



# 2020-2021 College Catalog

Equal Opportunity Employer and Educator  
Empleador y educador que ofrece igualdad de oportunidades



# Table of Contents

2020-2021 Academic Calendar .....	1
Academic Information and Student Records .....	46
Academic Planning, Advising and Registration .....	24
Accreditation and Affiliation .....	4
Admissions .....	18
Apprenticeship Programs .....	360
Campuses and Centers.....	2
Certificates of Completion .....	356
<b>Course Descriptions.....</b>	<b>363</b>
Paying for College.....	29
<b>Program Curricula—Associate of Applied Science Degree, Technical Diploma and Advanced Technical Certificate .....</b>	<b>86</b>
Student Rights and Responsibilities .....	57

Information is subject to change and reflects material of record as of March 1, 2020. Updated information will be posted to appropriate locations on Gateway’s website [gtc.edu](http://gtc.edu). Published by the Marketing & Communications Department, Gateway Technical College—Spring 2020.

Accommodations: If you need special accommodations, please contact Gateway’s Disability Support Services department:

**Elkhorn Campus: 262-564-2683**

**Kenosha Campus: 262-564-2006**

**Racine Campus: 262-564-2103**

Deaf/Hard of Hearing Services:

Office: 262-564-2564

(Voice) Cell/Text: 262-960-1931

Wisconsin Relay System: 711

Email: [sadowskil@gtc.edu](mailto:sadowskil@gtc.edu)

Atención: Si usted necesita asistencia en español, favor de llamar a:

Maria Abrego 262-564-2718, Maria Perez, 262-564-2388, or Rosalva Santana, 262-564-2976.

# 2020–2021 Academic Calendar

Summer 2020 (May 26 through August 15)	
Monday, May 25	Holiday – college closed
Tuesday, May 26	First day of Summer Semester
Friday, July 3 – Saturday, July 4	Holiday – college closed
Saturday, August 15	Last day of Summer Semester
Fall 2020 (August 31 through December 12)	
Monday, August 31	First day of Fall Semester
Monday, September 7	Holiday - college closed
Wednesday, September 23	Employee Learning Day – no classes
Thursday, November 26 – Sunday, November 29	Holiday – college closed
Saturday, December 12	Last day of Fall Semester
Thursday, December 24 – Sunday, January 3	Winter Recess – college closed
Spring 2021 (January 6 through April 19)	
Wednesday, January 6	First day of Spring Semester
Monday, January 18	Martin Luther King, Jr. Day – no classes
Friday, April 2 – Monday, April 5	Spring Recess – college closed
Monday, April 19	Last day of Spring Semester
Tuesday, May 18 (tentative)	Commencement



## CAMPUSES & CENTERS

Administration Center • 3520 - 30th Avenue • Kenosha, WI 53144



**Burlington Center**  
496 McCanna Parkway  
Burlington, WI 53105



**Elkhorn Campus**  
400 County Road H  
Elkhorn, WI 53121



**HERO Center**  
380 McCanna Parkway  
Burlington, WI 53105



**Horizon Center for  
Transportation Technology**  
4940 - 88th Avenue  
Kenosha, WI 53144



### **Inspire Center**

3520 - 30th Avenue  
Kenosha, WI 53144



### **Kenosha Campus**

3520 - 30th Avenue  
Kenosha, WI 53144



### **LakeView Advanced Technology Center**

9449 - 88th Avenue  
Pleasant Prairie, WI 53158



### **Racine Campus**

1001 S. Main Street  
Racine, WI 53403



### **SC Johnson iMET Center**

2320 Renaissance Blvd.  
Sturtevant, WI 53177

### Gateway Vision and Mission

#### College Vision

We make life-changing educational opportunities a reality.

#### College Mission

We deliver industry-focused education that is flexible, accessible and affordable for our diverse community.

### Essential Career Competencies

#### Philosophy of Core Abilities

We believe students need both technical knowledge and skills and core abilities in order to succeed in careers and in life. Our six essential career competencies are the general attitudes and skills essential for every successful graduate. Our faculty promotes the development of these competencies through learning experiences in all Gateway Technical College courses. We continually assess our students' learning in these areas to improve the general component of a Gateway Technical College education.

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Atención

Si usted necesita asistencia en español, por favor de llamar a Kristin Yesbeck a 262-564-2721 en Elkhorn, Maria Abrego a 262-564-2718 en Kenosha o Reyna Juarez a 262-564-3114 en Racine. Gateway es un empleador y educador que ofrece igualdad de oportunidades.

### Accreditation

Gateway Technical College is fully accredited by the Higher Learning Commission. The Wisconsin Technical College System Board has approved Gateway as a self-governing district. Associate of Applied Science degrees, technical diplomas, advanced technical certificates and Adult High School diplomas are granted.

### Academic Year

Gateway's academic year is typically made up of three 15-week with specified vacation periods. Individual programs may schedule courses within one, two (usually fall and spring) or all three of these semesters. Gateway's academic year begins with the summer semester. Summer semester begins in May and ends in August. Fall semester begins in September and ends in December. Spring semester begins in January and ends in April. Most courses are scheduled for the full length of the semester.

## Bookstores

Follett Campus Stores offer a complete selection of course materials, schools supplies, technology and clothing. Purchasing either in-store or online at [efollett.com](http://efollett.com) is easy and convenient. Online orders can be sent to a home address or picked up at one of the campus stores. Make sure to ask about our rental, digital and price match programs to reduce costs.

Students can use financial aid to purchase course materials in the campus stores or online. Student ID and class schedule is required. Financial aid is available for a limited time, as posted on [gtc.edu/important-dates](http://gtc.edu/important-dates). Computer devices are limited to one device per Gateway career program, and other items should be purchased for school use only.

Rented books can be returned to any campus store in-person or by preferred shipping service and should be done by the posted due date at the end of the semester to avoid late fees.

Our stores buy back books year round. Buyback values will vary based on need. A student ID is required to sell books, and proof of prior enrollment may be requested as buybacks cannot be processed on current semester materials. Books may also be donated to help raise funds for Better World Books charity programs.

### Bookstore Refund Policy

Course materials may be returned within seven (7) calendar days from the start of the course for any reason and up to thirty (30) days from the start of the course if the class is dropped. Short-term courses have two (2) calendar days from the start of the course for refunds and mid-semester purchases have two (2) days from the date of purchase. All refunds require a receipt and items to be in original condition. Your refund will be processed in the currency it was purchased. For example, if you purchased your books/supplies with a financial aid authorization, your refund will be credited to your student account before being refunded directly to you.

All other store purchases may be returned within thirty (30) days for refund or exchange, provided they are in original condition and with receipt. Any electronic devices purchased from the bookstore are non returnable if the package is opened.

For Campus Store hours and information visit [gtc.edu/bookstore](http://gtc.edu/bookstore).

**Elkhorn: 262-741-8108**

**Racine: 262-619-6866**

**Kenosha: 262-564-2246**

## Bulletin Boards, Posters and Campus TV System

The campus television messaging system, posters and bulletin boards will keep students informed of various happenings on campus and in the community. Keep this in mind for promoting club sales or events. It is necessary to obtain permission from the Office of the Dean of Campus Affairs before posting material on campus. In order to keep bulletin boards current, any outdated information will be removed.

## Campus Safety

### Emergency Notification System

Gateway Technical College's "AlertMe" emergency notification system will alert all staff, students and registered subscribers with an email, a phone call and a text message in the event of an emergency situation or a required timely warning occurring at or near one of the Gateway locations. In addition to the email, phone call and text alert, the "AlertUs" beacons, which are located throughout all of Gateway's buildings, may sound in the affected building(s). Once the situation no longer presents a threat, an "all clear" message will be sent.



All students are enrolled in the AlertMe system at the time of enrollment. If you provide your cell phone information, then you will receive text messages as well as email messages when the college issues a notification. All students are encouraged to log in to the AlertMe system at [gtc.edu/alertme](https://gtc.edu/alertme) to verify their enrollment if they are uncertain of their current status.

Note: If your cell phone provider charges for text messages received, there will likely be a cost associated with this service. Check with your mobile phone provider. If you wish to not participate in the AlertMe text messaging, then you will need to log in to the AlertMe system at [gtc.edu/alertme](https://gtc.edu/alertme) each semester and discontinue text notices.

### Incident Reports

The safety of our students is one of our top priorities. Gateway encourages all persons to take an active role in ensuring the safety of the campus community. If you witness, hear about or are a victim of an incident on campus or at an off-campus Gateway site or at a Gateway sponsored event, Gateway encourages you to directly file a report by completing an online incident report at [gtc.edu/safety](https://gtc.edu/safety) or in person at one of the campus security offices.

Examples of items to submit through this reporting system include but are not limited to: safety concerns, suspicious activity, criminal law violations, violations of college policy and student code of conduct, and accidents including traffic and personal injury. If you are unsure about whether the incident should be reported, call the security office for the campus where the incident occurred at the phone number listed below.

Anyone completing a report may remain anonymous if they desire. In addition, if you observe a crime or incident taking place, we ask that you contact a member of our security team immediately or dial 911 if it is an emergency.

### CARE Team

The mission of the Communication, Awareness, Referral and Evaluation Team (CARE Team) is to contribute to a safe campus environment by reducing potential threats and to increase student success through the identification, assessment and management of troublesome or concerning behaviors. This multidisciplinary team will assess available information regarding an individual student or employee and determine an appropriate course of action and interventions. By intervening with a student or employee who has exhibited behavior that is of concern, Gateway hopes to prevent escalation of harmful or disturbing behavior that would impede on a student's academic journey or an employee's position. Members of the campus community are strongly encouraged to report persons of concern by completing a CARE Team report at [gtc.edu/care](https://gtc.edu/care). If you observe or hear ANY behavior that causes concern (no matter how small or limited your direct knowledge may be) please complete a CARE Team report to alert the college as soon as possible.

### Emergency Response Plans

Gateway Technical College has developed Emergency Response Plans (ERPs) for the college that can be found at [gtc.edu/safety](https://gtc.edu/safety). This plan includes an outline of the college's processes for responding to a campus or district incident. They also include a "checklist" of responses to typical incidents that may occur on campus.

### Annual Security Report

The safety of our students is one of our top priorities at Gateway Technical College. As a student, we are providing you and encourage you to read our Annual Security Report. This report is published in compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act) and the Violence Against Women Act. This report includes crime statistics, institutional policies on campus security and safety, alcohol and drug use, crime prevention, the reporting of crimes or incidents, sexual misconduct and other important matters. The full text of this report is available online at [gtc.edu/safety](https://gtc.edu/safety) under the Additional Information section at the bottom of the page. Please feel free to email [cousinot@gtc.edu](mailto:cousinot@gtc.edu) or call 262-564-2812 should you need a hard copy of the report.

**To report an incident or crime, please call:**

Campus/Location	Campus Security	Dean of Campus Affairs
Burlington	262-767-5208*	262-564-2084 (Office)
Elkhorn	262-741-8208	262-564-2084 (Office)
Horizon	262-564-2208 (Kenosha)	262-564-3218 (Office)
iMET	262-619-6208 (Racine)	262-564-2590 (Office)
Kenosha	262-564-2208	262-564-3218 (Office)
Racine	262-619-6208	262-564-2672 (Office)

*\*Burlington Security: Monday-Friday from 2:30 p.m.-10:30 p.m. At all other times, call Elkhorn Security.*

- 1) If a person and/or property are in immediate danger, call 911.
- 2) Then notify Campus Security at the phone numbers above.

## Career and Employment Services

### Career Planning

If students are unsure of what program they would like to pursue, help is available from Career and Employment Services. Gateway Career Counselors work with students to provide guidance in choosing an appropriate program and career. Students can register for an individual appointment or Career Exploration Workshop by calling 1-800-247-7122 or in-person at any Student Service Center. Career exploration includes assessing student interests, values and strengths to help align self-knowledge with potential career options. Both formal and informal assessment tools are used in this process. Students will be shown how to conduct occupational research and uncover labor market statistics and employment trends using internet resources.

### Student Employment

Career and Employment Services is also dedicated to developing and empowering students with the skills necessary to find employment in their chosen career. Students can sign up to meet with Career & Employment Services for an individual appointment by calling 1-800-247-7122 or in-person at any Student Service Center. Appointments focus on a variety of job readiness skills: resume and cover letter writing, interviewing skills/practice and job search strategies. All students and alumni are welcome to utilize these services.

### Find Jobs & Internships

Students are highly encouraged to access a wide variety of job opportunities from local and nationwide employers through Wisconsin TechConnect, a web-based job database specifically developed for the Wisconsin Technical College System. TechConnect can be found at [gtc.edu/techconnect](http://gtc.edu/techconnect). To utilize TechConnect, individuals must be a current program student or a graduate of Gateway Technical College. If students would like their resume reviewed before posting to TechConnect, please contact Career & Employment Services at 1-800-247-7122.

### Engaging with Employers on Campus

Career and Employment Services also partners with employers to offer employment opportunities to Gateway students and alumni including but not limited to:

#### *On-Campus Recruiting*

Employers staff a table on campus to discuss employment opportunities, collect applications and resumes and schedule interviews with students for job openings and internships.

## *Career Fairs*

On-campus career fairs are held throughout the academic school year to expose students and alumni to a variety of employers in one convenient setting. Information on upcoming career fairs can be found at [gtc.edu/ces](http://gtc.edu/ces).

## *Employer Information Sessions*

Employers offer students the option to ask questions, offer in-depth expectations for positions and potential job and internship opportunities in an open forum format geared towards specific programs.

## **Online Services**

For online services and more information about Career & Employment Services, visit [gtc.edu/ces](http://gtc.edu/ces).

## **Computer Labs**

There are computer labs on each campus. Each computer lab is equipped with computers that have software to support Gateway program curriculum and have access to the internet. Every currently enrolled student has access to the computer labs. Open computer lab hours are posted outside each lab.

In addition, Gateway locations without open computer labs have computers available in other areas such as the library, the commons, atrium or other locations. These computers have basic office applications installed as well as access to the internet.

## **Computer Software**

Gateway provides the G Suite for Education to all active students for FREE. G Suite (formerly Google Apps) is a free suite of communication and collaboration tools – including an ads-free Gmail account, Sheets, Docs and Hangouts – for learning anywhere, anytime, on nearly any device with access to the internet. All Gateway students have FREE unlimited storage for documents, photos, drawings, recordings, videos – essentially anything associated with your G Suite account. And with Office Compatibility Mode, you can open and edit documents in their native format.

Microsoft offers an Office 365 subscription for active Gateway students for FREE. The subscription includes Office for Mobile, Office for Mac, OneDrive and Office 365 Professional Plus On Demand which includes Word, Excel, Powerpoint, Access, OneNote, Publisher and Outlook. To get started on Office 365, search for Office 365 on the Gateway website or find the instructions under the Student Support tab in Blackboard on how to sign up. If you need assistance accessing Office 365, contact Tech Central at 262-564-3695 or submit a ticket at [support.gtc.edu](http://support.gtc.edu).

Some academic programs have software that students are required to install on their personal computers. These applications may be free or may be required to purchase. Your instructor will share this information with you in class.

## **Deaf/Hard of Hearing Services**

Gateway Technical College provides services to Deaf and Hard of Hearing (D/HH) individuals. Educational support services include interpreters, tutorial services, note taking, closed captioning, C-print captioning and other support to enable a student to obtain equal access to the college.

To find out more or to meet with a Deaf/Hard of Hearing staff member, please contact:

### **Lisa Sadowski, Disability Support Specialist (D/HH)**

Office: 262-564-2564 (Voice)

Wisconsin Relay System: 711

Cell/Text: 262-960-1931

Email: [sadowskil@gtc.edu](mailto:sadowskil@gtc.edu)

Gateway interpreters will respect the privacy of students and keep information on a need-to-know basis. This means that your interpreter will keep personal information confidential as stated in the RID Code of Professional Conduct. However, there are times in which interpreters must inform others about details or circumstances they learn about while interpreting for you at the college. These include violations of Gateway policies related to sexual misconduct, civil rights violations and violations of the student code of conduct, as well as discussions relating to harming others, criminal activities and child abuse. You can review the Student Code of Conduct in the Student Handbook under Student Rights and Responsibilities. Interpreters work for Gateway Technical College and follow the rules of the college in regards to reporting these violations.

### Food Service

Gateway's Elkhorn, Kenosha and Racine campuses have food service offered by private companies. Gateway's Culinary Arts program also provides food service and a bakery shop on the Racine Campus and during Fall Semesters on the Elkhorn Campus. For specific vendor hours by campus, please visit [gtc.edu/food-services](http://gtc.edu/food-services)

### Gateway GreenPrint

Each semester, registered students will receive a \$10 credit of non-refundable Gateway Print Points on their Gateway student ID card.

#### Costs:

Single-sided, black & white prints or copy: 7¢

Double-sided, black & white prints or copy: 10¢

Single-sided, color prints or copy: 50¢

Double-sided, color prints or copy: 75¢

There will be no charge for scanning to email. Double-sided printing will be the default setting on all printing devices.

If a student does not have sufficient funds on his/her account, a job will not be released. The student is responsible for adding additional funds to their account via their online account or kiosk stations on campus. Kiosk locations and directions for logging into the online account center are available at [gtc.edu/printing](http://gtc.edu/printing).

The \$10 credit will be allocated the first day of each semester. This credit will expire/dissolve the day before the start of the next semester. Students and community members may also purchase blank visitor cards and load/reload them at the kiosk stations.

### Housing

Gateway does not have dormitory facilities for students. It is a student's responsibility to arrange for room and board if they will be living away from home. Students moving into local housing are advised to register their address with the Student Services office on the campus they attend.

### Learning Success Centers

Learning Success Centers provide tutoring services, facilitated study groups and other academic assistance for any student enrolled in Gateway Technical College courses. Instructors in the centers also provide guidance and direction for successful study skills. Computers are available for use in doing research and completing written assignments. The Learning Success Centers also offer classes and individualized instruction in basic skills, GED® and Wisconsin High School Equivalency Diploma (HSED) preparation, career exploration and academic preparation for entry into a technical or associate degree program. These services are free to Wisconsin residents.

**Burlington Center Learning Success Center:** 262-564-2030

**Elkhorn Campus Learning Success Center:** North Bldg., Room 208, 262-564-2683

**Kenosha Campus Learning Success Center:** Academic Bldg. Room A111, 262-564-2006

**Racine Campus Learning Success Center:** Lake Bldg. L100, 262-564-2103

## Library

Libraries are located on the Elkhorn, Kenosha and Racine campuses and online 24/7 at [gtc.edu/library](http://gtc.edu/library). The libraries support the academic, career and professional needs of students, instructors and staff. Each of the campus libraries has an extensive collection of electronic, print and multimedia resources, group and quiet study areas, computers and printers, Wi-Fi and staff to assist you with your research and information needs. Library hours, policies, services and resources are available at the library webpage.

## Lockers

Lockers are available on the Kenosha and Elkhorn campuses for students who would like the convenience of storing coats, books and materials while on-campus. Students can get information on lockers from Student Services Centers. In Kenosha, students should use their own lock. All items will be cleaned out of the lockers at the end of the semester and contents destroyed. The college reserves the right to search or inspect lockers at any time.

## Lost and Found

Students who have lost or found property should contact Campus Security.

## Medical/Health Insurance Coverage

All students are expected to have adequate health insurance coverage.

## My Gateway - Student Online Portal

My Gateway is your online student portal to the resources you need for academic success. My Gateway is filled with tools to help you have the best Gateway experience possible.

My Gateway can be accessed on Gateway's website at [gtc.edu](http://gtc.edu) by clicking on **"My Gateway"** in the upper right corner or directly at [gtc.edu/MyGateway](http://gtc.edu/MyGateway).

Log in using your seven-digit Gateway student ID number and password.

My Gateway provides access to a wide range of resources including:

- **Blackboard:** Blackboard is your web-based hub for course information such as syllabi, handouts, assignments, interactive discussion boards and online tests. Blackboard use varies by program, course and instructor. If you are enrolled in an online course, all of your course content will be accessed through your Blackboard account. You can also access Blackboard directly at [blackboard.gtc.edu](http://blackboard.gtc.edu).
- **WebAdvisor/Self-Service:** Access your student account information and financial aid, register for courses, view your Academic Plan, check your grades, view your course schedule and more.
- **Student Email:** This is your channel for Gateway-related communication, including event announcements, financial aid award notifications, correspondence from your instructor and more. You can also access email directly at [mail.gtc.edu](mailto:mail.gtc.edu).
- **Campus-wide Announcements** and Gateway's academic and events calendar
- **Student Resources:** These include quick links to the campus bookstore, library, Learning Success, Tutoring Services, Student Life, scholarships and more.

## Gateway Student ID Number and Password

Your Gateway Student ID number and password are the single login that you will use to access: My Gateway, WebAdvisor/Self-Service, Blackboard, Gateway student email and the Gateway wireless network.

## ***Forgot your Student ID Number?***

1. Go to **gtc.edu/MyGateway**. Click on, “Don’t know your Student ID?”
2. Enter your last name, Social Security number and birthdate.
3. Click “Submit.” WebAdvisor will return your Student ID number.

## ***Forgot your password?***

You may have already set up your password in Student Services. If not, you can request your password by visiting **gtc.edu/MyGateway**, clicking “Forgot your password? Student” and following these directions:

1. **To access your new password immediately:** If you know your previously supplied security question and answer, fill in the first and fourth sections and your password will immediately be displayed on the screen.
2. **Have your password emailed to you:** If you know what personal email address Gateway has on file for you, fill in the first and third sections and your password will immediately be sent to that email address.
3. **Have your password mailed to you:** Fill in the first section (student ID, last name and birth date) and check the box in the second section to have your password sent to you via US Postal Service. This can take 7-10 days.

If you do not have your security question set up, you can do so at any of Gateway’s Student Services Center.

**Questions about My Gateway?** If you have any questions about your student ID number or password, please call 1-800-247-7122 or visit any Student Services Center.

**Questions about Blackboard?** Please call 262-564-3695 or email **techcentral@gtc.edu**.

## **Parking**

Lighted parking is available on all campuses. Vehicles should be locked and property stowed out of sight. Parking in unauthorized areas may result in vehicles being ticketed and/or towed by local police at the owner’s expense. Abandoned vehicles or any vehicle deemed to be a hazard may also be towed. Designated parking spots have been reserved for individuals with disabilities. Only those with designated license plates or placards issued by the Wisconsin Department of Transportation Division of Motor Vehicles or a similar government agency are allowed to park in these areas. All others may be ticketed by the local police department.

## **Services for Students with Disabilities**

In accordance with the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973, Gateway special needs staff provide a full range of support services/ reasonable accommodations at the request of the student with documented disabilities. This is to give all students equal access to learning opportunities at Gateway Technical College in order to reach their educational goals. Disability support services should be requested before the start of the semester to allow adequate time to review documentation and to facilitate accommodations.

### **“The term ‘disability’ means, with respect to an individual –**

- (a) a physical or mental impairment that substantially limits one or more of the major life activities of such individual;
- (b) a record of such impairment; or
- (c) being regarded as having such an impairment. “(P.L. 101-336, Sec.)

## Procedure to Receive Services and Accommodations

- Collect your disability documentation – see the Gateway website for the information needed from your doctor which specifies how your disability may affect learning.
- Contact a Disability Support Instructor on your campus for more information on disability documentation accommodations and other support services. The Disability Support Instructors will verify the documentation and assist you with the transition process.

## Strengths

Gateway Technical College is proud to be a Strengths-based college and encourages Gateway students to take their CliftonStrengths Assessment. Your CliftonStrengths Assessment is an hour-long quiz that uncovers your top five talent themes by measuring your talents. Once you know your talent themes, you can develop them into Strengths that you can apply to your academic, professional and personal life. Visit our collection of Strengths resources and connect with campus resources at [gtc.edu/strengths](https://gtc.edu/strengths) Learn more about how to name, claim and aim your Strengths through Gateway's Student Success Workshops at [gtc.edu/student-success-workshops](https://gtc.edu/student-success-workshops)

## Student Accident Insurance

Students are eligible to receive Student Accident Insurance coverage when they are taking at least one eligible post-secondary class. This charge is automatically added to the student's account when they register for an eligible course. For more information on this benefit please visit: [gtc.edu/campus-life/campus-resources/student-accident-insurance](https://gtc.edu/campus-life/campus-resources/student-accident-insurance)

## Student ID Cards

The Gateway photo student ID card is the property of Gateway Technical College, serving as the official form of college identification. The following applies:

- All students (registered in a course more than 4 weeks in length) and staff are required to have a Gateway ID card.
- It must be carried at all times and presented to Gateway staff and/or security personnel upon request.
- Failure to present a valid Gateway student ID card may result in a request to leave the premises.
- Security personnel may verify identity with any Student Services Center if a student fails to present valid Gateway student ID card.
- The Gateway student ID card is non-transferable.
- The Gateway student ID card may be confiscated and/or disciplinary action taken if presented by someone else for use or altered in any way.
- Students in courses off-campus are not required to have a Gateway student ID card.

To report a lost or stolen Gateway student ID card, contact the Student Services Contact Center or any Student Services Center immediately. Gateway student ID cards that are damaged or defaced are no longer valid and must be replaced. There is no charge for your initial card. To replace a lost or stolen card, there is a \$5.00 charge. For more information about the Gateway student ID card visit [gtc.edu/gatewayonecard](https://gtc.edu/gatewayonecard).

## Student Support Counselors

Gateway Student Support Counselors provide free short-term private and confidential counseling for students at the Elkhorn, Kenosha and Racine campuses. Student Support Counselors help students address: personal and relationship issues, transition and change, stress management, communication skills, grief and loss, self-awareness/advocacy, coping strategies and community referral (e.g., housing, transportation, other personal emergencies). Students can make an appointment by calling 1-800-247-7122 or at any Student Services Center.

### Student Support Programs

Gateway offers a variety of support services to help students succeed in their program of study, including tutoring services, facilitated study groups and disability services. A variety of specific support programs are also offered. These support programs are designed to support and assist students in a variety of ways, including academic workshops, one-on-one assistance, leadership skills and mentorship.

**Multicultural Program:** Provides students with one-on-one support and mentoring, student success workshops, leadership development, connection to campus and community resources, scholarship information, academic learning communities and social/cultural programming.

**TRiO Achiever Group:** TAG Support Specialists work one-on-one with students with disabilities to help them adjust to the demands of college. Also, students with disabilities who are interested in attending 4-year college can receive academic support and case management.

**Non-Traditional Occupations Program:** Assists students who are pursuing career goals in non-traditional occupations through a variety of resources. A non-traditional occupation is defined as one in which women or men comprise less than 25 percent of the workforce.

**Step UP Program:** Supports individuals who are single parents or may have worked in the home for a substantial number of years providing unpaid household services for family members or individuals. This program also provides support to students who are currently unemployed or underemployed. Step UP Program services include: case management services, workshops and networking opportunities.

**Veteran Support Services:** Gateway has been identified as a military-friendly college and continues to increase its commitment to helping veteran students, spouses and dependents to complete their education. The Veteran Support Specialist will develop strategies for overcoming barriers, create individual success plans and provide referrals to campus resources within the Student Success Division.

### Tech Central – Technology Support

Gateway's Tech Central help desk is ready to assist students 24/7 with expanded, free support services to assist students with their personal computers. Students can contact Tech Central if their computer is running slow to obtain free malware and anti-virus options that may help with slowness caused by computer virus(es)/malware, difficulty accessing Gateway's wireless network, provide suggestions for troubleshooting issues with software updates or installation and questions regarding WebAdvisor or Blackboard. Tech Central can be reached by calling 262-564-3695, by emailing [techcentral@gtc.edu](mailto:techcentral@gtc.edu) or by visiting [gtc.edu/techcentral](http://gtc.edu/techcentral). Note: Not all services are available 24/7.

### Visitors, Guest Speakers and Children on Campus

Visitors and guest speakers shall be permitted to visit classes offered by the Gateway District with the prior consent of the instructor. Consent and permission for visitors will be granted only for the purpose of becoming knowledgeable about a course or oriented to the educational mission of the Gateway District. Students are not allowed to bring a child or children to a class. Furthermore, students, visitors or guest speakers are prohibited from leaving a child under the age of sixteen (16) years unattended in Gateway District facilities, unless the child is enrolled in a course or program. Greater restrictions may apply in computer labs, program labs and other areas of the college that may be restricted to students only or are unsafe.

### Weather Closures

In case of bad weather, do not assume that classes are cancelled. More than likely, classes will be held as scheduled. Information on campus closures is available on the home page at [gtc.edu](http://gtc.edu), at 1-800-353-3152 or on the college's Facebook page. During bad weather conditions, students are encouraged to use their own judgment in regard to distance, safety and road conditions.

Each campus is closed on an individual basis, depending on each county's weather and road conditions.

Classes Cancelled means no classes will be held, but buildings are open and staff will remain present or report to work stations.



Campus Closed means the buildings are closed.

Building Emergency means building(s) evacuated, return or dismissal determined by the campus dean or their designee.

## Wireless Computer Information

Gateway offers all students free access to the college network and the internet. "GTC-Wireless" is the wireless network for students, faculty and staff to access on all Gateway Technical College campuses and centers. Gateway uses WPA2 Enterprise (Wi-Fi Protected Access) for authentication and encryption. Students should use "GTC-Wireless" for all of their devices.

### **Please follow the instructions below to access the wireless network.**

#### Windows 10

1. From your Windows 10 desktop, open the Start Menu.
2. Once you have the Start Menu opened, click on the Gear icon just above the power button.
3. When the Settings Bar appears, select the Internet Access Icon or Available Icon.
4. When the Start Menu appears, click Wi-Fi on the left sidebar, then click on Show available networks.
5. From the list of available Wireless networks, select "GTC-Wireless."
6. When prompted for authentication, enter your student ID number and your My Gateway password.
7. A warning message will appear, click Connect.
8. You should now be connected to "GTC-Wireless."

#### Windows 8.1

1. From the Start screen, open the Charms Bar using your finger by swiping in from the right side of the screen. If you're using a mouse, point to the upper-right corner of the screen and move the mouse pointer down.
2. When the Charms Bar appears, select Settings.
3. When the Settings Bar appears, select the Internet Access Icon or Available Icon.
4. From the list of available Wireless networks, select "GTC-Wireless."
5. When prompted for authentication, enter your student ID number and your My Gateway password.
6. A warning message will appear, click Connect.
7. You should now be connected to "GTC-Wireless."

#### Mac OS X

1. Select the Wireless Icon from the menu located in the top right corner.
2. From the list of available Wireless networks, select "GTC-Wireless."
3. When prompted for authentication, enter your student ID number and your My Gateway password.
4. A certificate warning message will appear, click Continue.
5. You should now be connected to "GTC-Wireless."

#### iPhone/iPad

1. Open Settings then select Wi-Fi.
2. From the list of available Wireless networks, select "GTC-Wireless."
3. When prompted for authentication, enter your student ID number and your My Gateway password.
4. A certificate warning message will appear, click Accept.
5. You should now be connected to "GTC-Wireless."

#### Android / ChromeBooks

1. Open the Settings application.

2. Search for and select Wi-Fi.
3. From the list of available Wireless networks, select "GTC-Wireless."
4. When prompted for authentication, ensure the following settings are selected:

EAP Method: PEAP

- a. Phase 2 Authentication: None
- b. CA Certificate: Do not validate
- c. Identity: your student ID number
- d. Password: My Gateway password
- e. Tap on Connect.
- f. You should now be connected to "GTC-Wireless."

### **Will I need to login every time I want to access the network?**

No. You do not have to log in again after following the above directions.

### **What do I do if I am unable to log in to the wireless network or if I am frequently disconnected from the wireless network?**

Contact Tech Central at 262-564-3695 or log a support ticket at [support.gtc.edu](https://support.gtc.edu).

### **What happens if I change my password?**

If you change your password, the next time you try to access the network, you will be prompted to provide that password. Enter the new password and click "OK." Your password will be saved and your device will begin connecting automatically to the network again.

Questions about wireless access? Contact Tech Central at 262-564-3695.

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## Student Life

A variety of student activities and events are planned during the academic year on all campuses through the Student Life staff, United Student Government and other Student Success department staff. Events such as musical entertainment, comedians, awards ceremonies, trips, graduation and multicultural events are planned for students, faculty and staff to ensure a more enjoyable college experience. Most activities and events are held during the day in the student commons area of the campuses. For more information on student activities and events, please contact the Student Life Coordinators at 262-564-2519 or 262-564-2789 or visit [gtc.edu/studentlife](https://gtc.edu/studentlife).

### **Student Activities Funding Committee**

The Student Activities Funding Committee (SAFC) makes decisions regarding the disbursement of funds derived from student activity fees. The board comprises thirteen USG officers. The Controller prepares an annual budget for SAFC approval that is submitted to the Executive Leadership Council and college president for approval. In partnership with SAFC, the Student Funding Request Committee reviews and approves requests for fundable activities which include but are not limited to: student government, student club activities, Student Success activities and programs, advisor expenses, cultural activities, campus building projects, conference travel, etc. The SAFC may not expend any funds for the purchase and/or distribution of alcoholic beverages. To request SAFC funds, contact the Student Life Coordinators at 262-564-2519 or 262-564-2789.

### **Campus Ambassadors**

The Campus Ambassador awards program is designed to acknowledge deserving students based on their occupational competence, personal goals, enthusiasm for technical education, outstanding character, positive attitude, leadership, communication skills and self-confidence. In order to be nominated as a Campus Ambassador, nominees must be accepted and enrolled in a technical diploma or an associate degree program and must have completed at least one semester at Gateway. Nominees are then required to give a presentation that is judged by a panel of three. A winner is selected from

Elkhorn, Kenosha and Racine to represent their campus as the Campus Ambassador. A Gateway WTCS Ambassador is selected from the three Campus Ambassadors to represent the Gateway district in Madison as well as around the state. The competition is held annually. Find the application and more information at [gtc.edu/campusambassadors](http://gtc.edu/campusambassadors).

## Student Organizations and Clubs

Your participation in college organizations is encouraged. Many groups have state and national affiliation. Club meetings are scheduled periodically throughout the semester to provide meeting times during the academic day. Each club must have a faculty/staff advisor. Club social, civic and service projects foster a broadened appreciation of experiences outside of the Gateway classroom and can result in your personal development. Future employers recognize the value of club participation in identifying leadership potential. Clubs and other student organizations receive many advantages and conveniences provided by the college. These include the use of college facilities at no charge for social activities, meetings and fundraisers. Club checking account services are provided at no charge, and Student Activities Funding Committee (SAFC) funds are made available upon request to support club activities. For additional information on the clubs listed, visit [gtc.edu/clubs](http://gtc.edu/clubs).

<b>District.....</b>	<b>Advisor(s)</b>
NSLS - Sigma Alpha Pi .....	Lindsey Kosman, Trina Muscarella
Phi Theta Kappa.....	Jorge Nieto
United Student Government (USG) .....	Lindsey Kosman, Trina Muscarella
Active Minds.....	Tammi Summers, Erika Saylor, Vicki Wahler
Assoc. of Information Technology Prof. (AITP).....	Mary Baldwin-Grimes
Black Student Union.....	Danyanna Dunn, Shayla Thompson
CNC Machinists Club.....	Kidia Tyler
Cosmo/Barber Club.....	Sandy Christman
International Club.....	Sherry Bubel, Chinedu Obowu
Outdoor Adventure Klub (OAK).....	Lindsey Kosman, Trina Muscarella
Rainbow Alliance.....	Katie Lohre, Madeline Carrera
Student Nurses Association (SNA) .....	Shronda Green, Jacquelyn Griesbach, Emily Herbert
Student Veterans of America Club.....	Rob Swanson, Edwardo Vargas
Team EXCEED.....	Lindsey Kosman, Trina Muscarella
Women in Manufacturing.....	Kidia Tyler
<b>Kenosha Campus.....</b>	<b>Advisor(s)</b>
Alpha Beta Hortus (Horticulture).....	Courtney Greve, Ali Schultz
Collegiate DECA.....	Kari Aiello, Achille Infusino
Iota Delta Kappa (IDK/ASID – Interior Design) .....	Rita Serpe, Jessica Gleason
Physical Therapist Assistant (PTA).....	Traci Gotz, Megan Zingelman
SAIFD (Floral Design).....	Jane Edwards
Student Society of Arboriculture.....	Aaron Schauer
WIP – Work in Progress.....	Julani Bayan
<b>Racine Campus.....</b>	<b>Advisor(s)</b>
Alliance for Multicultural Students.....	Jomarie Coloriano
Collegiate DECA.....	Vanessa Garcia, Jen Christianson
Creating Entrepreneurship Opportunities (CEO).....	L. Robbins-Thurmond, M. Ferba Davis

## Student Organizations and Clubs

Health Information Technology - HIT Club.....	Jacki King
HOSA/Human Services.....	Tom Crawford
Step UP Club.....	Shayla Thompson
<b>SC Johnson iMET Center .....</b>	<b>Advisor(s)</b>
Amateur Radio Club.....	Pat Hoppe
Biomedical Engineering Club.....	Pat Hoppe
Electronics Club .....	Jill Eide
Fab Lab Creative Design Circle.....	A. Reed, K. Cakja
Red Hawk Racing RC Club.....	Rich Buhnerkemper
Society of Manufacturing Engineers (SME).....	Rich Buhnerkemper
Society of Women Engineers (SWE).....	Jill Eide
<b>Elkhorn Campus .....</b>	<b>Advisor(s)</b>
Collegiate DECA.....	Ed Grochowski
Gateway Computer Professionals United (G-CPU).....	Paul Nelson
HOSA/Medical Assistant.....	Robert Formanek
Robotic Welders .....	Scott Rohde
Society of Cultural Excellence.....	Mary Xiong
SCNAVTA.....	S. Guttschow, H. Darbo
Sustainable Living Club.....	Jim Jazdzewski

## National Society of Leadership and Success

### Sigma Alpha Pi

The National Society of Leadership and Success (NSLS) is a nationwide organization dedicated to creating lasting positive change in students' lives and in the community. Students participate in nationwide leadership telecasts, a leadership training day, peer coaching and receive a leadership certificate. To be eligible for membership, students must achieve a 3.3 grade point average or better.

### Phi Theta Kappa (PTK)

#### Scholastic Honorary Fraternity

All Gateway students have the opportunity to earn scholastic recognition through membership in Phi Theta Kappa, the honors society for two-year colleges. The PTK member becomes part of the international organization that offers national scholarships. To be eligible for membership, a student must be currently enrolled in an associate degree program and have earned 12 or more credits with a grade point average of 3.75 or higher.

### United Student Government

The United Student Government (USG) is the one encompassing body representative of the student population. It provides students with opportunities to learn leadership skills. Officers of the United Student Government are elected by the student body in an annual online election. This organization is an advisory body, working with students, faculty and administration on the social, educational and cultural aspects of college citizenship, and for the betterment of the campus. The United Student Government underwrites many special events planned for students. United Student Government membership is open to all students. For additional information visit [gtc.edu/usg](http://gtc.edu/usg)

## Admissions

The Gateway District provides an equitable process for admitting individuals to Gateway programs which is consistent with Chapters 38 and 118 of the Wisconsin Statutes and TCS 10 of the Wisconsin Administrative Code which govern the Wisconsin Technical College System. Applications and related materials are reviewed on a first-come, first-served basis.

The laws pertaining to Family Educational Rights and Privacy Act rights (FERPA) begin at the time of matriculation. A student is defined as one who has been accepted to a program and/or enrolled in a course.

### Admissions Dates

Gateway accepts applications on an ongoing basis year-round. Application processing time is typically five days.

### Student Types

#### Degree-Seeking Students

Degree-seeking students are individuals who are accepted to a specific postsecondary program with the intent of graduating. Application, application fee, placement testing, official high school transcripts and any other identified admission requirements must be completed for program admission.

#### Non-Degree Seeking Students

Non-degree seeking students are individuals who are attending Gateway with no intention of completing a program. These individuals may enroll in courses for which all prerequisites have been met. Placement testing may be required depending on the course(s) selected. Students seeking this status do not need to complete an application for admission and may register beginning the first day of open registration. Students accepted as non-degree seeking (not admitted to a specific program) are not eligible for federal financial aid.

#### Guest Students

Guest students are individuals who are accepted to Gateway for the purpose of transferring credits back to the college or university they are currently attending. These individuals should complete the guest student application and return it to Gateway's Admissions Office with the appropriate required signatures or ACT/SAT scores for course placement. Gateway Technical College does not offer financial aid to guest students. Guest students must work with their home institution to develop a consortium agreement with Gateway to utilize financial aid at the home institution.

### Acceptance Status

**Full Acceptance Status:** For individuals who have met all program admission requirements.

**Remedial Acceptance Status:** For individuals who have met all program admission requirements and for whom placement scores indicate remediation is required.

**Conditional Acceptance Status:** For individuals who are required to verify high school or GED graduation for admission to their program. A conditional acceptance may apply for students who have completed their junior year of high school or at least half of their GED testing (passed 3 of 5 GED tests). To be accepted conditionally, all other admission requirements for the program must be met. Conditionally accepted students may register with newly accepted students for their first semester at Gateway. The receipt of official verification of the secondary credential or equivalent must be met prior to the start of the student's second semester of enrollment. Conditionally admitted students will be considered for petitioning programs based on their conditional acceptance to a program. Students can lose their petition seat if they do not provide a final official transcript. Conditionally accepted students will be eligible for financial aid once they are fully admitted to their program and meet all other financial aid eligibility requirements.

## Placement Testing

All individuals applying for admission to Gateway's postsecondary educational programs must take a placement assessment to assist in the appropriate placement in coursework. All applicants must meet the current placement test requirements for admission and courses. Individuals not seeking program admission who wish to take a college course(s) may be required to take a placement test for courses with a placement score prerequisite. When individuals with a documented disability are required to test, reasonable accommodations will be provided pursuant to state and federal regulations.

## Admission of Transfer Students

Students who want to transfer credits from another college or university to Gateway Technical College must be accepted to a postsecondary program and submit official transcripts to any Student Services Center. Official transcripts are defined as transcripts sent directly to Gateway from the issuing institution by a recognized electronic transcript service or hand delivered by the student if the transcripts remain unopened in the issuing school's sealed envelope. Official transcripts must have the issuing institution's seal and appropriate official's signature to be accepted. The Registrar's Office will review all admitted students' post-secondary transcripts and award maximum transfer credit. Please also see the section on credit for prior learning.

## Admission of High School Age Students

### Compulsory School Attendance (118.15)

§118.15 Contracts are exemptions to the requirements of compulsory attendance. Students qualify for these contracts under varying circumstances. Requirements for school districts also vary.

1. Upon the child's request of the school board and with the written approval of the child's parent or guardian, any child who is 16 years of age or over and a child at risk, as defined in §118.153 (1) (a), may attend, in lieu of high school or on a part-time basis, a technical college if the child and his or her parent or guardian agree, in writing, that the child will participate in a program leading to the child's high school graduation. The district board of the technical college district in which the child resides shall admit the child.
2. Upon the child's request and with written approval of the child's parent or guardian, any child who is 17 years of age or over may be excused by the school board from regular school attendance if the child and his or her parent or guardian agree, in writing, that the child will participate in a program or curriculum modification under par. (d) leading to the child's high school graduation or leading to a high school equivalency diploma (HSED). Prior to a child's admission to a program leading to the child's high school graduation or a high school equivalency program under 1 or 2, the child, his or her parent or guardian, the school board and a representative of the high school equivalency program or program leading to the child's high school graduation shall enter into a written agreement. The written agreement shall state the services to be provided, the time period needed to complete the high school equivalency or program leading to the child's high school graduation and how the performance of the pupil will be monitored. The agreement shall be monitored by the school board on a regular basis, but in no case shall the agreement be monitored less frequently than once per semester. If the school board determines that a child is not complying with the agreement, the school board shall notify the child, his or her parent or guardian and the high school equivalency program or program leading to the child's high school graduation that the agreement may be modified or suspended in 30 days.
3. Upon the child's request and with the written approval of parent or legal guardian, a child 17 years of age or older shall be excused by the school board from regular attendance if the child began a program leading to a High School Equivalency Diploma (HSED) in a secured correctional facility, a secured child caring institution, secured detention facility or a juvenile portion of a county jail, and the parent or guardian agree that the child will continue to participate in the HSED program. The child must have passed at least one of the four content areas of the General Educational Development tests.

Children at risk of not graduating from high school are defined as pupils in grades 5 to 12 who are at risk of not graduating from high school because they are dropouts, or are two or more of the following:

1. One or more years behind their age group in the number of credits attained.
2. Two or more years behind their age group in basic skills levels.
3. Habitual truants, as defined in §118.16(1)(a).
4. Parents.
5. Adjudicated delinquents.
6. Eighth grade pupils whose score in each subject area on the examination administered under §118.30(1m)(am) 1 was below the basic level, 8th grade pupils who failed the examination under §118.30 and 8th grade pupils who failed to be promoted to 9th grade.

Dropout means a child who ceased to attend school, does not attend public or private school, technical college or home-based private educational program on a full-time basis, has not graduated from high school and does not have an acceptable excuse under §118.15(1)(b) to (d) or (3).

Participants attending Gateway under a §118.15 contract for the High School Equivalency Program must complete all HSED requirements prior to taking GED tests.

## **Voluntary Attendance of Youth Sixteen (16) Years or Older**

Any child who is the age of sixteen (16) years or older is eligible to apply to a Gateway postsecondary program if all of the following apply:

- Gateway agrees to admit the individual.
- The individual satisfies the other requirements for admission under s.38.22(1), Technical College Admission Requirements.
- The individual has the written permission of his or her parents or legal guardian.
- The individual will not be attending Gateway during the hours of normal school day established under s.119.18(7) or 120.12(15).
- The attendance is not a fulfillment of the student's compulsory school attendance requirement.
- The student attends at the regular tuition rate charged adult students.
- Individuals taking course(s) solely for Gateway program credit shall pay their own tuition and fees, books and other associated costs.

## **Home-schooled Students**

Any pupil who is under a home school agreement with the Wisconsin Department of Public Instruction and requests educational services from Gateway shall first seek assistance from the public school system. Home schooled students may attend Gateway at the regular tuition rate charged adult students, provided the attendance is outside of their designated home-school schedule and is not counted toward fulfillment of their home school attendance or completion requirements.

## **Start College Now**

Start College Now will allow public high school students the opportunity to take college courses that are not offered at their high school and that satisfy high school graduation requirements at Wisconsin Technical Colleges under §38.14(12). The program formerly known as Youth Options is now known as Start College Now. Students are eligible to participate if:

1. The pupil has completed 10th grade.
2. The pupil is in good academic standing.
3. The pupil notifies the school board of the school district in which the pupil resides of his or her intent to attend a technical college by March 1 if the pupil intends to enroll in the fall semester and by October 1 if the pupil intends to enroll in the spring semester.

4. The pupil is not a child at risk, as defined in § 118.153(1)(a).
5. The pupil is not eligible under § 118.153 (7t) (c) to participate in the program under § 38.12

The school board of the school district in which the pupil resides is not responsible for transporting a pupil attending a technical college under this subsection to or from the technical college that the pupil is attending. The school board is required to pay the technical college for the cost of tuition, course fees and books for the approved course(s).

### Adding or Withdrawing from a Program

Students are responsible for keeping demographic and program of study information updated on their records. Students' programs, along with personal information, are listed in My Gateway or Student Planning. It is important to keep this information updated so students receive important program information and notifications.

Students who wish to withdraw from their programs should do so through My Gateway - WebAdvisor/ Self-Service. Students also have the option to complete a program withdrawal form available at **gtc.edu/forms** and submit the form to any Student Services Center. To add a program, students must complete a program-add form available at **gtc.edu/forms** and submit the form to any Student Services Center. Students will be required to complete all coursework outlined on the curriculum sheet that corresponds to the academic year they were accepted into the program.

To encourage academic progress toward graduation, Gateway limits the number of programs students may pursue to three. Students applying to more than three programs — excluding internal and Advanced Technical Certificates — must seek approval from the program dean before the additional application is accepted.

### Active Program Status

Students who are not enrolled for two consecutive academic years and who are not taking college-level courses toward their degree will be deactivated from their program(s). To be reinstated, students must reapply to the program by completing a new Application for Admission at **gtc.edu/apply**. Applicants who are reapplying must meet the program's current admission and graduation requirements. The new date of program admission will be considered the official date of acceptance. Note: Withdrawal from a program does not imply withdrawal from courses. See Student Services staff for course withdrawal information.

*Note: Students who are actively petitioning in designated programs will not be deactivated.*

### Readmission of Students Activated for Military Service

Students who are forced to withdraw from their educational program due to military deployment shall be readmitted to the program with their original acceptance date.

### High-Demand Programs/Petitioning

Some programs have a greater number of students than available core course seats. For such programs, Gateway Technical College utilizes a petition process where a post-admission process is used to select accepted students for upcoming core course seats. As directed by TCS 10, students selected via the petition process are chosen based on Gateway District residency at the time of acceptance into their program. First priority is given to in-district residency, then Wisconsin non-district residency and finally non-Wisconsin residents. In addition to residency, students will also be selected based on date of program acceptance. Applicants who change their minds regarding program enrollment or have their application/program status deactivated and want to return to the program will need to reapply and meet current admission requirements. They will be selected based on the most recent program acceptance date rather than the original acceptance date. Conditionally accepted students will be considered for petitioning with their acceptance date and could lose their seat if they do not provide a final official transcript.



The time element prior to selection for and enrollment in core courses varies by program and is not predictable. Further information about specific program petitioning is available at [gtc.edu/petitioning](http://gtc.edu/petitioning). Gateway must be informed of all address changes and changes for telephone or cell phone numbers. If the college does not have updated information, the result could be program deactivation or bypassing the student for openings in a program's core courses.

### Residency Qualifications

Gateway determines whether students are eligible for in-state tuition and petition selection per Administrative Code TCS 10.03. This policy is applicable to all courses whether credit, non-credit, English Language Learner (ELL) or Adult Basic Education (ABE). Determination of Wisconsin residency is based on where the student permanently resides and holds legal bona fide residence. Students must demonstrate the intent to permanently reside in Wisconsin and may not be charged in-state rates if their purpose of residing in Wisconsin is for educational purposes. A person who enters and remains in the state principally to obtain an education is presumed to continue to reside outside the state and the presumption continues in effect until rebutted by clear and convincing evidence of residence in the state through the Residency Determination process. A visa is a permit granted to persons legally residing outside the United States (U.S.) to enter the U.S. for a specified period of time with the intent of returning to their home country. Therefore, students on visas cannot be considered Wisconsin residents for tuition purposes.

Any person who is a resident of Wisconsin/the Gateway district at the beginning of any semester for which the person makes application is a resident of the state/Gateway district for admission and fees purposes. Any resident of the state who has maintained a permanent residence within the district prior to application at Gateway is a Gateway district resident for admission priority. Prior to the beginning of any semester or session for which admission is applied, a person may petition the admissions office for a reconsideration of a residence determination based on changed circumstances. Upon receipt of such petition, the district official charged with residence determinations shall issue a written decision within 30 days of receipt of the request. Requests should be made prior to the start of the intended term. In-district fees will not be retroactively applied.

Applicants/students who wish to have their residency status reviewed should complete the Wisconsin/Gateway Technical College District Residency Verification form at [gtc.edu/forms](http://gtc.edu/forms) and supply corresponding, supporting documentation. All residency verifications must be done prior to the start of the semester in which the applicant/student attends. If verification is received after the start of the term, the new residency status will be effective at the start of the next semester.

### Remission of Non-Resident Fees for Out-of-State Residents Including Au Pairs (Out-of-State Fee Waiver)

WTCS administrative code allows Gateway to remit the out-of-state fees for individuals who are considered out-of-state, can demonstrate financial need and demonstrate the ability to benefit from their educational experience. Au pairs are eligible for remission of out-of-state fees for up to six (6) credits or the equivalent. Additional credits/courses beyond those approved for remission are at the out-of-state rate. Remission of non-resident fees is limited and granted to those eligible on a first-come, first-served basis. Remission applications are submitted on an academic year basis. To apply, complete the Remission of Non-Resident Fees application available at [gtc.edu/forms](http://gtc.edu/forms). Registration will be at the out-of-state rate until remission is approved. Students approved for fee remission are responsible for the payment of any in-state fees (and out-of-state fees, if applicable) that are incurred. Requests should be made prior to the start of the intended term. In-district fees will not be retroactively applied.

### International Students

Gateway Technical College is authorized to issue I-20s for students attending under F-1 and M-1 visas; however, enrollment of foreign students in the educational programs at Gateway will be based upon space availability unless there is a Contract for Service (C-150) which provides for completely dedicated courses at full cost recovery. Gateway is not authorized to issue I-20s to students for study of the English language or for programs considered high-demand. International students are not considered Wisconsin residents and are required to pay tuition equal to the out-of-state rate.

## Conditions for Admission

- Enrollment in technical diploma or associate degree programs that have no waiting period, waiting list or other restrictions.
- Verification of financial resources covering the cost of education.
- Completion of all necessary International Student Admission requirements.
- If transferring, demonstration of good standing in academics, conduct and have no debt at the sending institution(s).
- Sufficient proficiency in English to enable the student to benefit from instruction. Evidence of English proficiency may be TOEFL or IELTS scores that meet Gateway's minimum requirements.

## Procedure

An international student seeking to be admitted to Gateway Technical College shall:

1. Submit a completed application with application fee
2. Complete International Student admission documents:
  - Declaration of Financial Resources or certification of finances documenting funds to cover education for the length of the program.
  - International Student Questionnaire/Emergency Contact form
  - Transfer Clearance form (if transferring from another U.S. school)
3. TOEFL score of 500+, 180 (CBT) or 64 (IBT) or earned a score of 5 or higher on the IELTS or written documentation that the applicant is from an approved English-speaking country. A list of countries which are excluded from the TOEFL testing can be found at **[gtc.edu/internationalstudents](http://gtc.edu/internationalstudents)**.
4. Submit official evaluation of high school and/or college transcripts. Evaluations must be provided directly from the recognized, educational evaluation service.
5. All first semester students are required to pay an initial down payment of \$2400 before/at the date of orientation. This \$2400 goes towards your overall semester charge for tuition and fees. The only exceptions are:
  - Students attending under Section 38.14(3) of the Wisconsin Statutes where Gateway has entered into a Contract for Service with a foreign government or business not operating in Wisconsin.
  - Students qualifying as eligible for Non-Resident Fee Remission:
    - Those enrolling under Administrative Bulletin 04-03, Exchange Agreements with Foreign Educational Institutions.
    - Those who meet the requirements to qualify as Needy and Worthy under Administrative Bulletin AB 04-02. An international student who qualifies for Needy and Worthy status will have his/her deposit returned.
6. Upon completion of all above admission requirements, an I-20 will be issued to the student.
7. When the student arrives, he/she will be required to submit a copy of his or her visa, take the placement test and complete an Agreement of Attendance and Program Completion. An International Student Processing Fee of \$75 will be posted to the student's account once their application is complete. The fee is to be paid prior to the start of classes. International students interested in applying for admission should contact the Primary Designated School Official, Director of College Access, Admissions and Testing in Student Services for further information. Additional information and all forms are available at **[gtc.edu/internationalstudents](http://gtc.edu/internationalstudents)**.

Please note that due to enrollment restrictions, international student applicants should view the list of programs available to them on our website.

### Reciprocity Agreements with the College of Lake County (CLC) and McHenry Community College (MHCC)

Through an agreement between Gateway Technical College and CLC and MHCC, students may be able to attend approved programs in their neighboring state at the in-state rate. Students participating under the terms of these agreements must be accepted to an associate degree, technical diploma or certificate approved by the receiving college under the agreement. These students are not considered district residents for petition selection purposes. Illinois students interested in this option should contact the appropriate official at the college in their home county. Gateway Technical College district residents should contact the Admissions Office at Gateway Technical College. Individual courses and transfer programs are not covered by this agreement. For further information regarding our current agreements please visit [gtc.edu/admissions/cooperative-reciprocal-agreements](http://gtc.edu/admissions/cooperative-reciprocal-agreements).

### Reciprocity Agreement with Minnesota

Wisconsin has a reciprocal agreement with Minnesota. Individuals from Minnesota who wish to attend Gateway may do so at in-state tuition rates by completing a Residency Determination Verification form and submitting Minnesota residency verification (same as for Wisconsin). These students are not considered residents for petition selection purposes.

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## Academic Planning, Advising and Registration

### Academic Advising

Gateway Technical College offers a staff of highly trained and experienced Academic Advisors in each program area. Academic Advisors are available to provide new and continuing students with information about academic programs, curriculum requirements, transitioning to college, college expectations, college success tools and assistance with course selection. Academic Advisors are the primary contact for new students regarding all things academic planning, such as creating a plan, registering, adding/dropping courses, transferring to another program or college, withdrawing or any other academic matter.

We strongly encourage all new students to meet with the Academic Advisor for their program prior to beginning coursework. To a new student, the advisor is the primary source of academic advice, college preparation and assistance in interpreting placement test results, providing an overview of their program and helping complete an initial course schedule along with an academic plan. To the continuing student, the advisor is able to update students on their progress in their program, review graduation requirements, assist with updating academic plans and provide encouragement, guidance and referrals as needed. Advisors are available by appointment, phone, email or at various walk-in opportunities in the Student Services Center on the Elkhorn, Kenosha and Racine campuses.

### Role of the Student in Advising

It is the responsibility of the student to consult an advisor regarding academic information and concerns that may affect the student's academic progress. While Gateway's advisors are here to guide and assist students towards completion of their program, it is ultimately each student's responsibility to fulfill his or her degree requirements. Students will be assigned advisors based on the most recent program they are admitted to. If an embedded degree was added after the highest level degree the student will remain assigned to the highest level degree. Students may set up an appointment with an academic advisor at 1-800-247-7122.

### Role of the Faculty Advisor

Faculty members from each program serve as faculty advisors to continuing students. Students will be assigned a faculty advisor upon completion of 30+ program credits towards an associate degree or 15+ program credits towards a technical diploma. Faculty advisors are available via email, phone and during

faculty office hours throughout the year. Faculty advisors bring a unique wealth of knowledge to share and are eager to help guide students by providing specialized individual assistance specific to each academic program for academic planning, course recommendations, detailed program information as well as general guidance and support to help continuing students progress towards graduation.

### Contact Your Advisor

Students are able to look up contact information for their academic and faculty advisor through their My Gateway account. This will provide a student with the phone number and email address for their designated advisor. To locate this information:

- Log in to My Gateway
- Click on the “My Advisor & Success Team” tab.

### Registration Information

Registration is the process of enrolling in courses. Dates, hours and instructions for registration are available each semester via My Gateway. In the Student Resources menu, click Student Services>Advising & Registration through Self-Service. Academic planning guidance and assistance is available through faculty advisors and academic advisors.

- Students must be officially registered to attend class.
- Students must be officially registered in order to receive credit for class(es).

Students are able to find out when their specific registration window opens. This is the first day available to register for their next set of courses. Gateway Technical College encourages all students to register as early as possible. Each student is able to find this exact date through My Gateway. To locate this information:

- Log in to My Gateway
- In the WebAdvisor and Self-Service Menu, click on Registration and Schedule>When Can I Register?

### Registration Requirements

To complete registration for classes, students must:

- Register via My Gateway or submit a completed registration form to any Student Services Center.  
*Note: Students who are Single-course takers scroll to the bottom of the gtc.edu main page and click the Take A Course link to register. Click the Register Now button to login and register. If you are new to Gateway, first click the “create your Gateway student account here” link to complete the Create an Account process.*
- Make payment or payment arrangements.
- Have met class requisites and be accepted to the program, if applicable.
- Not have an outstanding debt. Students may register with a debt if:
  1. The debt is from the previous semester and is not more \$200 OR
  2. The student has a third-party payer authorization in place with the Student Accounts Office that will pay at least 95% of the tuition and fees of the course(s) for which the student is registering AND the student has a payment arrangement in place for the outstanding debt.

*Note: Students who have any outstanding debt will not be able to receive their transcript or diploma.*

### Priority Registration

Students who are accepted to a postsecondary program are eligible to register during the priority registration period. A continuing program student is given a priority registration date based upon the number of credits the student has completed. Newly admitted program students may register during

New Program Student Registration. Students not accepted into a postsecondary program register during the open registration period, which occurs after the opportunity for all postsecondary program students. Students attending Gateway Technical College under the Start College Now program register during the open registration period regardless of whether or not they have been accepted into a postsecondary program.

### Service Member Priority Registration

Wis. Stat. §38.12(12) provides that priority registration be granted to eligible service members attending a Wisconsin technical college. Eligible service members include those who have served or who are serving on active duty under honorable conditions. In accordance with the law, Gateway Technical College allows eligible service members (not including dependents) to register one day prior to their standard registration date.

### Prerequisites and Corequisites

A prerequisite is a required course which must be successfully completed before a student can register for an advanced course. Most courses require a minimum D- grade to be earned in the prerequisite. However, some courses require a higher minimum grade.

Please see course description information for prerequisite and corequisite requirements. A corequisite is a class which must be completed prior to or at the same time as the selected course. Students should become familiar with the prerequisite and corequisite requirements of their program courses. Not following these requirements can result in the need for extra semesters of work to complete graduation requirements.

Credit for prior learning may help some students meet required prerequisites and corequisites. Students who believe they have work experience or training which may qualify for enrollment in an advanced course should discuss the situation with their academic advisor or visit [gtc.edu/cfpl](http://gtc.edu/cfpl) for more information.

### Electives

Some programs require elective credits for graduation. Electives allow students some flexibility in choosing courses within their program curriculum. Elective courses may be chosen from the wide variety of classes offered each semester. Students in associate degree programs should be sure that their electives are at the associate degree level. Students should check with their faculty advisor or an academic advisor if they need assistance determining the academic level of courses.

### Financial Aid Census Date

The amount of financial aid funding a student is eligible to receive will be based on the fundable number of credits in which the student is enrolled and attending on the Census Date (the 14th calendar day of each semester). After this date:

- Adjustments will not be made for additional enrollment,
- Award may be recalculated for classes with no attendance and/or
- A repayment may be charged for all or a portion of funds received

Gateway highly encourages students to register for all classes for a semester prior to the Census Date.

### No-Shows

If a student does not attend class, they are not eligible to receive financial aid for the class. If an instructor drops a student from the class they are teaching due to the student being a 'no-show' or having poor attendance, there is no refund of tuition and fees; however, the Financial Aid office is required to adjust financial aid based on actual credits.

### Changes in Registration

In accordance with add and drop timelines, changes to a schedule may be made via My Gateway or in person at any Student Services Center. If using My Gateway, in the WebAdvisor and Self-Service

menu, click Registration and Schedule>My Class Schedule. Review your schedule to verify that your transaction was submitted and your schedule reflects the change. A student wanting a third party to complete any transaction on their behalf must provide the third party with the appropriate signed document. The third party must provide photo identification for himself/herself, along with their phone number, relationship to the student and a signature.

### Adding a Class

Prior to the start of the fourth hour of class, a student may register without instructor consent, provided the class capacity has not been reached and all registration requirements have been met. Accelerated, internet and blended classes require instructor approval when adding a class on or after the start date. After the fourth class hour of the course has begun, the student must obtain a Petition to Register Late Form available at [gtc.edu/forms](http://gtc.edu/forms) or in any Student Services Center. An email generated by the student from his or her Gateway email account and instructor response with approval to enter late into a specific section of a course may be used in lieu of the petition form.

After obtaining the signature/approval of the instructor, the student must, prior to the end of the refund/add/drop period for that class, officially add the class in any Student Services Center. Class capacity may not be exceeded. The student is responsible for any and all missed coursework, materials and assignments. Refunds for students who enter a class late and subsequently drop will be calculated based upon the start date of the class, not the date the student registered for the class. A student who does not register for a class is not eligible to receive credit for the class. Financial aid awards will not be adjusted if the class is added after the Census date.

Students may not attend a class unless they are officially registered for the course.

### Waitlists

Waitlists are offered for the majority of post-secondary course sections. If a course section is full, students may join a waitlist via My Gateway or in-person at any Student Services Center. The path to waitlist via My Gateway is in the WebAdvisor and Self-Service menu: Click Registration and Schedule>Plan and Schedule. During the registration process you may join the waitlist for the full class.

#### Waitlists - Seat Available Notification/Registration Requirements

1. If a seat becomes available in a class for which a student is waitlisted, a message telling the student that they have permission to register will be sent to the student's Gateway email account.
2. The seat will be held for the student until 11:30 p.m. the next day.
3. If the student does not register for the class within that time frame, the permission to register will expire and the seat will automatically be offered to the next eligible student.
4. When a student with a Permission to Register is registering for an available seat in a waitlisted class, all standard registration procedures apply, e.g. requisites must be met, capacity limits must be observed, late registration rules still apply, etc.

#### Waitlist Process Notes

- Students must meet normal registration requirements in order to join a waitlist, e.g. have met requisites, have instructor consent, etc.
- A student already registered for a course may not be added to a waitlist for an additional section, i.e. if already registered for a 801-136 class, a student cannot go on a waitlist for another 801-136 section.

A student may only waitlist for one section of a course.

#### Waitlist Closing Info

- Waitlists close (become inactive) at 11:55 p.m. the night before the first day of the class. The last "Permission(s) to Register" will be issued at 11:50 p.m. that night and will expire at 11:30 p.m. the first day of class if the student does not register.

- See the Adding a Class section above for information about registering for a class that has started.

### Dropping a Class

A drop is student-initiated. A student may drop a class without a grade up until 20% of the class meeting times have elapsed. In order to drop a class, a student must complete a drop via My Gateway or submit a completed Drop Form in any Student Services Center. The drop is not complete until My Gateway processes the drop (confirmed by viewing “My Class Schedule”) or the Drop Form is received and processed by the Student Services Center.

Nonattendance or notifying the instructor that the student will not be attending does NOT constitute a drop. When a student registers for a class, the student owes the corresponding tuition and fees. Students who plan to drop a class should do so immediately. A single day can make a significant difference in the amount of the refund. Drop deadlines are printed on a student’s class schedule and are strictly enforced. For information regarding refunds, please see “Refund Policy” in the “Paying for College” section of this handbook. A student who is a financial aid recipient should be aware that dropping a class may affect his or her financial aid award and account balance with the college. If a class is dropped, the financial aid award will be recalculated based on the remaining eligible credits. Dropped classes will be monitored throughout the entire semester. Dropped classes are considered course attempts and are used to calculate satisfactory academic progress for financial aid purposes. If students have questions on how dropping a class may affect their financial aid award, they should contact a Student Finance Specialist prior to dropping the class.

Refunds to employers, agencies or institutions for students dropping contract for service classes are governed by the terms of the contract. Contact the Business and Workforce Solutions department for further information about employer contracts. Contact the High School Partnerships department for further information regarding high school contracts

### Withdrawing from a Class

Withdrawals occur after the refund period; there are no refunds for withdrawn classes. A student may withdraw from a course without an academic penalty up until 80% of the class time has elapsed. A student withdraws from classes by completing a Withdrawal Form for each class and submitting it in any Student Services Center. A grade of ‘W’ will be recorded on the student academic record. A student who stops attending a class after the refund period without withdrawing receives an F grade. Withdrawing from a class(es) may affect the student’s financial aid award. Withdrawn classes are considered course attempts and are used to calculate satisfactory academic progress for financial aid purposes.

*Note: Withdrawal from classes does not imply withdrawal from the academic program. To withdraw from a program, login to My Gateway. In the WebAdvisor & Self-Service menu, click Academics>Withdraw from a Program. A student may also submit a Program Withdrawal Form (found at [gtc.edu/forms](http://gtc.edu/forms)) to a Student Services Center.*

### Class Cancellations

Gateway reserves the right to cancel any scheduled class. Refunds are issued for cancelled classes. The student is encouraged to work with their academic advisor or faculty advisor in making alternative class selections.

### Combining Class Sections

Gateway reserves the right to combine class sections as a result of insufficient enrollments. If this occurs, every effort will be made to notify the student prior to the start of the class. The student’s class schedule can be viewed using My Gateway. In the WebAdvisor and Self-Service menu, click Registration and Schedule>My Class Schedule.

### Auditing a Course

At times, a student may wish to attend a class without receiving a grade or credit. To do so, the

student must register to audit the course. The tuition and fees are the same, whether the student is auditing the course or taking it for credit. (Information regarding the fee waiver for senior citizens auditing postsecondary courses follows.) A student must officially change his or her audit status within the first 20% of class. At the completion of the course, the student will receive a grade of AU (audit). A student who is auditing a course may not change his or her enrollment in the class to credit seeking or vice versa after the first 20% of the class has passed. Courses that are graded on a pass-fail basis only may not be audited.

### Senior Citizen Audits of Postsecondary Courses

Wisconsin residents 60 years of age or older on the start date of the class may audit an associate degree or technical diploma course without paying the tuition portion of the class fee, provided space is available. This is a significantly reduced rate. Only non-tuition fees, such as material, activity and other miscellaneous fees will be charged. Forms for requesting a senior citizen audit are available in any Student Services Center. If a senior citizen wants credit for the course, regular registration procedures and charges apply. The regular audit rules apply to changing status from credit-seeking to audit and vice versa.

### Senior Citizens and ACE Classes

Wisconsin citizens 62 years of age or older on the start date of the class may take Adult Continuing Education (ACE) classes at a significantly reduced rate. A student in this category is not charged tuition for the class, only non-tuition fees, such as material, activity and other miscellaneous fees will be charged. Courses with special tuition charges will be charged at those alternative tuition rates (e.g. traffic safety or firefighter classes). Please contact Student Services for information.

### Student Enrollment Status

Student enrollment status is determined by the number of credit hours for which a student is registered. A full-time student is defined as one who is enrolled in 12 or more credit hours in a semester. A part-time student is defined as one who is enrolled in less than 12 credit hours in a semester. Enrollment verifications reflect the student's enrollment status at the time the verification is completed.

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## Paying for College

Gateway Technical College believes that the opportunity for a college education should be within the reach of all interested individuals. To that end, Gateway offers a variety of payment options, including cash, check, credit card, financial aid, third-party authorizations, Veteran Education Benefits, scholarships and a Gateway student payment plan.

A formal payment arrangement must be selected by 11:59 p.m. on the day of registration to avoid being removed from your class(es). If the classes for which you are registering have already started and you are using the late registration process, you will remain registered and be responsible for all charges.

Gateway has formal payment arrangements that will allow you to remain registered in your classes. Payment arrangements include:

- Gateway Student Payment Plan - no fee or down payment required
- Awarded Financial Aid
- 3rd party funding source, such as employer or agency authorization
- Veteran Education Benefits
- Scholarships
- Payment in full

### Tuition and Fees

Gateway Technical College's tuition and fee structure is established in accordance with the Wisconsin Technical College System and state statutes. Tuition and fees may vary annually and are subject to



change. In addition to the tuition charges for a course, students are responsible for other costs such as books, equipment, uniforms, graduation fees, etc.

Out-of-state students pay additional tuition charges (see Residency Qualifications for more information).

The Student Accounts department maintains your account at Gateway Technical College. For the most up-to-date tuition and fee information, please visit: [gtc.edu/tuition](http://gtc.edu/tuition).

### Financial Aid and Eligibility

Financial aid is financial assistance to help students meet their educational costs. The Gateway Technical College Financial Aid Office administers a comprehensive program of federal, state and college grants, work-study and loan programs to provide assistance to students in funding their education. Gateway uses the Free Application for Federal Student Aid (FAFSA) to determine if a student is eligible for federal grants, student and parent loans, work-study and state grants. The FAFSA is available at [studentaid.ed.gov/sa/fafsa](http://studentaid.ed.gov/sa/fafsa). Students may apply for the upcoming year beginning Oct. 1 of the year before they plan to attend. Please note: You must fill out the FAFSA completely and accurately. If you receive federal student aid based on incorrect or fraudulent information, you will have to pay it back.

Financial aid is made available to students who are eligible according to specific state and federal regulations. All eligible students must:

- Be accepted to an aid-eligible program before an award can be determined
- Be a U.S. citizen, an eligible non-citizen or a permanent resident of the United States
- Demonstrate financial need as determined by Gateway's Financial Aid Office through the Financial Aid Application (FAFSA) process
- Not be in default on any educational loan or demonstrate an unwillingness to repay any educational loan and/or owe any overpayment to Gateway Technical College or the U.S. Department of Education
- Be in compliance with Selective Service regulations
- Be enrolled at least half-time status to receive most types of financial aid
- Maintain Financial Aid Satisfactory Academic Progress (SAP) as defined by Gateway's Financial Aid Office
- Must participate in Loan Entrance/Exit Counseling if award includes loan
- Students must have a high school credential (e.g. high school diploma, GED, HSED)
- Only receive aid at one college per semester

There are three major types of aid available to Gateway students. They include:

- Grants (do not have to be repaid unless a student stops attending during the term. See information on Return of Title IV funds)
- Student Loans (must be repaid)
- Student Employment (students who work and earn money to help pay for college)

Information about the specific types of grants, loans and student employment available may be obtained at [gtc.edu/financialaid](http://gtc.edu/financialaid). Financial aid information may be subject to change at any time due to change in federal, state or sponsoring agency regulations.

### Financial Aid Communications

Communication in regards to the processing of the Free Application for Federal Student Aid (FAFSA) and any resulting financial aid award/eligibility information will be sent to the student's Gateway Technical College student email and located in the "Required Documents" section of Self-Service. It is the responsibility of every student applying for or receiving aid to check both of these locations on a weekly basis throughout the academic year to ensure that all relevant financial aid requirements and deadlines are met in a timely manner. This includes periods when school is not in session as changes

to student eligibility may occur during these times, such as when final grades are issued after the end of the semester. Failure to check student email and the “Required Documents” section of Self-Service on a regular basis could result in the delayed receipt of important information regarding financial aid requirements and the loss of financial aid eligibility.

If a student is awarded funds through the Federal Student Aid program at Gateway Technical College, an award letter will be made available in the “Award Letter” section of Self-Service. Students may view or print this letter at any time for their records. If a student requires assistance viewing and/or printing their award letter, they may visit the nearest Student Services location for assistance. The Financial Aid Office does not print or mail award letters to students, parents or third parties.

### Census Date (Date of Record)

In accordance with federal regulations, the Financial Aid Office will recalculate federal, state and institutional awards based on the enrollment status as of the published census date. The census date is set by the college and is the 14th calendar day of each semester. Official census dates for the current academic year can be found at [gtc.edu/important-dates](http://gtc.edu/important-dates). On this day, the college takes a “snapshot” of all students’ enrollment which becomes the official enrollment that is used for both state reporting and financial aid eligibility. After this date:

- Adjustments will not be made for additional enrollment.
- Awards may be recalculated or cancelled for courses with nonattendance.
- If classes are cancelled or if a course is dropped that has not started, students may owe repayment of aid which was not earned.
- Students enrolled only in remedial/developmental coursework are not eligible to receive aid.
- Students must be enrolled and attending at least 6 credits in order for their student loans and state grants to be disbursed.

Classes that students are enrolled in and attending as of census date will determine the amount of financial aid they receive. If a student is enrolled and attending less than full-time as of the census date, awarded aid will likely be less than what was reported in an initial award letter or email. This difference is because students are initially awarded based on the expectation of full-time enrollment. Financial aid is then adjusted after the census date to reflect students’ actual enrollment. Gateway highly encourages students to register for all courses (including late classes) for a semester prior to the census date.

### Consortium Agreements

Consortium agreements are written agreements between two or more eligible schools. If a student is taking classes at Gateway Technical College (as the HOME school) and would like to take a class or two at a different school (as the VISITING school), their financial aid can potentially be adjusted to include the credits being taken at the VISITING school. For more information regarding Consortium Agreements, please visit: [gtc.edu/student-services/financial-aid/consortium-agreements](http://gtc.edu/student-services/financial-aid/consortium-agreements).

To request a Consortium Agreement Form or more information, please use your Gateway student account to email the financial aid office at: [financialaidoffice@gtc.edu](mailto:financialaidoffice@gtc.edu).

### Financial Aid Satisfactory Academic Progress (SAP) Policy

The Federal Student Aid program requires that schools maintain Satisfactory Academic Progress policies in order to ensure that students are progressing successfully through their programs as a condition of receiving financial aid. Students’ complete Gateway Technical College academic records are used to determine if each student meets the Satisfactory Academic Progress criteria as outlined in this document. All credits attempted at or transferred to Gateway Technical College, including those attempted without the use of financial aid, are included.

Each student’s financial aid status is calculated upon receipt of their Free Application for Federal Student Aid (FAFSA), as well as at the end of each semester if a student has submitted a FAFSA and attempted coursework. Students that have not met the Satisfactory Academic Progress criteria as outlined in this document are notified via their student email account and Self-Service.

For complete website information related to Gateway Technical College's Satisfactory Academic Progress Policy, please visit [gtc.edu/financial-aid](http://gtc.edu/financial-aid). This policy is subject to change at any time should the Department of Education Federal regulations require it.

### Satisfactory Academic Progress Criteria

To maintain financial aid eligibility, students must meet all Satisfactory Academic Progress criteria as outlined below:

- Minimum 2.0 term Grade Point Average (GPA)
- Minimum 67% term completion rate (also known as Pace) -  $67\% = \text{credits completed} / \text{credits attempted}$
- Minimum 2.0 cumulative Grade Point Average (GPA) - Cumulative GPA is calculated on all credits attempted at Gateway
- Minimum 67% cumulative completion rate (all credits completed at Gateway and transferred to Gateway divided by total credits attempted)

Unlike a student's academic GPA and/or completion rate, all attempted coursework is used in calculations involving Satisfactory Academic Progress. This means that courses with a final grade of F, U, W, WF or WP, as well as a final status of NG (no grade) are included in these calculations as non-completions with zero grade points (this is the same as receiving a final grade of "F" in a course). All Repeats (R) are included as the final grade or status that was earned for each attempt. Incompletes (I) are excluded from Satisfactory Academic Progress calculations until such a time that a final grade is issued. Once a final grade is issued, the results will be included in the cumulative results of any and all subsequent Satisfactory Academic Progress calculations. The academic GPA and/or completion rate shown on WebAdvisor may not match your GPA and/or completion rate as calculated for Satisfactory Academic Progress purposes due to these differences. Remedial/Developmental courses are also included in SAP calculations.

### Financial Aid Statuses

#### Financial Aid Warning (FAW)

Students failing to meet the Satisfactory Academic Progress criteria listed above will automatically be placed in Financial Aid Warning status. Students in Financial Aid Warning status remain eligible to receive financial aid. Students in Financial Aid Warning status are not restricted in the number of credits they may take, but must meet all four Satisfactory Academic Progress criteria as outlined above in all future terms to avoid being placed in Suspension – Need Appeal (SNA) status.

#### Suspension – Need Appeal (SNA)

Students in Financial Aid Warning status who fail to meet all Satisfactory Academic Progress criteria will be placed in Suspension – Need Appeal (SNA) status. Students in Suspension – Need Appeal status may file a SAP Appeal/Plan and appeal to have their aid eligibility reinstated. Students choosing not to file a SAP Appeal/Plan must meet all Satisfactory Academic Standing criteria listed in this document in order to be eligible to receive any further financial aid.

#### Approved Appeal/Plan (AP)

Students who submit the SAP Appeal/Plan and are approved must follow the terms of their approved SAP Appeal/Plan. This would include:

- Achieving a minimum 2.0 term Grade Point Average (GPA) in all future terms
- Achieving a minimum 67% term completion rate (also known as Pace) in all future terms -  $67\% = \text{credits completed} / \text{credits attempted}$
- Taking only courses required to complete the current active program listed on the SAP Appeal/ Plan form
- Any and all other criteria as outlined on the SAP Appeal/Plan Form

Students are not allowed to appeal a Financial Aid Suspension more than once. Students in Approved Appeal/Plan status are strongly encouraged to meet with their program advisor to ensure that they are only taking required coursework. Students in Approved Appeal/Plan status that do not meet all of the criteria outlined above will be placed in Financial Aid Suspension (FAS) status.

### Financial Aid Suspension (FAS)

Students are placed into Financial Aid Suspension (FAS) status if:

- The student has completed a SAP Appeal/Plan and it has been denied
- The student has had his or her SAP Appeal/Plan approved, but did not meet the terms specified by the approved SAP Appeal/Plan
- They have exceeded the maximum duration of financial aid eligibility (150% Rule) as outlined below

Students in the Financial Aid Suspension (FAS) status are not eligible to receive financial aid and are not eligible to appeal. Students in Financial Aid Suspension (FAS) status may regain financial aid eligibility if they complete financial aid eligible coursework with alternate funding sources and meet all Satisfactory Academic Progress criteria. Students that meet this criteria will be sent the SAP Reinstatement Form via student email and will be eligible to receive aid once the form is processed by the Financial Aid Office. Students that have had their financial aid eligibility reinstated as a result of the SAP Reinstatement Form being processed and do not meet all Satisfactory Academic Progress criteria in any subsequent term will immediately be placed back in Financial Aid Suspension (FAS) status.

Students exceeding the maximum duration of financial aid eligibility (150% Rule) as outlined below cannot regain financial aid eligibility regardless of academic performance.

### Duration of Financial Aid Eligibility - Meeting the 150% Rule (M150%)

Students that can no longer graduate by the time they have attempted 150% of the published credits for their current active program, as listed on their program requirement sheet, will immediately become ineligible for financial aid and will be placed in Financial Aid Suspension (FAS) status.

All credits that a student has transferred to Gateway Technical College, as well all credits attempted at Gateway Technical College count toward the 150%. All attempted credits are included in this calculation regardless of:

- Program status
- Program(s) being pursued
- Financial Aid received/not received
- Length of time since the credits were attempted

The maximum duration of financial aid eligibility is calculated by taking the number of credits required to complete your current active program requiring the most credits and multiplying by 150% (1.5). For example, a program requiring 70 credits to complete would have a maximum duration of eligibility totaling 105 credits. This is because  $70 \text{ Credits} \times 150\% (1.5) = \text{A maximum of } 105 \text{ credits}$ .

The maximum duration of eligibility for students active in more than one program is calculated using the active program requiring the most credits to complete. It is not calculated on the basis of multiple programs.

Students who meet or exceed the M150% limit for a certificate or technical program who are subsequently accepted into an associate program must notify the Financial Aid Office to have financial aid eligibility reassessed under the SAP policy. Students that remain in the M150% status as of the census date for a given semester are ineligible to receive aid for that semester.

REQUIRED CREDIT for Program	150 percent of that program's credit
70	105
69	104
68	102
67	101
66	99
64	96
61	92
44	66
33	50
32	48
28	42
27	41
17	26

Students exceeding the allowable 150% of their current program will be placed in Financial Aid Suspension (FAS) status at the end of the semester in which the 150% limit is reached. The 150% status cannot be appealed. At this time, all future aid will be cancelled at Gateway Technical College. Students may be able to still receive financial aid at other institutions depending on their SAP policy. Students on Financial Aid Suspension are still allowed to take classes at Gateway Technical College by paying for the classes with alternative resources (payment plan, scholarships, Veterans Affairs benefits, etc.).

### Financial Aid Disbursement and Eligibility Policy

If a student receives federal and/or state funding, his/her funds will be applied to his/her student account. Students are able to charge certain expenses to this account. Expenses include tuition, fees and bookstore charges. After courses begin and a student's attendance is verified on the census date, Gateway Technical College will apply a student's financial aid award to their account. If a student is awarded aid in excess of the balance on their student account, a refund will be issued to the student (for more information please see the BankMobile section below). Financial aid awards are based on enrollment levels. Up-to-date award information may be viewed on Self-Service. Please check the important dates calendar online for disbursement date information: [gtc.edu/important-dates](http://gtc.edu/important-dates).

Gateway Technical College makes multiple disbursements of student loans each semester. If students are receiving loan funds, half of their loan for each eligible semester will be applied to their student account on the first disbursement date, and the second half will be applied to their student account on the second disbursement date. This does not apply to grant disbursements. Students must be enrolled in and attending at least 6 credits for each loan disbursement to be made.

Students due a federal loan refund will follow one of the following scenarios:

- If the first disbursement of the loan funds is enough to cover all remaining charges at Gateway and a refundable balance exists after the first disbursement is made, students will receive a portion of their refund on the first disbursement date and then a second and final portion of the refund on the second disbursement date

OR

- If the first disbursement of loan funds was not enough to cover all remaining charges at Gateway, students will receive a refund on the second disbursement date.

The dollar amount and timing of refunds are dictated by each student's particular balance due and financial aid award. Students should review the award amounts provided on Self-Service and compare them to the charges on their account to determine the timing and dollar amounts of any refunds.

As multiple loan disbursements are a federal requirement, no exceptions can be made to the timing of disbursements for any reason. Please view the Important Dates section to view disbursement dates for each semester. Students must be enrolled in and attending at least 6 credits for each loan disbursement to be made.

### Grants - Eligibility

#### Federal Pell Grant

Students must be enrolled in a minimum of one (1) undergraduate level credit in order to be eligible for the Federal Pell Grant. Depending on a student's Expected Family Contribution (EFC), students may not be eligible for the Pell Grant. Please check with a Student Finance Specialist for more information. Student awards are initially based on full-time enrollment (12 credits each term) for the academic year. The amount of Federal Pell Grant a student receives is based on the student's actual enrollment status at the census date. Due to this, after the census date, awards are recalculated to reflect the student's actual enrollment status. Pell eligibility is based on enrollment, Estimated Family Contribution (EFC) and/or Cost of Attendance (COA).

#### Federal Work-Study

Federal Work-Study provides part-time jobs for Gateway Technical College students who have been awarded Federal Student Aid and have remaining unmet financial need, allowing them to earn money to help pay education expenses. The program encourages community service work and work related to the student's course of study (if possible).

To be eligible to participate in the Federal Work-Study program, students must:

- Apply for and be awarded financial aid (completed a FAFSA)
- Be registered and enrolled in classes
- Have a remaining unmet need

Work-Study earnings are paid at a wage of \$12 per hour and are based on the number of hours worked. Total monies earned cannot exceed the amount stated on the student's Letter of Employment.

#### State Grants

Students must be enrolled in a minimum of six (6) credits as of the census date to be eligible for state grants. Due to limited state funds it is recommended that students apply for financial aid before April 1 for maximum eligibility.

### Loans - Eligibility

#### Federal Student Loans

Students must be enrolled in a minimum of six (6) credits at the time of disbursement to be eligible for student loans.

Students who have not previously received a loan from Gateway Technical College and are requesting a loan must complete Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note (MPN). If you do not complete Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note, your loan funds will not be applied to your account.

Students may complete the Federal Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note on the Department of Education website at [studentaid.ed.gov](http://studentaid.ed.gov).

Students requesting a loan disbursement from a previous term will undergo a review of loan requirements by the financial aid office in order to verify funding eligibility. Loans from a prior award year will not be considered for disbursement.

## Federal Parent PLUS Loans

Dependent students must be enrolled in a minimum of six (6) credits at the time of disbursement.

Eligibility for federal financial aid must first be determined for dependent students before consideration of Parent PLUS loans. Students may complete a FAFSA at [studentaid.ed.gov/sa/fafsa](https://studentaid.ed.gov/sa/fafsa). Parents and dependent students must be U.S. citizens or eligible noncitizens and cannot be in default or owe an overpayment on federal grants. Dependent students' parents' credit history will be checked. If a PLUS loan is denied, students may be considered for additional unsubsidized loans.

Please note, any eligible Direct Parent PLUS Loan amounts in excess of tuition, fees and books will be refunded to a parent through the student's selected refund preference with BankMobile. Students and parents will be required to sign a Parent PLUS Excess Loan Refund Authorization Form. This form will be emailed to the student's Gateway email account when required. If a parent has questions regarding the Parent PLUS Excess Loan Refund Authorization Form, they can contact the Financial Aid Office.

If a borrowing parent of a PLUS Loan refuses to sign the Parent PLUS Excess Loan Refund Authorization Form, accommodations will be made for the parent to receive the funding via check. This request will need to be made in writing and submitted to the Gateway Technical College Financial Aid Office.

## Private Loans

Students must be enrolled in a minimum of one (1) credit at the time of disbursement. Any other requirements set by the private loan originator must also be met in order to receive a disbursement.

Eligibility for federal financial aid must first be determined by completing a FAFSA at [studentaid.ed.gov/sa/fafsa](https://studentaid.ed.gov/sa/fafsa) before consideration of private loans will be made. Gateway reserves the right to deny certification of private loans.

## Purchase or Rental of Textbooks Using Financial Aid Funds

Gateway Technical College believes that being prepared for classes is essential. To ensure students are ready, students who have a financial aid award in place on Self-Service may use their funds to purchase or rent their textbooks and supplies from our partner, Follett Bookstores.

The amount of funds a student will have available to use at the bookstore each semester will be the difference between the amount of financial aid a student has been awarded and the cost of their tuition and applicable fees.

- Bookstore authorization dates can be referenced on the Important Dates page of the Gateway Technical College Financial Aid website.
- Funds will be available 24 hours after your financial aid award has been posted to Self-Service and the student is enrolled in courses.
- To purchase or rent in person, bring a photo ID and a copy of your schedule to the bookstore on campus during the bookstore authorization dates. Let them know you would like to charge your purchase to your financial aid when you check out.
- To purchase or rent online, visit [eFollett.com](https://www.follett.com) during the bookstore authorization dates and select the items to be purchased and/or rented. Proceed to the Checkout area and enter all the required information. You will be taken to the Payment Methods screen and here is where to indicate that you would like to pay using Financial Aid.

Students who are Pell Grant-eligible may wish to purchase their books from an alternate source. To do this, the student has the right to request an early disbursement of a portion of their Pell Grant.

- The maximum early disbursement allowed will be calculated by subtracting the cost of tuition and fees from the amount of Pell Grant awarded for that term as of the date the request is being reviewed. If the cost of tuition and fees is more than the award an early disbursement will not be granted.
- The early disbursement will also be limited to the book component of the student's cost of attendance as determined by Gateway's Financial Aid office.

- If this early disbursement is granted, the student will not have any funds available through Follett Bookstore for that term. If a student already purchased books using their financial aid at Follett, they are no longer eligible for the early disbursement.
- A student may request the early disbursement on a per-term basis by contacting a Student Finance Specialist and asking for an Early Pell Disbursement form. The form must be completed and returned to a Student Finance Specialist at Gateway by the first day of the term that the disbursement is being requested.

### BankMobile

Gateway Technical College has partnered with BankMobile to deliver your financial aid refund. For more information about BankMobile, visit [bankmobiledisbursements.com/refundchoices/](http://bankmobiledisbursements.com/refundchoices/)

For additional information on the BankMobile card, visit [gtc.edu/BankMobile](http://gtc.edu/BankMobile). If you have questions, contact Student Services at 1-800-247-7122 or [sscontactcenter@gtc.edu](mailto:sscontactcenter@gtc.edu).

### Drops with a 100 Percent Refund

If a class is taken off your schedule and you are not charged for the class, your financial aid will be recalculated with the remaining eligible credits on your schedule. Dropped classes will be monitored throughout the entire semester.

### No-Shows

If you never attend class, you are not eligible to receive financial aid for the class. In a situation where an instructor drops a student from the class they are teaching due to the student being a “no-show,” there is no refund on tuition; however, Financial Aid is required to adjust aid based on actual attended credits.

If you intend to drop a course, you must drop the course via Self-Service or submit a class add/drop form in any Student Services Center so that you can be officially dropped from the class. Do not simply stop attending class.

### Return of Federal Financial Aid Funds

The Return of Title IV Federal Funds Policy (R2T4) applies to students who have received federal financial aid assistance and have officially or unofficially withdrawn from Gateway Technical College. Federal financial aid assistance includes Pell Grants, Supplemental Education Opportunity Grant (SEOG), Direct Student Loans (subsidized or unsubsidized) and PLUS Loans for parents. The official withdrawal date is defined as the actual date the student begins the College’s withdrawal process. The student’s last date of academically related activity is used for unofficial withdrawals.

The amount of the federal financial assistance that a student earns is determined on a pro-rata basis. Once the student has completed sixty percent (60%) of the term, all financial aid is considered to be earned. Please contact the Financial Aid Office for the 60% refund dates.

If a student withdraws from school before 60% of the term has been completed or does not officially withdraw and receives all failing grades for the term, the Financial Aid Office will calculate the amount of unearned financial aid and return the funds in the following refund distribution order: Unsubsidized Direct Loan, Subsidized Direct Loan, Direct PLUS Loan, Federal Pell Grant, Federal Supplemental Education Opportunity Grant and other Title IV assistance programs.

If a student receives all “F” grades for a term, they will be considered an unofficial withdrawal. If a student receives all “F” grades for a term but attended at least one class the entire term and “earned” the grade of “F”, the student will not be considered an unofficial withdrawal and no aid will be returned. If the student received financial aid and failed to attend classes, they are considered a “no show” and have not established eligibility for any financial aid. No shows must repay in full any funds received.

Gateway Technical College must return the Title IV funds to the programs from which they received them during the period of payment or period of enrollment, as applicable, up to the net amount disbursed from each source.



The student will be billed for the funds that Gateway Technical College is required to repay.

Consult with the Financial Aid Office prior to any withdrawal to discuss your situation or if you have any questions regarding your financial aid. Students who want to dispute an amount should address all concerns in writing to: Director of Financial Aid, Gateway Technical College, 3520 30th Ave, Kenosha, WI 53144.

### How Return of Title IV Funds are Calculated

Federal regulations assume that students “earn” federal financial aid in direct proportion to the percentage of the term they complete. Federal law requires schools to calculate how much federal financial aid a student has earned if that student:

- Completely withdraws, or
- Stops attending before completing the semester, or
- Does not complete all modules (classes which are not scheduled for the entire term) for which he/she registered at the time those modules began, or
- Receives all F's and W's (or a combination of both) for all classes in any semester.

Based on this calculation, Gateway Technical College students who received federal financial aid and do not complete all their scheduled classes during a semester could be responsible for repaying a portion of the aid they received.

### How is the Financial Aid that I Earn Calculated?

Students who received federal financial aid earn the aid they receive by staying enrolled and participating in college. The amount of federal financial aid the student earns is determined on a prorated basis. Students who withdraw or do not complete all registered classes during the semester may be required to return some of the financial aid they were awarded.

For example, if you complete 30% of the payment period or period of enrollment, you earn 30% of the aid you originally were scheduled to receive. This means that 70% of your scheduled awards remain unearned and must be returned to the federal government. Once you have completed more than 60% of the payment period or period of enrollment, you earn all of your federal financial aid.

The following formula is used to determine the percent of unearned aid that has to be returned to the federal government:

**For Credit Hour Programs:** The percent earned is equal to the number of calendar days completed up to the withdrawal date, divided by the total calendar days in the payment period (minus any scheduled breaks that are at least 5 days long).

**For Clock Hour Programs:** The percentage earned is equal to the number of clock hours the student was scheduled to complete in the period divided by the total number of clock hours in the period.

The payment period for many students is the entire semester. However, for students enrolled in modules (classes which are not scheduled for the entire semester), the payment period only includes those days for the module(s) in which the student is registered.

The percent unearned is equal to 100% minus the percent earned.

Withdrawals from all classes before aid disbursement could result in a post-withdrawal disbursement of aid based on percent earned before aid was disbursed. One hundred percent withdrawals, class cancellations, not attending and complete withdrawals may require adjustments and repayments of federal financial aid funds.

### What is the Withdrawal Date?

The withdrawal date used in the return calculation of a student's federal financial aid is the actual date the student begins the College's withdrawal.

### How are the Unearned Federal Funds Returned?

The College is responsible for returning unearned federal financial aid to the federal government. Amounts that must be returned will be applied in the following order: Unsubsidized Direct Loan, Subsidized Direct Loan, Direct Parent PLUS Loan, Federal Pell Grant and Federal Supplemental Education Opportunity Grant.

The College must return the lesser of 1) the total amount of unearned aid or 2) institutional charges multiplied by the unearned percentage.

The College will bill the student for any funds that were returned due to the Return of Title IV Aid calculation. The student must contact the Student Accounts office to make payments.

### What Happens if I Don't Repay?

Refer to the "Past Due Balances" section of the student handbook.

### Gateway Foundation Scholarships

Students can help keep their education more affordable by applying for a Gateway Foundation Scholarship. Annually, the Gateway Foundation awards scholarships to eligible students ranging from \$300 to \$1,000 or more. During the continuing student scholarship application period, students are encouraged to go to the Foundation Web page and click on the link for "Scholarship Application." To go to the Gateway Foundation online application, visit [gtc.edu/foundation/scholarships](http://gtc.edu/foundation/scholarships). The application period will open at the end of August and close in October. For more information about Gateway Foundation Scholarships, visit [gtc.edu/foundation](http://gtc.edu/foundation).

Established in 1977, the Gateway Technical College Foundation supports the mission of the College by raising community awareness and financial resources, broadening its base of support and providing programs such as scholarships, grants and funds for educational growth. The Foundation will enhance the College's tradition of excellence by being responsive to its needs and strengthening the vitality and well-being of the diverse communities it serves.

As one of its activities, the Foundation specifically raises funds to provide assistance to Gateway students who wish to enhance their lives through education and training. Annually, the Gateway Technical College Foundation, Inc. awards scholarships and grants to students. These awards are made possible through the generosity of individuals (including Gateway alumni and staff), businesses and organizations in southeast Wisconsin who recognize the need to assist in providing funds for students eager to embark on the path to their future. To learn more about the Foundation, please visit [gtc.edu/foundation](http://gtc.edu/foundation).

### Military and Veterans Education Benefits

Gateway Technical College is proud to offer a wide variety of benefits and support services to help veterans, active service members and their spouses and dependents reach their educational goals. Experts on the Kenosha, Racine and Elkhorn campuses can walk students through the process of applying for military and veterans education benefits at Gateway. To schedule an appointment with a Student Finance Specialist, please call 1-800-247-7122, email [sscontactcenter@gtc.edu](mailto:sscontactcenter@gtc.edu) or visit one of our convenient Student Services locations.

For more information about applying for Veterans Education Benefits at Gateway Technical College, please visit [gtc.edu/va](http://gtc.edu/va).

### Federal VA Education Benefits - Satisfactory Academic Progress Policy

Students receiving any of the Federal VA Education Benefits listed below are required to maintain satisfactory academic progress by earning a minimum 2.0 term Grade Point Average (GPA) and complete at least 67% of the courses attempted within the term:

- Post 9/11 GI Bill ®\* (Chapter 33)
- Montgomery GI Bill - Active Duty (Chapter 30)
- Montgomery GI Bill - Selected Reserve (Chapter 1606)
- VA Vocational Rehabilitation (Chapter 31)
- Dependents Educational Assistance (Chapter 35)
- Fry Scholarship

*\*GI Bill ® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by the VA is available at the official U.S. government website at [benefits.va.gov/gibill](https://benefits.va.gov/gibill).*

### Federal VA Education Benefit Statuses

Federal VA Education Benefit Satisfactory Academic Progress calculations will be completed prior to the start of the next consecutive term. Once the students final grades are reviewed, their Federal VA Education Benefits will be placed on one of the following statuses: Good Standing, Warning, Probation or Suspension (see below for more information regarding each status). Students will be notified of their status via their Gateway student email.

**Good Standing:** Good Standing means the student has successfully met the Federal VA Education Benefit Satisfactory Academic Progress criteria (VA SAP) for the semester in question, and they are eligible to continue receiving their benefits.

A student's Federal VA Education Benefits will be considered in Good Standing if they meet the VA SAP criteria while on any of the following statuses: Good Standing, Warning or Probation.

**Warning:** A student's Federal VA Education Benefits will be placed on warning if they fail to meet the VA SAP criteria while their benefits are on Good Standing. Students in a warning status are eligible to continue receiving VA Benefits.

**Probation:** A student's Federal VA Education Benefits will be placed on Probation if any of the following occurs:

- Fail to meet the Federal VA SAP criteria while on warning
- Approved Federal VA Education Benefit Suspension Appeal Form on file
- Successfully Reestablish Satisfactory Academic Progress (earn 6 credits with a minimum 2.0 term GPA) while on Suspension.

Students are still eligible for Federal VA benefits while on Probation.

**Suspension:** If a student's Federal VA Education Benefits are on Suspension, they are no longer eligible to receive their benefits. Students benefits can be suspended due to the following reasons:

- Failure to meet the VA Satisfactory Academic Progress criteria while on Probation
- Incomplete Federal VA Education Benefit Suspension Appeal form submitted
- Denied Federal VA Education Benefit Suspension Appeal form.

Gateway Technical College is required to notify the Department of Veterans Affairs anytime a student's VA benefits are placed on Suspension.

### Reinstatement of Federal VA Education Benefits

When a student's Federal VA Education Benefits are placed on Suspension, the student has two options to regain eligibility for benefits:

#### 1. Federal VA Education Benefit Suspension Appeal Form

Students that have been placed on Suspension will receive an email that includes a link to the Federal VA Education Benefit Suspension Appeal form. The appeal form should be filled out by students who

had an extenuating circumstance occur during their schooling that directly caused them to not meet the satisfactory academic progress criteria.

### 2. Re-establish Satisfactory Academic Progress

Students are able to regain eligibility for their Federal VA Education Benefits by successfully completing a minimum of six college level credits with a minimum 2.0 term GPA. Once this step is completed, the student would be placed on Probation, and the student would be eligible to receive their Federal VA Education Benefits for the next semester of attendance.

For more detailed information regarding Gateway Technical College's Federal VA Education Benefit Satisfactory Academic Progress Policy, please visit: [gtc.edu/va-sap](http://gtc.edu/va-sap)

### Wisconsin GI Bill Tuition Remission Program

The Wisconsin GI Bill (WI GI Bill) waives 100% of tuition and material fees for eligible veterans, spouses and dependents for up to eight full-time semesters or 128 credits (whichever is longer) at any University of Wisconsin System (UWS) or Wisconsin Technical College System (WTCS) institution.

The student is responsible for any remaining balance on their account after the WI GI Bill is applied, such as bookstore charges, activity fees and any other miscellaneous fees associated with the course (ex. online fees, activity fees, etc.).

#### WI GI Bill 2.0 Cumulative GPA Requirement

Students using the Wisconsin GI Bill are required to maintain a minimum 2.0 GPA in order to remain eligible for benefits. If a student's cumulative GPA falls below 2.0 at the end of the semester, the student would no longer be eligible to receive the WI GI Bill for future terms, unless their cumulative GPA reaches a 2.0 or higher.

Once a student reaches the minimum cumulative GPA requirement, he or she should submit a VA-Education Benefit Request Form (VA-EBRF) to notify Gateway they would like to use their WI GI Bill benefit for their next term of attendance.

#### Wisconsin Veterans Education Grant Program (VetEd)

The Veterans Education Grant Program provides a reimbursement grant for the tuition and fees following successful course completion at Gateway Technical College. Reimbursement will be reduced to the extent that tuition and fees have already been paid by other grants, scholarships and remissions provided for the payment of tuition and fees, including federal Post 9/11 GI Bill® (Chapter 33) benefits. The VetEd application (WDVA form 2200) must be submitted to Gateway Technical College no later than 60 days after the start of the course, term or semester for which reimbursement is being sought or the grant will be denied.

*\*GI Bill ® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by the VA is available at the official U.S. government website at [benefits.va.gov/gibill](http://benefits.va.gov/gibill).*

#### National Guard Tuition Grant (NGTG)

The National Guard Tuition Grant provides reimbursement of eligible tuition charges. It does not cover any segregated fees, bookstore purchases and any other fees or costs added to the student's account.

Students are required to submit their Wisconsin National Guard Tuition Grant Application to Gateway no later than 90 days after completion of a course or term, whichever occurs first. For more information and to download the application (DMA Form 189-E), go to: [dma.wi.gov/DMA/support/education](http://dma.wi.gov/DMA/support/education).

#### WDVA Retraining Grant

This grant is for recently unemployed or underemployed veterans who demonstrate a financial need while being trained for employment. The program must be completed within two years. This is a grant, not a loan, and does not have to be repaid. The applicant may not receive a retraining grant and another WDVA education grant for the same period.

- The maximum grant is \$3,000 per year for a maximum of two years.
- Complete eligibility requirements and application forms for the WDVA benefits are available through the students local County Veterans Service Officer.

For more information regarding this program, go to: [dva.state.wi.us/Pages/educationEmployment/Retraining-Grants-.aspx](https://dva.state.wi.us/Pages/educationEmployment/Retraining-Grants-.aspx).

### Payment Arrangements

As a student, you may use one of the following formal payment arrangements to pay for your tuition/fee charges. A formal payment arrangement must be selected by 11:59 p.m. on the day of registration to avoid being removed from your classes. If the class has already started and you are registering late, you will be held in the class and responsible for payment.

Formal Payment Arrangements that will prevent you from being removed from classes include:

- **Awarded Financial Aid:** Verify that the “Review and accept your Financial Aid Award Package” row is marked complete in the Self-Service Financial Aid section.
- **Authorization:** If a third party (company/employer/agency) will be paying all or partial tuition and/or fees for a student, they will need to submit Gateway’s authorization form to the Student Accounts Department. Students can log into their Self-Service account under the “Activity” section to confirm that their authorization is on file.
- **Pay Fees in Full:** Payment can be submitted online via through My Gateway by selecting Financial Information | Make a Payment at [gtc.edu](https://gtc.edu), over the phone at 1-800-247-7122 or in person at any Student Services Center.
- **Student Payment Plan:** Students can log in to their My Gateway account and select Financial Information | Payment Plan or visit any Student Services Center to enroll. NO fee and NO down payment are required; the first payment is due the first Friday of the semester.
- **Scholarships:** Scholarship checks must be received and listed in the student’s My Gateway account to hold the student in their classes.
- **Veterans Education Benefits:** Students who have all paperwork on file for their Post 9/11 GI Bill (Chapter 33) or WI GI Bill, VA Vocational Rehabilitation (Chapter 31) benefits will be held in their classes. Students will receive an email to their Gateway student email address once their benefits have been processed.

For additional information on payment arrangements, please visit: [gtc.edu/payment](https://gtc.edu/payment).

### Student Payment Plan

The Student Payment Plan is available each term until the first installment due date for that semester.

Semester	Summer 2020	Fall 2020	Spring 2021
Payment Plan Opens	2/30/2020	3/23/2020	11/9/2020
Initial Payment/First Installment	5/29/2020	9/4/2020	1/8/2021
Second Installment	6/19/2020	9/25/2020	1/29/2021
Third Installment	7/10/2020	10/16/2020	2/19/2021
Fourth Installment	7/31/2020	10/30/2020	3/12/2021

Students can enroll in the payment plan via My Gateway or by visiting any Student Services Center during normal business hours. Students will receive statements at the mailing address on file with Gateway. If a statement is not received, the student is still responsible for the balance.

Students can view their payment plan balance by logging into their My Gateway account and selecting Financial Information>Make a Payment at [gtc.edu/mygateway](https://gtc.edu/mygateway)

The following outlines the Student Payment Plan requirements.

- The student must be enrolled in 3 or more credits. (Not available for non-credit students or to students only registered in Adult High School, Business Workforce Solutions and Traffic Safety courses.)
- Partial payments do not enroll you in the Payment Plan; the student must officially enroll on the plan and complete the signed contract.
- A maximum of \$4000 is allowed on the payment plan. Any charges over the maximum must be paid in full at the time of enrollment on the plan.
- Four (4) installment payments are due during the semester for which the payment plan is initiated. Due dates are published in the student handbook, on Gateway's website and on the Payment Plan form. Students receive a bill, which is sent to the current address on file. Payments are due by scheduled due dates without exception, even in the event a bill is not received by the student.
- A late fee of \$45.00 will be assessed if scheduled payments for the Payment Plan are received after the due date.
- There is no grace period beyond the due date for payment before a late fee is assessed.
- The student will not be removed from classes and will be responsible for payment of all fees once enrolled on the payment plan.

### Past Due Balances

Students are responsible for all charges incurred on their student account. Debts owed to Gateway are educational debt and therefore seen as educational loan if not paid prior to the end of the term. Your student account is considered by Gateway, a nonprofit institution of higher learning, to be an educational loan made to you to assist in financing your education, and therefore is not dischargeable under the United States Bankruptcy Code. Gateway has the right to recover any collection and/or litigation costs incurred in the collection of any amount due.

It is the student's responsibility to ensure all applicable funding (example: financial aid, scholarships and other outside payments) is applied to their account as expected. Balances not paid by the due date may be subject to the following:

- A late payment fee of \$45 for failure to pay installments on payment plan
- Referral to an outside collection agency and collections costs
- The withholding of transcripts
- Inability to register.

All unpaid balances are subject to collections and credit bureau reporting. A letter will be mailed to the student 30 days prior to this action occurring. If the account is sent to collections, the student is responsible to pay all collection costs, including attorney's fees incurred by Gateway Technical College or its representatives in association with the collection of the past due debt.

Gateway utilizes the Wisconsin Department of Revenue Tax Refund Interception program (T.R.I.P) and State Debt Collections Program (SDC) to collect outstanding debts owed to Gateway.

*\*Students are able to make partial payments online or in person. However, a hold is removed only after a student's outstanding balance is paid in full. Making payments on an overdue balance will not prevent an account from being sent to collections.*

### Balance of \$200 or Less

In accordance with Gateway Technical College's Board of Trustees' policy, in the event a student has a past due balance totaling \$200 or less, the student will be allowed to register for future courses; however, a hold will still be placed on their account that will prevent them from accessing their transcripts and other services.

## Balance of \$200 or More

Students are responsible for all charges on their account. In the event a student has a past due balance over \$200, a hold will be placed on the student's account. The results of this hold is:

- You cannot register for classes
- You cannot receive or send an official copy of your Gateway Technical College transcripts
- Access to other records and/or services may also be restricted.

## 95% or Greater Funding Policy

Students who have a total outstanding balance over \$200 that have submitted the items below will be able to register for future courses at Gateway:

- A third-party authorization on file, reflecting 95% or greater funding for the term they are registering for.
- Submitted proof of a payment plan with the State Debt Collection Agency for the total amount of the outstanding debt.

Please note that until all outstanding debts to Gateway are resolved by being paid in full, access to services, transcripts and diplomas will be restricted.

## Prior Debt Process

Students receiving financial aid may be eligible to take advantage of the Prior Debt Process to assist with paying prior debts with excess Financial Aid funds. Students can apply for the Prior Debt Process via My Gateway.

## Refund Policy

### Refunds for Dropped Classes

Students can drop a course online by logging into their My Gateway account or in person by visiting any Student Services Center. Students are responsible for all incurred charges up to the time in which courses are dropped.

Students may be eligible to receive a reduction in tuition and fee charges if a course is dropped during the designated drop period for that course. An adjustment in tuition charges will be processed in accordance with the refund schedule listed below:

### Refund Schedule

Refund Schedule			
Drop	Before the first class meeting	Last Refund Drop Date column on the front side of student's class schedule	100% Refund
Drop	1-10% of class meetings elapsed	Last Refund Drop Date column on the front side of student's class schedule	80% Refund
Drop	11-20% of class meetings elapsed	Last Refund Drop Date column on the front side of student's class schedule	60% Refund
Withdrawal	21-80% of class meetings elapsed	Contact Student Services for withdrawal dates, instructions and information	No Refund
Non-attendance/ Instructor Drops	Definition: Student doesn't attend or discontinues attendance without completing and submitting drop or withdrawal paperwork.		No Refund

**The student's class schedule is available via "My Class Schedule" on WebAdvisor.**

### No Refund for Instructor Drops

A student who registers for a class but who fails to attend, or stops attending during the refund period without dropping, may be dropped by the instructor. As an instructor drop is administrative and not student initiated, the student is not eligible to receive a refund.

### No Refund for Withdrawals

No refund is made when a student withdraws from a class. Students are able to withdraw from classes after the refund period has ended, e.g., after 20% of the class meeting times have elapsed.

### Refunds for Cancelled Classes

A student is entitled to a full refund of all tuition and fees paid for a class if Gateway Technical College cancels the class.

### Called to Active Duty

The college will provide a full refund of tuition and fees to students called into active service during the term. Students can submit their orders by email to [studentaccountsdepartment@gtc.edu](mailto:studentaccountsdepartment@gtc.edu), or in person at any Student Services Center (Kenosha, Racine or Elkhorn). An email will be sent to the students Gateway email account with a decision regarding their account within 10 business days of the paperwork being received.

## Account Adjustments

Refunds will be applied to any outstanding balance the student has at the College. If the student account is:

**Paid in Full:** The refund will be mailed to the student's current address. No cash refunds.

**Payment Plan Account:** Any refund will be credited toward the balance owed. The amount due on subsequent statements will reflect the adjustment in fees. The refund percentage is based upon the total cost of the courses; it is not a percentage refund of the payments the student has made.

**Paid by Sponsorship/Agency/Company:** The tuition charges billed to the third party will be reduced. No refund will be issued.

**Paid/Partially Paid by Financial Aid:** The Financial Aid award/disbursement will reflect adjustments due to dropped classes.

## Student Account Appeals

Students are responsible for payment of all charges on their account. However, in the event that a student encounters an extenuating circumstance that unexpectedly impacted their ability to complete their courses, the student may request a Student Account Appeal to request a reduction of the balance on their account. Please note that an approved Student Account Appeal will only adjust tuition charges, not other fees or bookstore charges on a students account.

A student who wishes to submit a Student Account Appeal form must meet with a Student Finance Specialist to discuss their situation in more detail. If the student's situation meets the criteria for an appeal, the Student Finance Specialist will provide the form.

All completed Student Account Appeals and supporting documentation must be submitted within 120 days from the official end of the term that the student is appealing charges for. Appeals submitted after that date will not be accepted.

Students will receive a decision regarding their appeal within 21 days from the date the completed appeal was received by Gateway staff.



# Academic Information and Student Records

## Gateway Technical College Credentials

### Associate Degrees, Technical Diplomas and Advanced Technical Certificates

The Gateway Technical College District Board has the authority to grant associate of applied science degrees, technical diplomas and advanced technical certificates to graduates of occupational programs approved by the Wisconsin Technical College System Board. Students must apply and be accepted to an associate of applied science degree, technical diploma or advanced technical certificate program and complete all program requirements to graduate.

### Gateway Certificates

The Gateway Technical College District Board may award District certificates to students who complete a specific course or group of courses. Certificates are designed to help students gain entry level employment in specialized areas or to qualify for occupational advancement. Students must apply to the certificate program and complete all program requirements to receive a certificate.

### General Education Development (GED®)

Students can earn their GED by passing the official GED Testing Service tests. Subjects include Language Arts (RLA - Reasoning through Language Arts), Math, Science and Social Studies. Students must also pass the Civics exam. Prior to testing, students must complete an orientation (course 890-721) through the Adult Learning Center. GED instructors can pretest in all four testing subject areas. Practice tests are available in selected subject areas. GED teaching strategies include small group instruction, computer-assisted learning, self-guided exercises or assignments and one-on-one tutoring. Nonresident fees may apply.

### High School Equivalency Diploma (HSED)

An HSED may be completed in several ways. Many students decide to complete their HSED through GED testing and completion of health, civics exam, career Awareness and employability skills. An HSED may also be obtained through the completion of high school credits, post-secondary credits or competencies. Students may also be eligible to receive an HSED if they have been granted a diploma from a foreign country. Students interested in pursuing an HSED should have their official high school transcripts sent to Gateway Admissions Office for review. All HSED participants must take an orientation (890-721) prior to starting the HSED program. Nonresident fees apply.

### English Language Learner Program (ELL)

ELL is designed to prepare students whose first language is other than English to speak and understand the English language. Students will improve their speaking, listening, grammar, writing, reading and vocabulary skills and learn about health, community, government, consumer education and employability skills. Large and small group instruction, computer-assisted learning and self-guided exercises and assignments are utilized. Free to Wisconsin residents.

## Student Name

The legal name on a student's record is the official name that will be displayed on college documents such as transcripts, diplomas, commencement programs, academic records, billing records, financial aid records, clinical placement records, licensing certification records and international student records as well as employment, benefit and payroll records. Name changes will only be completed upon presentation of a legal document supporting the change, linking the new name to the name currently on the student's record. Requests for name changes may be submitted to any Student Services Center. Gateway recognizes that students may use names other than their legal names to identify themselves. The college is phasing in use of students' chosen names where the functionality is available in the

software systems. Last names cannot be updated through the chosen name process. Students can submit a chosen name request online at [gtc.edu/forms](http://gtc.edu/forms), in the Registrar Forms section or in person in Student Services.

## Social Security Number Policy

Social Security numbers (SSN) are used to identify student records. A student's failure to provide a SSN may delay processing. All Gateway students who are applying for financial aid are required to provide their Social Security number. A Social Security number is critical to state and federal reporting and the financial aid process. The Social Security number, protected by the Family Educational Rights and Privacy Act (FERPA), is not considered directory information and therefore will not be released to a third party. The Internal Revenue Service allows some post-secondary students to claim an education income tax credit on their taxes. In order to claim this credit, the student's Social Security number must be on file at the college so the student's enrollment and tuition and fees costs can be reported to the IRS. The college will make a 1098T form available to the student electronically by January 30 of each year. This will document the student's SSN on file and the post-secondary enrollment information. For tax credit eligibility information, consult your tax professional. The Internal Revenue Service requires that Gateway provide 1098T forms annually to post-secondary students.

## Student ID Number

Every student will have a system-generated ID number that will appear on his or her academic record and most Gateway correspondence. This number is not considered directory information and will not be released to a third party. It is important that students know their student ID number.

## Curriculum Sheets

Curriculum sheets detail current course requirements and course descriptions in a student's program. In order to graduate from a specific program, students must fulfill the requirements of the curriculum sheet for the academic year for which they were accepted.

At any time, a student may elect to follow the most recent program curriculum but may not move to a previous sheet. To move to the most recent program curriculum, students must complete a Curriculum Year Change form. This form can be found under the Registrar section at [gtc.edu/forms](http://gtc.edu/forms) or at any Student Services Center.

Useful information concerning possible job opportunities at entry and advanced levels is listed on the back of each curriculum sheet. Curriculum sheets can be obtained at [gtc.edu](http://gtc.edu) or printed in any Student Services Center.

## Academic Standards

### Academic and Program Standards

Academic and program standards are developed and are available to all students.

### Continuous Student Enrollment (Policy J-110)

Academic programs at Gateway undergo frequent changes to keep programs current with demands in technology and accreditation criteria. Generally, students are allowed to graduate following the program curriculum sheet in place at the time of the student's initial program acceptance. Because of frequent program changes and the length of time taken by students to meet graduation requirements, the following policies will govern which curriculum sheet will be used to define a student's graduation requirements:

1. The College does, after two (2) years of non-continuous enrollment, require the student to follow the most recent program curriculum in order to graduate.
2. The College reserves the right to place a seven (7) year limitation on accepting courses for graduation. Some programs have more stringent age requirements on course age for courses that are prerequisites to program courses.

3. At any time, a student may elect to follow the most recent program curriculum.
4. The College reserves the right to establish course substitutions when courses are inactivated to meet program curriculum requirements.

## Grading System

### Credits

Each post-secondary course carries academic credit based on total contact hours and the method of instruction. Credits are used in determining student grade point average. General college and developmental/remedial (pre-technical and pre-college) courses do not carry credit toward post-secondary degrees or diplomas and are not used in academic GPA calculations. However, all post-secondary courses, including general college, developmental and remedial courses are used to calculate Satisfactory Academic Progress for financial aid purposes.

### Post-Secondary Grading Information

Students enrolled in associate degree, technical diploma or adult high school credit courses will be graded by the following letter grade and point system. These represent various levels of accomplishment and grade points earned. Some instructors may not use plus (+) or minus (-) grades.

Grading scales for individual courses are outlined on each course syllabus and may vary from course to course. It is important for students to review and understand course grading scales.

Grades	Description	Grade Points
A	Excellent	4.00
A-	Excellent	3.67
B+	Good	3.66
B	Good	3.00
B-	Good	2.67
C+	Satisfactory	2.33
C	Satisfactory	2.00
C-	Satisfactory	1.67
D+	Poor	1.33
D	Poor	1.00
D-	Poor	0.67
F	Failure	0.00

The following grades may appear on your transcript but will not be included in the Grade Point Average:

- WP - Withdrawal Passing (prior to 2007)
- WF - Withdrawal Failing (prior to 2007)
- W - Withdrawal
- R - Repeated
- I - Incomplete
- AU - Audited (no credit earned)
- TR - Transfer Credit
- PR - Proficiency Credit (Credit for Prior Learning)
- M - Manual Repeat Adjustment
- P - Pass (minimum 2.0 GPA equivalent)

## “I” Grade

The “I” (incomplete) grade may be assigned at the discretion of the instructor. The student must have been close to completing the course but, due to extenuating circumstances, unable to complete the final exam or a limited amount of coursework. The instructor sets a deadline by which the coursework must be completed. The deadline will normally be within a few weeks of the end of the class, but no later than the end of the following semester (not including Summer semester). The “I” grade will be displayed on the student’s transcript, which may be viewed via My Gateway. In the WebAdvisor & Self-Service menu, click Academics>Unofficial Transcript. If the student receives an “I” grade in a course which is a prerequisite to a subsequent course the student will not be eligible to enroll/remain in the subsequent course. An “I” grade which is not changed by the deadline set by the instructor will automatically be changed to an F. The “I” grade counts as credits attempted but not completed for financial aid Good Academic Standing calculation.

## Grade Changes

Grade changes must be made within one year of the end of the semester in which the student registered for the courses. Grade changes will be honored only to correct a mistake or error in calculating or assigning the course grade.

## Student Program Record Sealed at Graduation

Once a student graduates from a program, that record is sealed. No changes are made to grades used to meet program requirements. If a course used to fulfill a graduation requirement is repeated after a student graduates, the repeat does not affect the record; it will not be used for credit or GPA purposes. Students who graduate from a program and subsequently complete the courses required for an additional concentration(s) in a program will not be officially awarded additional concentration(s). The courses will display on the student’s transcript, but the graduation information for the program will not be modified.

## Viewing Grades

Students may view their grades via My Gateway. In the WebAdvisor & Self-Service menu, click Academics>Unofficial Transcript. Final grades are available online the day after the instructor submits them. Students who have an outstanding balance on their account will not be able to view their grades or transcripts.

## Grade Point Average (GPA)

A student’s average grade is expressed in terms of a Grade Point Average (GPA). Grading at Gateway is based on a four-point scale. GPAs are truncated, not rounded. The grade point average is calculated by dividing the sum of the grade points by the total number of GPA credits. General college, pre-college and pre-technical classes are developmental and/or remedial classes and do not count toward post-secondary graduation, nor are they used in GPA calculations for academic or credential purposes. Financial aid does include general college, pre-college and pre-technical classes for Satisfactory Academic Progress calculations. To determine grade point average:

- Multiply the number of GPA credits for each course by the grade point value of the letter grades assigned. This converts the letter grades into grade points.
- Add the total number of GPA credits.
- Add the total number of grade points earned.
- Divide the total number of grade points by the total number of GPA credits.

The resulting figure is the student’s grade point average. The example on the next page illustrates GPA calculation for one semester.

Example:					
Course	Grade	Point Value		GPA credits	Grade Points
English Comp I	F	0.00	X	3.0	0.000
Intro to Sociology	C	2.00	X	3.0	6.000
Speech	D	1.00	X	3.0	3.000
Management Principles	B	3.00	X	2.0	6.000
Accounting I	A	4.00	X	4.0	16.000
Investments	AU	--	X	--	--
			<b>Total</b>	<b>15.0</b>	<b>31.000</b>
Credits Completed	--	15.0			
Grade Points Earned	--	31.000			
Grade Point Average	--	31/15=2.066			

## Repeated Courses

Students may only earn credit once for a course. When a student repeats a course, only the highest grade earned is used for academic GPA calculations. The lower grade remains on the transcript but is annotated as being a repeated course. All attempts of repeated courses are used to calculate Satisfactory Academic Progress for financial aid purposes.

## Dean's List

Dean's List honors are granted each semester for students who are accepted into an associate degree or technical diploma program, have enrolled for a minimum of six (6) credits, not including developmental/remedial credits and achieved a semester grade point average of 3.75 or better (see "Grade Point Average (GPA)" section). Dean's List calculations are based on courses that have finished (been graded) by the end of the traditional semester. The deadline to order a replacement certificate is the end of the semester following the semester in which the Dean's List recognition was earned.

## Provost Honors Program

To be eligible to participate in the Provost Honors program, a 3.5 or higher cumulative grade point average and a minimum of 12 credit hours of college coursework completed is required. Eligible students will need to submit the honors contract. The honors contract is a collaborative effort between the student and a faculty member which provides an opportunity for the student to enrich the quality of his/her education beyond what is normally expected in the course. Proposed contracts must be relevant to the subject of the course. If the honors contract is approved by the Provost's office and the student completes the requirements of the project, the student will receive honors designation for that course. If 12 or more credits of honors courses are completed satisfactorily the student is awarded Provost Honors at graduation.

## Midterm Grades

Midterm grades will be available via My Gateway on the dates specified in the academic calendar. In the WebAdvisor & Self-Service menu, click Academics>Midterm Grades. A midterm grade is a snapshot of your grade on the date the midterm grade was entered. Midterm grades do not appear on your transcript and are not calculated into your GPA. Midterm grades are intended to help students understand their progress in courses. Instructor comments may be provided with midterm grades. Since the grades are for student information purposes only, no grade changes are processed for midterm grades. If a midterm grade is determined by the instructor to have been inaccurate, the instructor will communicate the accurate grade to the student. Students should refer to their syllabus for the course grading policy and assignment information. Midterm grades are only required for post-secondary courses that begin at the start of the traditional semester and are at least 13 weeks in length. It is important for students to review their midterm grades via My Gateway.

## Adult Continuing Education Grading Information

Adult Continuing Education courses are non-credit, are recorded on a separate transcript and are not calculated in a student's GPA. Students enrolled in Adult Continuing Education (ACE) courses will be assigned the following grades:

Grades	Grades	Grade Points
S	Satisfactory	No grade points are assigned for Adult Continuing Education Courses
U	Unsatisfactory	
W	Withdrawal	

## Attendance

Gateway recognizes the importance of attendance in the learning process but does not believe that attendance in and of itself constitutes learning. Instructors will document in their course syllabi fair and reasonable attendance policies for their classes based on their subject matter, delivery methods, learning activities, student audience, external regulations, college and departmental guidelines and employer expectations in their field of instruction. Students are responsible for reading and understanding each class attendance policy and for learning any material covered during an absence.

To be eligible to receive financial aid funding for classes, students must be registered for and attending all classes prior to the established Census Date.

## Transfer Credit

A student must be accepted to a post-secondary program at Gateway before transfer credits will be evaluated. Courses completed at a regionally accredited institution are evaluated to determine transferability. The Transfer Credit Specialist will evaluate the transcripts working in collaboration with course instructors and academic deans as necessary to determine course transfer credit. Coursework completed at an institution which is not regionally accredited may be evaluated through the credit for prior learning process to determine what proficiency credit may be granted. Gateway must have official transcripts on file before transfer credits are evaluated. Official transcripts are defined as transcripts sent directly by mail to Gateway from the issuing institution, by a recognized electronic transcript service or hand-delivered by the student if the transcripts remain unopened in the issuing school's sealed envelope. Official transcripts must have the issuing school's seal and appropriate official's signature to be accepted. Official transcripts remain the property of Gateway Technical College and cannot be returned. Gateway Technical College cannot provide students with copies of their transcripts from other institutions. Students requiring copies of transcripts from other institutions they have attended must obtain them directly from those institutions. No more than 75 percent of a degree or certificate can be earned through transfer credit and/or credit for prior learning. A minimum grade of C is required for courses to be accepted as transfer. Courses with a grade of C- or below will not be accepted. Some courses in some programs (e.g., Nursing) have prerequisites with minimum grades higher than a C. Please refer to the degree requirements on your curriculum sheet. Transfer credit does not count in GPA calculations for graduation purposes. Students must have completed at least one post-secondary credit before an official transcript reflecting transfer credit will be issued.

## Credit for Prior Learning

Credit for prior learning recognizes prior learning through the awarding of academic proficiency credit. A student must be active in an associate degree, technical diploma or certificate program at Gateway to be eligible to apply for a prior learning assessment. Students with prior learning may be able to pass prior learning assessments and earn credit toward their degree or diploma from Gateway. Non-refundable prior learning assessment fees are charged based on the standard WTCS rates and are not covered by financial aid. No student is allowed to apply for prior learning assessment for a course which they are failing or for which they have received a letter grade on their official transcript including A through F grades, incomplete or withdrawal grades. Internally developed and Gateway administered

PLA's may only be attempted once. Should you fail a Gateway developed and administered PLA, you must then enroll in and pass the course to receive credit.

No more than 75 percent of a degree or certificate may be earned through transfer credit and/or credit for prior learning. When PLA credit is awarded, it is on a proficiency basis. Grades of "PR" are awarded. PLA credit does not count toward the student's grade point average. Students must have completed at least one post-secondary course at Gateway before an official transcript reflecting transfer credit will be issued. Please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu) for information. Credit for Prior Learning assessment methods are listed below.

### College Level Examinations

College-level proficiency credit will be granted for knowledge validated by exams such as Advanced Placement (AP), College Level Examination Program (CLEP) and Dantes Subject Standardized Test (DSST). Please refer to Gateway's website for a list of accepted exams. Students must meet minimum score requirements to be awarded credit. A minimum score of 3 is required for AP exams, a minimum score of 50 is required for CLEP exams and minimum scores on DSST exams varies by exam. Some examinations may require additional competence tests before credit can be granted. An official transcript, score report or equivalent documents issued by the external agency must be submitted before credit can be granted. Additionally, proficiency credit may be granted to students who demonstrate course competencies through the satisfactory completion of college developed course-specific internal exams for designated courses.

### Demonstrative Exam

Proficiency credit may be granted to students who demonstrate course competencies through the satisfactory completion of college developed demonstrative performance exams for specified courses. Exams are not available for all courses. Contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu) for information

### Portfolio Assessment

Proficiency credit may be granted to students who demonstrate course competencies through portfolio presentations demonstrating mastery of skills or competencies. Portfolio presentations are not available for all courses. There are specific courses for which proficiency credit may be granted through portfolio presentations. Contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu) for information.

### Military Evaluation

Credit may be granted upon review of an official military transcript from Joint Services Transcript (JST) which may be requested at [jst.doded.mil](http://jst.doded.mil). Transcripts should be submitted to the Registrar's Office. Guidelines established by the American Council on Education (ACE) are considered in addition to referrals to specific departments when deemed necessary. The Registrar's Office will evaluate the transcripts working in collaboration with academic departments as necessary to determine course transfer and/or proficiency credit. There are no fees assessed for the award of CFPL credit based on a JST evaluation.

### Articulation for High School Students

Through articulation agreements with area high schools, Gateway awards credits for certain approved courses taken at the high school level. Students must enroll in Gateway within 27 months of high school graduation and have earned a B or better in the high school course. It is also possible for qualified high school students to enroll in a higher level Gateway course with the consent of the academic advisor. High school students should speak with their high school guidance counselors regarding these opportunities.

### Graduation Requirements

The Gateway Technical College District has procedures that govern the graduation requirements for technical diplomas, associate degree programs and advanced technical certificates. In order to graduate, a student must fulfill the following requirements:

- All the course requirements on the official curriculum sheet the student is enrolled under must be completed successfully. Any course substitutions must be approved and documented on the student's record.
- Twenty-five percent (25%) of the program credits must be earned at Gateway Technical College. Courses which were completed by the credit for prior learning process are not counted as credits earned at Gateway Technical College.
- Twenty-five percent (25%) of the major course credits designated with an asterisk (\*) on the curriculum sheet must be earned at Gateway Technical College. Courses which were completed by the credit for prior learning process are not counted as credits earned at Gateway Technical College.
- The following grade point average (GPA) requirements must be met:
  - A Program GPA of 2.000 or above is required to graduate (2.000 on a four-point grading scale is a C).
  - A Major GPA of 2.000 or above is required.
- Some programs require a grade of "C" (2.0) or above in some courses; refer to your curriculum sheet.
- Individual programs may have additional requirements to meet accrediting agency requirements. Refer to the program curriculum sheet for additional graduation and grade point requirements.
- All student financial obligations must be met before certificates, diplomas, degrees, advanced technical certificates and transcripts are released.
- It is the student's responsibility to check his/her degree audit prior to the last semester of study to ensure that all the requirements for graduation will be met. All requirements must be completed by the last day of the semester, including removal of incomplete grades and submission of transcripts with transfer credits. If students have questions related to graduation requirements, they should discuss with their academic advisor.

## Computation of GPA for Graduation

### Cumulative GPA

- All associate degree and technical diploma level courses that a student has taken at Gateway are used to calculate this GPA.
- Not used to determine graduation eligibility.
- This GPA appears on the transcript and program degree audit.

### Program GPA

- All courses on the program curriculum sheet are used to calculate this GPA.
- This GPA is used to determine graduation eligibility and graduation honors.
- This GPA may also be used to determine other department or campus awards.

### Major GPA

- All courses that are designated with an asterisk (\*) on the program curriculum sheet are used to calculate this GPA.
- This GPA is used to determine graduation eligibility.
- This GPA may also be used to determine other department or campus awards.

## Graduation - Post-Secondary Credentials

Students are automatically graduated at the next available graduation date from any associate of applied science degrees, technical diplomas or advanced technical certificates for which they have completed all program and graduation requirements. Graduation is processed at the end of each semester and the graduation dates are the last day of classes of the Summer, Fall and Spring semesters.



## Application for Graduation - Adult High School

In order to graduate with an adult high school diploma, students must submit an application for graduation by the filing deadline. Apply via My Gateway. In the WebAdvisor & Self-Service menu, click Academics>Apply for Graduation. Paper applications will also be accepted in any Student Services Center. Gateway has three (3) graduation dates each year. The graduation dates are the last day of classes of the Summer, Fall and Spring semesters. Students graduate on the next available graduation date after they have applied for graduation and have met all program requirements. The filing deadline dates are: Summer Graduation – July 31; Fall Graduation – October 31; and Spring Graduation – March 31. Students who have applied to graduate but fail to meet the requirements must submit a new application to graduate indicating in which semester they intend to graduate.

## Awarding of Certificates

Students do not need to apply to be awarded certificates. Certificates will automatically be awarded and mailed to students active in certificate programs if they have completed all requirements by the end of the term. Students will receive their certificates in the mail 6 to 8 weeks after the end of the term.

In order to receive a certificate students must fulfill the following requirements:

- All the course requirements on the official curriculum sheet must be completed successfully. Any course substitutions must be approved and documented on the student's record.
- Twenty-five percent (25%) of the program credits must be earned at Gateway Technical College. Courses which were completed by the credit for prior learning process are not counted as credits earned at Gateway Technical College.
- A Program GPA of 2.000 or above is required (2.000 on a four-point grading scale is a C).
- Some certificates have specific minimum grade requirements for certain courses, e.g. a grade of "C" (2.0) or above in some courses. Refer to your curriculum sheet.
- Individual certificates may have additional requirements to meet accrediting agency requirements. Refer to the certificate curriculum sheet for additional graduation and grade point requirements.
- All student financial obligations must be met before certificates will be released.
- It is the student's responsibility to check his/her degree audit prior to the last semester of study to ensure that all the requirements for completion will be met. All requirements must be completed by the last day of the semester, including removal of incomplete grades and submission of transcripts with transfer credits. If students have questions related to completion requirements, they should discuss with their academic advisor.

## Graduation with Honors

There are three graduation honors designations which may be earned by students completing an associate degree or technical diploma.

Honors distinction is bestowed upon students attaining the following program grade point average (GPA):

- District Honors: 3.750 - 3.899
- President's Honors: 3.900 - 4.000
- Provost's Honors: A student who receives honors credit for 12 or more credits in their program will be recognized as a Provost's Honors graduate. Please see the section on Provost's Honors program for further information.

The final determination regarding official honors status is made at the end of the semester. The decision will be made when the final program GPA is calculated and the Provost's Honors courses have been graded and reviewed. Official graduation honors will be recorded on the student's transcript and will

display on the diploma after final graduation verification. The program grade point average listed on the program degree audit is the official grade point average used to determine honors. Grade point averages are not rounded.

### Commencement Ceremonies: Associate of Applied Science Degree, Technical Diploma and Advanced Technical Certificate

The college commencement ceremony, held in May, is a special recognition of students' scholastic achievements at Gateway Technical College. It is a formal cap-and-gown ceremony and all graduates are encouraged to participate. A student's name will appear in the official program and potential honors designation will be acknowledged at the ceremony only if they have registered for their last program classes by March 31. August graduates are eligible to participate in either the ceremony before or after their graduation. To participate in the ceremony before their graduation, August graduates must be registered for their last classes by March 31. All August graduates who register after this date will be invited to the next year's ceremony. Students who would like to participate in the commencement ceremony must reserve their seat online. All potential graduates and confirmed graduates are notified in mid-April of ceremony and reservation details. For further information, please visit [gtc.edu/graduate](http://gtc.edu/graduate).

### Adult High School Graduation Ceremony

*Note:* The Adult High School Program will be permanently closing at the end of the Spring 2021 semester. Students must have all of their graduation requirements completed by the end of the Spring 2021 semester. The Adult High School graduation ceremony, held in May, is a special recognition of students' scholastic achievements at Gateway Technical College. This is a formal cap-and-gown ceremony, and all graduates are encouraged to participate. December graduates from the previous semester are invited to participate in the May ceremony. For Spring and Summer graduates, the student's name will appear in the official graduation program only if an Application for Graduation form is on file with the Registrar's Office by March 31. Students who, as of March 31, have two adult high school credits (six credit hours) or less to complete in Summer semester may participate in the ceremony in May of the same year. All potential graduates and confirmed graduates are notified in mid-April of graduation ceremony details. For further information, please visit [gtc.edu/graduate](http://gtc.edu/graduate).

*Note:* The Adult High School Program will be permanently closing at the end of the Spring 2021 semester. Current students must have all of their graduation requirements completed by the end of the Spring 2021 semester.

### HSED/GED Recognition Ceremony

The HSED/GED recognition ceremony, held in May in conjunction with the Adult High School graduation ceremony, recognizes students' earning of their academic credential through Gateway Technical College. This is a formal cap-and-gown ceremony, and all credential recipients are encouraged to participate and be recognized. Students who have earned their credential since April 15 of the prior year are invited to attend the ceremony. Students must complete their testing by April 15 of the current year to participate in the ceremony. Confirmed credential recipients are notified, beginning mid-April, of graduation ceremony details. For further information, please visit [gtc.edu/graduate](http://gtc.edu/graduate).

### Transcripts

Transcripts may be secured by submitting an online request via the National Student Clearinghouse (NSC) website. Transcripts are available for the following types of records: postsecondary, adult high school and adult continuing education (ACE). Transcripts of General Educational Development (GED) or High School Equivalency Diploma (HSED) testing completed through Gateway prior to 2014 may also be obtained. GED or HSED credentials earned 2014 or later must be requested from the testing service Pearson Vue.

The student must electronically submit their request to the NSC before transcripts may be released. Gateway does not release transcripts received from other institutions. For more information on requesting a transcript, including request fees, please visit [gtc.edu/transcripts](http://gtc.edu/transcripts).

Until all outstanding debts to Gateway are resolved by being paid in full, access to records will be restricted. Students with an outstanding balance will not have access to transcripts or diplomas. Students may owe debts to Gateway which are related to registration, financial aid, library, returned checks or for other miscellaneous reasons. Students' debts are retained on their records until they are cleared. All students with debts will be notified by the Registrar's Office upon submitting a transcript request.

### Guaranteed Retraining

Graduates may be eligible for up to six additional credits of free retraining if their employer certifies that they lack certain skills or if the student has been unable to secure employment. Questions regarding retraining available under this policy should be directed to the Institutional Effectiveness or Student Services office.

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## Student Rights and Responsibilities

Gateway is dedicated to helping students identify and achieve realistic goals through excellent educational opportunities. The administration and staff of the College promote the goals of responsible participation and high achievement for our students. As a Gateway Technical College student, you should be aware of and accept responsibility as an active, contributing member of the College. This section explains policies and procedures identifying student rights and responsibilities. Gateway Technical College believes that all students have responsibilities in the areas of governance, services and conduct.

### Student Academic Responsibilities

Students are responsible for their own learning and development. They have a responsibility to be active learners by attending class, participating in class activities and discussions, completing class and laboratory assignments and preparing in advance for the scheduled class session.

### Student Use of Services Responsibilities

Students are responsible for

- Appropriate use of equipment and services provided by the College
- Knowledge and participation in student social and professional activities.
- Seeking assistance when facing problems that interfere with educational success.
- Meeting financial obligations to Gateway Technical College and those incurred through student loan programs.

### Student Code of Conduct – Policy J-300

#### Policy

1. The Gateway District recognizes that in order to operate a meaningful educational program and a safe environment for students and staff, this Code of Conduct will be followed.
2. The Gateway District believes every student has the right to pursue an education free from disruption, harassment, illegal activities, threats or danger. The District further believes that academic honesty and integrity are fundamental to the educational mission of this College. Every student is expected to comply with the standards set and to be familiar with all the rules, regulations and policies of Gateway Technical College.
3. On a daily basis, any student or group of students may be denied access to the classroom upon the instructor's determination that their behavior impedes student learning, the health and safety of peers, self or the staff. The instructor will notify the student(s) of their denied access. The Dean of Campus Affairs will also be notified by the end of the working day.

## Procedure - Standards

1. Students are expected to comply with all institutional, federal, state, county and municipal policies, statutes and ordinances.
2. At all times, students are expected to conduct themselves in such a manner as not to interfere with the educational process at Gateway Technical College.
3. Students will conduct themselves in such a manner as not to endanger the safety or welfare of their fellow students.
4. Students must comply with the following and may be subject to discipline, including suspension or dismissal, for the following offenses:
  - a. Obstruction or disruption of the normal operations of the College or activities authorized by the College.
  - b. Physical or verbal abuse, harassment or detention of any person(s) on school property or at school activities when such endangers the health, safety or rights of such persons.
  - c. Theft, damage or misuse of property of the College or property of any visitor or member of the Gateway Technical College community.
  - d. Unauthorized entry to or use of Gateway Technical College property or facilities.
  - e. Dishonesty, which includes but is not limited to, knowingly furnishing false information to the College, plagiarism or any form of cheating.
  - f. Use, under the influence of, possession, sale or distribution of narcotic or illegal drugs, firearms, explosives, dangerous chemicals, alcoholic beverages, etc. on Gateway owned or leased property or at Gateway sponsored activities.
  - g. Possession of a dangerous weapon on school premises or at school-related events.

## Discipline

The following procedures have been developed to deal with a student who has failed to comply with this policy.

**Step 1.** Upon receipt of an alleged violation, the appropriate Dean of Campus Affairs will be assigned to investigate the charges. The Dean of Campus Affairs may temporarily suspend a student pending an investigation when the student's continued presence might cause continued academic disruption or endanger the student or others.

**Step 2.** If the investigation determines that the college has reasonable cause to believe that a student has pursued a course of conduct which is contrary to Gateway policy and requires sanction(s), the dean of campus affairs may take appropriate action. Within five (5) working days from the action, the student shall be given notice in writing, by certified mail or personal delivery, the results of the investigation and the sanctions applied. The notice will also provide the information necessary for the student to appeal the sanctions if he or she wishes.

**Step 3.** Students who appeal the sanctions must notify the Executive Vice President/Provost in writing within five (5) working days of receipt of the letter. The student will be notified in writing, by certified mail or personal delivery, of the time and place of the hearing before a disciplinary committee composed of the Executive Vice President/Provost or designee, a staff member and a student. Said hearing shall be held no less than two (2) working days nor more than seven (7) calendar days from the date the student receives the above notice of hearing. The student shall be provided the name(s) of the witness(es) testifying against him/her and a copy of the initial investigation results that was conducted by the dean of campus affairs.

**Step 4.** At any hearing before the disciplinary committee, the student shall have the right to present testimony on his/her own behalf and call witnesses.

**Step 5.** The committee shall issue a dated, written order (to the student) informing the student of the decision. The order may be personally delivered or sent certified mail.

## Non-Academic Sanctions

The following sanctions may be imposed on students who fail to comply with this policy.

1. **Warning:** Issued to a student who has committed a minor violation of this policy and doesn't pose a continued concern for the college.
2. **Disciplinary Probation:** Issued to a student who has committed a violation of this policy and will face additional sanctions if any additional violations occur during a specified time frame.
3. **Suspension:** Issued to a student, for a specified time frame, who has committed a major, egregious or continued violation(s) of this policy.
4. **Dismissal:** Permanent removal, issued to a student who has committed a major, egregious or continued violation(s) of this policy.
5. **Restriction:** Issued to a student who has committed a violation of this policy, the resolution is a limitation on the student's access to identified services, locations, education, community activities or persons. Issued for a specified time frame.
6. **Restitution:** Issued to a student who has committed a violation of this policy that resulted in staff, institutional or another student's financial loss. May be issued as a condition of return or continued attendance in the college.
7. **Referral:** Issued to a student who has committed a violation of this policy and it's determined that continued participation at the college is contingent upon the student attending designated services (college or private vendor) or programs. May be issued for a specified time frame or as permanent and may be issued as a condition of return or continued attendance in the college.
8. **Loss of Privileges:** Issued to a student who has committed a violation of this policy and it is determined that the student may continue attendance in the college with permanent limitations on the student's access to identified service, location or educational community activities.
9. **No Contact:** Issued to a student who has committed a violation of this policy and it is determined that the student may continue attendance in the college with permanent limitations on the student's access/contact with an identified individual(s) or groups of students and/or staff.

These sanctions are not meant to be progressive in nature. A student may be issued one or more of these sanctions in response to an incident. The college will determine the level of sanction based on the severity of the incident or series of incidents.

## General Student Complaints - Policy J-100

### Policy

In order to provide students with the opportunity to have any complaint or concern they encounter at Gateway heard and addressed, the college maintains informal and formal channels for student complaints. The college requires that students first use informal channels to seek resolutions by working directly with the parties involved. If resolution cannot be reached, formal channels are provided to reach prompt and fair resolution of complaints.

The college will not tolerate retaliation against any individual for filing a complaint in good faith in order to seek a resolution to a problem with the college or its employees or students.

### Definitions

1. For the purpose of this policy, a student is defined as an individual who is currently or has been enrolled in any Gateway course within a 12-month period prior to filing a complaint.
2. A complaint is a request for specific action to resolve a problem caused by the action or inaction of the college or its employees.
3. Expressions of dissatisfaction with the college's action or inaction, facilities or services that do not include a request for action will be labeled as concerns and considered feedback. Concerns may or may not require follow-up by the college.

# Student Rights and Responsibilities

4. Retaliation is any adverse action or threat of adverse action against an individual because of the individual's good faith report of a complaint. Good faith means the individual has an honest and reasonable belief that college action is required to resolve a problem.

## Processes

Several categories of student complaint have separate processes outside this policy with their own timelines and requirements:

1. Academic concerns (grades, classroom policies, etc.)
2. Discrimination, harassment and Title IX complaints
3. Student account appeals - contact a Student Services Student Finance Specialist
4. Behaviors of Concern

All other student complaints follow this policy.

## Procedure

1. **Informal complaint.** Students are required to make every effort to resolve their complaint informally by working directly with the employee or department involved. Students should communicate specifically what problem they are experiencing and what action they are requesting to resolve their issue. Students are encouraged to seek resolution as soon as possible after the unsatisfactory situation occurred. If the complaint is not resolved in a reasonable amount of time to the student's satisfaction, the student may move on to the formal complaint process. Students may not skip this step since most complaints can be resolved at this level.
2. **Formal complaint.** All formal student complaints are submitted electronically on the Student Complaint form, which can be found at [gtc.edu/safety](http://gtc.edu/safety). Formal complaints must be filed within 12 months of the situation prompting the complaint. The following information is required:
  - a. **Identification of a complaining party.** Students are asked to provide their name and Gateway ID number. Anonymous complaints will be considered; however, the college's ability to investigate and resolve the complaint may be limited. For complaints on behalf of a group of students, all individuals seeking a specific action must be named.
  - b. **Category of complaint.** To assist in resolving complaints promptly, student should indicate the general nature of their issue: facilities/equipment, customer service, administration, employee conduct, student conduct, college services or general/other.
  - c. **Description of problem.** Student should describe in detail the action or inaction of the college or its employees with which they are dissatisfied and the negative impact of the situation on the student. Names of parties involved, dates and locations should be included whenever possible.
  - d. **Prior attempts to resolve.** Students must explain the prior attempts to resolve the problem at the informal level and why those attempts were unsuccessful.
  - e. **Outcome desired.** Students must state specifically the action they are requesting from the college that they consider an acceptable resolution of the problem.

Students will receive an acknowledgment of submission of the form and details of next steps. Students with disabilities may contact Gateway's Disability Support Services department for assistance with the complaint form.

3. **Review and Resolution.** Formal complaints will be directed to the supervisor of the person or department involved unless the issue has already been addressed unsuccessfully at that level. In those cases, the complaint will be directed to the next higher supervisor. Supervisors will investigate complaints and respond promptly based on the circumstances of the situation.
4. **Appeal.** Students who are dissatisfied with the response to their formal complaint may appeal to the vice president of the division involved by submitting a student complaint appeal form within five working days of receiving the response. If the vice president was party to the unsatisfactory resolution of the formal complaint, the appeal may go to the president or his/her designee. The decision of the vice president or president/designee is final.

- 5. Complaint records.** Gateway has a federal obligation to maintain records of all student complaints including the name of the complaining party, the nature of the complaint, the resolution, any other related actions (appeals to outside agencies, etc.) and any institutional learning resulting from individual complaints or patterns of complaints. Records are retained for a minimum of ten years. Release of complaint records is subject to appropriate privacy laws. A summary of these records will be shared with the college's accreditor, the Higher Learning Commission, with names and personally identifiable information removed. Gateway requires only complaints that reach the formal written level to be included in these records. Supervisors may enter verbal complaints into the college's student complaint database at their discretion.

## Student Due Process Rights – Policy J-101

### Academic Concerns Policy

The Gateway District believes that students need a process to address academic concerns (e.g. grades/classroom policies) and bring their issues to the faculty and administration's attention. These procedures are intended to afford students, faculty and the College fair and equal treatment. The student may seek guidance from an Academic Advisor or another Student Support representative who will assist the student in understanding the process. All complaints must be filed within one (1) year of occurrence.

### Procedure

**Step 1:** The student should first address a concern to the instructor. Students are encouraged to attempt to resolve the issue within the first thirty (30) days of the incident, through informal discussion with the appropriate faculty member.

**Step 2:** If the concern remains unresolved, the student may submit a Step 2 Academic Concern form, available on the Student Complaints and Concerns page of the Gateway website which identifies the specific concerns and desired outcomes. The supervisor will share the written complaint with the faculty member and request a written response. The supervisor will communicate with the student and the instructor and respond in writing within ten working days. This may serve as Step 1 in certain circumstances.

**Step 3:** If the concern remains unresolved, the student may appeal to the Executive Vice President/Provost by submitting a Step 3 Academic Concern appeal form within five (5) working days of receiving the supervisor's decision. If it is determined that a review is appropriate, an appeals committee will be assigned to hear the concern within seven (7) working days of the request.

The appeals committee selection is as follows:

- The Executive Vice-President/Provost selects the following four (4) people: one (1) chairperson who will be an administrator and three (3) faculty/staff members. The United Student Government leadership will select two (2) students from outside the student complainant's program area.
- The student complainant will select one (1) peer from his/her program area.

The committee will make a recommendation to the Executive Vice-President/Provost who will make a decision within five (5) working days of the committee hearing. The decision of the EVPP is final.

## Academic Integrity – Policy J-114

Academic integrity is submitting one's own work and properly acknowledging the contributions of others. Any violation of this principle constitutes academic dishonesty and is liable to result in a failing grade and disciplinary action. Gateway places the highest value on delivering a quality learning experience for all students. The learning experience requires trust between faculty and students and adherence to standards of academic honesty and integrity. To deter academic misconduct it is important that students understand how it is defined and what is expected of students. It is also important that students know their rights when an allegation of academic misconduct is made. Every member of the college community has the right to expect that all students will be graded fairly, and every member of

# Student Rights and Responsibilities

the college community has rights of due process if accused of academic misconduct.

Academic misconduct includes but is not limited to: (These definitions apply to all academic work, including but not limited to all exams, essays, homework, performances, computer programs, projects, labs, tutoring and the like.)

1. A student seeks to claim credit for the work or efforts of another without authorization or citation, i.e. plagiarism;
2. A student uses unauthorized materials (notes, calculators, etc.) in any academic exercise;
3. A student forges or falsifies academic documents or records;
4. A student provides examination questions or answers to another person or accepts examination questions or answers from another person;
5. A student copies the academic work of another student;
6. A student intentionally impedes or damages the academic work of another;
7. A student engages in conduct that misrepresents a student's academic performance;
8. A student assists another student in any of the acts described in this section; or,
9. Any member of the college community assists or collaborates with a student in any of the acts described in this section.

## Procedures for Addressing Allegations of Academic Misconduct

1. When an instructor suspects that a student or member of the college community has engaged in academic misconduct, the instructor will investigate the matter in a timely manner. The instructor will communicate the basis of his or her suspicion to the student and/or college member, if at all possible, to afford those individuals the opportunity to respond.
2. If, as a result of this investigation, the instructor determines that no academic misconduct has occurred, the matter will be considered concluded.
3. If, as a result of this investigation, the instructor determines that academic misconduct involving a student in his/her class has occurred, the instructor will apply sanctions as outlined in his/her syllabus. If a college employee is involved, that person's supervisor will be notified.
4. The instructor will file a Maxient report on each occurrence (Maxient is a reporting system used to share and store information).

## Multiple Occurrences of Academic Misconduct

- a. First confirmed occurrence will result in the sanctions specified in the instructor's syllabus.
- b. Subsequent occurrences of academic misconduct will follow the student code of conduct process (J-300).

## Appeals

- a. Appeals of the instructor's resolution of the initial occurrence follow Policy J-101 Student Due Process Rights/Academic Concerns.
- b. Appeals of discipline for student code of conduct violations follow Policy J-300 Student Code of Conduct.

## Student Information Updates

It is necessary for the college to have current student contact information for the purpose of communicating official correspondence and for use in case of emergencies. Students are responsible for keeping Gateway records up-to-date with their current mailing address, email address and phone numbers. Students can update their information via MyGateway>WebAdvisor & Self-Service>Personal Information>Update Personal Information. Students may also submit a Student Data Change form in Student Services. When students leave Gateway, it is their responsibility to maintain updated contact information with the college for purposes of continued communication.



## Texts and Automated Calls

SMS messages (also known as text messages) and automated phone calls are types of communication that Gateway Technical College may send to students. These forms of communication may be utilized by authorized university officials to relay registration, waitlist, course cancellation, academic advising, account information and financial aid messages that are time sensitive in nature. Students may opt out of receiving these text messages and calls via MyGateway>WebAdvisor & Self-Service>Personal Information>Update Personal Information They may also submit this information in person at any Student Services Center.

Note: If your cell phone provider charges for text messages received, there will likely be a cost associated with this service. Check with your mobile phone provider.

For information about Gateway's "AlertMe" Emergency Notification System, please see the Services for Students section of this handbook.

## Federal Family Educational Rights and Privacy Act (FERPA)

### Notification of Rights

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. FERPA rights begin when a student registers for a course or at the point of admission to a program. These rights include:

- 1.** The right to inspect and review the student's education records within 45 days of the day the College receives a request for access. A student should submit to the Registrar's Office a written, signed request that identifies the record(s) the student wishes to inspect. The registrar or designee will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the registrar, that official shall advise the student of the correct official to whom the request should be addressed.
- 2.** The right to request the amendment of the student's education records that the student believes are inaccurate, misleading or otherwise in violation of the student's privacy rights under FERPA. A student who wishes to ask the college to amend a record should write the College official responsible for the record, clearly identify the part of the record the student wants changed and specify why it should be changed. If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
- 3.** The right to provide written consent before the College discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent. The College discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic or research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted as its agent to provide a service instead of using College employees or officials (such as an attorney, auditor or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibilities for the College.
- 4.** The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW Washington, DC 20202-5901

## Notification of Directory Information

Gateway Technical College complies with the provisions of FERPA. Prior written consent from a student must be obtained before information may be disclosed by Gateway Technical College to third parties, unless the information or the individual or group making the request is exempted by the policy and the Family Educational Rights and Privacy Act of 1974. Such exemptions are made for the following:

1. Request from Gateway Technical College faculty and staff with a legitimate need to know.
2. Request in accordance with a lawful subpoena or court order.
3. Request from representatives of agencies or organizations from which the student is receiving or has received financial aid.
4. Request from officials of other postsecondary educational institutions to which the student has applied for admission.
5. Request from other persons or agencies specifically exempted from the prior consent requirement by the Act. This includes certain federal and state officials of the District accrediting agencies, etc.
6. Requests for directory information, which includes the following categories:
  - Name
  - Hometown
  - Date of birth
  - Program of enrollment (major field of study) and number of credits for which currently or formerly enrolled
  - Participation in officially recognized activities
  - Dates of attendance (including enrollment status, classification, year, matriculation and withdrawal dates)
  - Candidacy for graduation
  - Degrees and awards (type of degree and date granted)
  - Honors received
  - Most recent previous educational agency or institution attended

The student may elect to have directory information held confidential. When this option is exercised, the only information that will be released by Gateway, other than for exemptions 1 through 5 above, is confirmation that a student is or has been enrolled at Gateway. If a student elects to allow the release of directory information, such release will be limited to those requests perceived to be in the best interest of the student; e.g. requests from parents, friends, relatives, prospective employers or licensing agencies seeking to confirm certain information, societies, news releases, programs, etc. Gateway Technical College assumes no responsibility or liability for the accuracy of judgment as to whether or not a release of directory information is in the best interest of a student.

If a student elects to have directory information held confidential, they should contact the Registrar's Office for further information and to complete the appropriate form. Gateway will assume no responsibility for contacting students who have elected to stipulate directory information as confidential for the subsequent permission to release any information. When a student or former student no longer wishes their information to be confidential they must complete a form with the Registrar's Office to reverse the previous action

## Enrollment Policy – J-190

Students will be considered enrolled in a class upon registration (and provided they remain registered) if they have:

- Paid the required tuition and fees,
- Entered into a standardized payment plan with the District,
- Been awarded financial aid or
- A third-party payer authorization/contract filed with Gateway guaranteeing payment of the tuition and fees.

Any student who has an outstanding debt greater than \$200 with the College will not be allowed to register until the debt has been reduced to \$200 or less unless the student has a 95% or greater third-party payer authorization in place with the Student Accounts Office and has a payment arrangement in place for the outstanding debt. Students who believe they should not be held responsible for charges to their account due to extenuating circumstances must follow Student Account Appeals procedures. This policy will be effective in reference to debts incurred after January 1, 1992.

### Institutional and Employee Relationships with Educational Loan Lenders – J-217

1. Students and their families increasingly rely on loans to finance a college education. As a result, Gateway Technical College employees have more frequent interactions with educational loan lenders. In addition, because of the increasing numbers and complexities of the loans, Gateway employees are often asked by students and their families to provide assistance with regard to their financial decisions.
2. Gateway employees are committed to providing that assistance in an objective, fair, clear and understandable manner. In order to assure students, their families and the public that Gateway and its employees continue to serve students' best interests, Gateway will comply with all federal and state laws pertaining to the administration of financial aid in addition to the following regarding the relationship between Gateway and educational loan lenders.

#### 1. Lender Lists

- a. The District is permitted to maintain lists, either in print or other media, of educational loan lenders for the benefit of students, subject to the following:
- b. The District will use an evaluative process for the inclusion of lenders on the list; information regarding the selection of lenders, the evaluative process used and the criteria used for such selection will be available to the public upon request;
- c. Any District lender list must be accompanied by a statement explaining that students are not limited to the lenders included on the list;
- d. A lender list must include a minimum of three lenders; and
- e. The District will work with the educational loan lenders on the list to ensure that specific loan information and key details ( including, but not limited by enumeration to, the terms, interest rate and repayment requirements) are available from the lender in a clear and understandable manner.

#### 2. Consumer Information

The District will inform students who apply for financial aid of the following:

- a. That the student may use any lender who is eligible to make education loans when selecting a lender for a Federal Stafford loan.
- b. That federal and state government loans are available and provide comparative information on private and government loans.
- c. That students are encouraged to explore and weigh the use of federal loans that are guaranteed, regulated and may be more advantageous before pursuing private or alternative loans.

#### 3. Allowed Services and Resources

The District and its employees are allowed to receive the following services and resources for educational loan lenders:

- a. Counseling and educational materials for use by students and their families regarding student lending laws, education loans, financial literacy, debt management and other topics relevant to providing students and their families with financial aid assistance; any such materials must clearly disclose the source of said materials and may not use trademarks, logos, mascots or other symbols associated with the District or that would suggest any District endorsement of the lender or product.

- b. Training to District employees regarding student lending laws, education loans, financial literacy, debt management and other topics relevant to providing students and their families with financial aid.

### 4. Prohibitions on the Gateway District and its Employees

Gateway and its employees are prohibited from the following:

- a. To solicit, accept or enter into any agreement in which an educational loan lender provides fees, revenue sharing or material benefits to the District institution in exchange for the institution or its employees recommending the lender or its loan products.
- b. To enter into an agreement with a lender of education loans for or solicit or accept from a lender of education loans any funds that would be allocated or used for opportunity loan pools or any similar arrangements.
- c. To solicit or accept assistance for call center or financial aid staffing from a lender of education loans.
- d. To solicit, accept or enter into any agreement in violation of the District policy on student financial aid operations and may not engage in conduct that violates the District code of ethics under TCS 6.06(1), Wis. Adm. Code or any applicable provisions of Wis. Stats. §19.41, et seq., Code of Ethics for Public Officials and Employees.
- e. To receive compensation or reimbursement from an educational loan lender for any costs incurred as part of participating on an advisory council of the lender.
- f. District employees are allowed to participate on an advisory council of an educational loan lender for the purpose of improving services to students as long as they do not accept compensation or reimbursement from the lender for any costs incurred for participating on the advisory council.

### Student Right-to-Know Reporting – J-270

#### Policy

Gateway will maintain and disclose student program completion and graduation rates in compliance with the Student-Right-To-Know and Campus Security Act.

#### Procedure

- Information on completion and graduation rates of all technical diploma or associate degree-seeking full-time students will be collected.
- This information as well as Campus Security Information will be made available through appropriate College publications, on the Gateway Technical College website (gtc.edu) and to prospective students upon request.
- This information will be available before prospective students enroll or enter into any financial obligation with the College.

### Identity Theft Prevention – Policy H-195

Gateway Technical College is committed to protecting the identifying information of our customers' covered accounts. The College is governed by Section 114 of the Federal Trade Commission's Fair and Accurate Credit Transactions Act which created the Red Flags Rule. This regulation requires the College to have an Identity Theft Prevention Program designed to detect, prevent and mitigate identity theft in connection with opening a covered account or existing covered account and to provide administration of the program. The College's program will:

- Identify relevant Red Flags for covered accounts it offers or maintains and incorporate those Red Flags into the program
- Detect Red Flags that have been incorporated into the program
- Respond appropriately to any Red Flags that are detected to prevent and mitigate Identity Theft
- Ensure the program is updated periodically to reflect changes in risks to students and to the safety and soundness of the creditor from identity theft

If you have questions about the Identity Theft Prevention Policy, contact the Office of Student Accounts.

### Solicitation of Business on District Property for Personal Gain by Students – Policy J-320

Students shall not solicit other students, faculty or employees on District property for private financial gain. Violation of this policy is subject to Code of Conduct procedures, J-300, Non-Academic Discipline, Suspension or Dismissal.

### Drug-Free Environment

Any student who engages in an activity on Gateway premises or at a Gateway-sponsored event, that constitutes a violation of the State of Wisconsin Uniform Controlled Substances Act, shall be subject to non-academic misconduct disciplinary sanctions. In determining the appropriate sanction, the college President or designee, shall consider those penalties, including suspension and expulsion, that will contribute most effectively to maintaining a College environment free from controlled substances.

In keeping with local, state and federal laws, Gateway Technical College prohibits the possession, use or distribution of drugs, alcohol or any intoxicant, by students while on College property or when involved in any College-sponsored activity. If a student has a drug or alcohol problem, we highly recommend that they seek assistance from the Student Services office.

### Tobacco-free/Smoke-free Environment – Policy E-155

Gateway Technical College recognizes the health hazards associated with smoking and the use of tobacco products and is strongly committed to maintaining and improving the health and well-being of all students and staff.

Therefore, Gateway prohibits the use of tobacco products at any time on all Gateway properties including but not limited to all buildings, grounds, sidewalks, streets, parking lots and structures and all Gateway owned and leased vehicles. This prohibition applies to all employees, students and visitors at any school-sponsored instructional program or activity held on or off district property. Any written joint use agreement governing community use of district facilities or grounds, shall include notice of the district's tobacco-free schools policy and the consequences for violations of the policy.

Prohibited products include any product containing tobacco or nicotine, including, but not limited to, cigarettes, cigars, miniature cigars, smokeless tobacco, snuff, chew and nicotine delivery devices such as electronic cigarettes, electronic hookahs and other vapor-emitting devices with or without nicotine content that may mimic the use of tobacco products. Exceptions may be made for the use or possession of prescription nicotine products.

Failure to comply with this policy will be dealt with through the college's disciplinary procedures. Students, staff, visitors and tenants who breach the policy will be asked to cease use of said product and may be asked to leave the premises if they fail to comply with that request. All breaches of this policy will be recorded in writing.

### Concealed Carry

In an effort to provide a safe learning and working environment, Gateway Technical College has initiated a policy prohibiting anyone except for authorized law enforcement personnel, from bringing a weapon inside any college building. Gateway bans all weapons, as defined by Wisconsin state statute and U.S. Code, inside college facilities or on college owned/controlled property (outside of approved storage in personal vehicles), which includes – but is not limited to – such items as knives and firearms.

Persons storing weapons within their own vehicles while parked on college owned, leased or operated lots or grounds should make sure of the following:

- Conceal the weapon from open view
- If a firearm, store the weapon in a secured (locked) case or install a locked trigger guard

## Restraining Orders/Orders of Protection

Anyone who has a restraining order or other order of protection, against another person that identifies College facilities/locations as protected sites must provide the Associate Vice President, Facilities and Security with a copy of any temporary, protective or restraining order that is made permanent. Working with the student, a determination will be made as to the measures that need to be taken to meet the requirements of the restraining order. In addition, individuals are encouraged to make a report to the Office for Equal Opportunity and Civil Rights at [gtc.edu/TitleIX](http://gtc.edu/TitleIX)

## Sex Offenders on Campus

In accordance with the Campus Sex Crimes Prevention Act of 2000, which amends the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act, the Jeanne Clery Act and the Family Educational Rights and Privacy Act of 1974, you can view sex offenders on the Wisconsin Department of Corrections website: <http://offender.doc.state.wi.us/public>. All sex offenders are required to register in the state of Wisconsin and to provide notice of each institution of higher education in Wisconsin at which the person is employed or is a student.

In addition to the above notice to the State of Wisconsin, all sex offenders are required to deliver written notice of their status as a sex offender to the Associate Vice President, Security and Facilities, no later than three (3) business days prior to enrolling with, commencing employment with or volunteering at the College.

Such notification may be sent out by the College to — and for the safety and well-being of — the College community and may be considered by the College for disciplinary purposes.

## Equal Opportunity, Civil Rights and Sexual Misconduct

Gateway adheres to all federal and state civil rights laws prohibiting discrimination in public institutions of higher education. The full and current copy of this policy (Policy H-110) is posted at [gtc.edu/eeo](http://gtc.edu/eeo) and [gtc.edu/TitleIX](http://gtc.edu/TitleIX)

The College will not discriminate against any employee, applicant for employment, student or applicant for admission on the basis of race, color, national origin, ancestry, creed, religion, political affiliation, marital status, parental status, pregnancy, family or medical leave, disability, age, gender, sexual orientation, arrest record or conviction record, retaliation, union or non-union affiliation, membership in the National Guard, state defense force or any reserve component of the military forces of the U.S. or Wisconsin or any other protected category under applicable local, state or federal law, including protections for those opposing discrimination or participating in any resolution process on campus or within the Equal Employment Opportunity Commission or other human rights agencies.

This policy covers nondiscrimination in employment and in access to educational opportunities. Therefore, any member of the campus community who acts to deny, deprive or limit the educational or employment access, benefits and/or opportunities of any member of the campus community, guest or visitor on the basis of their actual or perceived membership in the protected classes listed above is in violation of Gateway's policy on nondiscrimination.

## Affirmative Action

Gateway is committed to affirmative action for women, minorities, veterans and disabled individuals in employment and academic advancement. The college completes a comprehensive affirmative action plan every year and uses this data to guide placement goals relating to these groups. Placement goals, when indicated, are neither rigid nor inflexible goals that set a ceiling or floor for employment of particular groups. Goals do not create set-asides for employment groups nor are they intended to achieve proportional representation or equal results. They do not supersede objective criteria and merit selection principles. All employment decisions are made in a nondiscriminatory manner and placement goals are not used to extend a preference to any individual or adversely affect an individual employment status on the basis of race, sex, religion, etc. In addition, the college conducts an adverse impact analysis to identify possible barriers to employment for all groups to ensure equal employment opportunity.

# Student Rights and Responsibilities

Gateway's affirmative action officer will share relevant information relating to the affirmative action plan with human resource leaders and other members of the college and the public through various methods. Select information regarding the affirmative action plan is published on the college's website at [gtc.edu/eeo](http://gtc.edu/eeo).

## Criteria for Filing Employee and Student Discrimination Complaint

Any employee or student who believes an act of discrimination/harassment has occurred and alleges he/she has been denied admission to, participation in or the benefits of, or has been discriminated against in any service, program, course or facility of the College on the basis of race, color, national origin, ancestry, sex, sexual orientation, creed, religion, political affiliation, marital status, parental status, pregnancy, disability, age, membership in any reserve component of the armed forces, union affiliation, arrest and conviction record or any other protected category under applicable local, state or federal law, including protections for those opposing discrimination or participating in any resolution process on campus or within the Equal Employment Opportunity Commission or other human rights agencies may file a complaint with the Office for Equal Opportunity and Civil Rights. Any employee or student may challenge a hostile or abusive work/learning environment, even if the harassment is not targeted specifically at them. Employees, with the exception of Student Support Counselors, must file reports of sexual misconduct.

An action constitutes unlawful behavior if it:

1. Has the purpose or effect of creating an intimidating, hostile or offensive work/classroom environment,
2. Has the purpose or effect of unreasonably interfering with an individual's work/classroom performance or
3. Otherwise adversely affects an individual's employment/learning opportunity.

## Complaint Procedure

A complaint procedure (H-120, Equity Resolution Procedure) is maintained for the purpose of processing complaints of discrimination on the basis of race, color, national origin, ancestry, sex, sexual orientation, creed, religion, political affiliation, marital status, parental status, pregnancy, disability, age, membership in any reserve component of the armed forces, union affiliation, arrest and conviction record or any other protected category under applicable local, state or federal law, including protections for those opposing discrimination or participating in any resolution process on campus or within the Equal Employment Opportunity Commission or other human rights agencies. Students and employees can file a formal complaint using the Maxient report located at [gtc.edu/TitleIX](http://gtc.edu/TitleIX) or [gtc.edu/safety](http://gtc.edu/safety). Students may also make a report to their instructor or other Gateway employee.

## Contact Persons

Coordination of Section 504 of the 1973 Rehabilitation Act and 1972 Education Amendments, as well as the Americans with Disabilities Act, has been assigned to the Director of Compliance. The Director of Compliance's responsibilities are mandated through the following laws: Executive Order 11246, Revised Order No. 4, Section 504, the Office of Civil Rights Guidelines for Eliminating Discrimination in Vocational Programs, Americans with Disabilities Act, Drug Free Act 1988, Uniform Controlled Substances Act: Wisconsin Chapter 161 and other Affirmative Action laws.

Any questions concerning Affirmative Action, Equal Opportunity and Sexual Misconduct contact:

**Joshua Vollendorf, Director of Compliance  
(Title IX Coordinator/504/Equal Opportunity)**

3520 30th Avenue, Kenosha, WI 53144

262-564-3062 • e-mail: [vollendorffj@gtc.edu](mailto:vollendorffj@gtc.edu)

Wisconsin Relay System: 711

Any student or employee found to have violated this policy shall be subject to discipline proceedings, which may result in suspension or discharge.

## Sexual Misconduct

Gateway Technical College prohibits rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence and domestic violence. This policy applies to all students, employees, contractors and visitors of the college.

Sexually violent acts, termed sexual misconduct by Gateway, are violations of the Gateway Student Code of Conduct, Administrative Procedures and College Practices Manual and can be crimes as well. Sexual misconduct includes, but is not limited to non-consensual sexual intercourse, non-consensual sexual contact, sexual exploitation, interpersonal relationship violence, sex/gender-based stalking and sexual harassment. While Gateway utilizes different standards and definitions than the State of Wisconsin statutes, sexual misconduct often overlaps with crimes of rape, sexual assault, sexual harassment, stalking, retaliation, dating violence and domestic violence. For further information and the text of the full policy, please visit [gtc.edu/TitleIX](http://gtc.edu/TitleIX).

Anyone wishing to officially report such an incident may do so by filing an Incident Report found at [gtc.edu/TitleIX](http://gtc.edu/TitleIX). Anyone with knowledge about sexual misconduct or gender-based violence or the crimes of rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence is encouraged to report it immediately.

Sanctions for violations of this policy can range from verbal or written warnings, up to and including immediate termination from employment or expulsion from Gateway for serious or repeated violations.

### Rights of the reporting and responding parties

Both the reporting and the responding party shall have the right to:

- Investigation and appropriate resolution of all credible allegations of sexual misconduct or discrimination made in good faith to College officials;
- Bring an advisor of their choosing to all phases of the investigation and resolution proceeding;
- Ask the investigators to identify and question relevant witnesses, including expert witnesses;
- Be informed in advance, when possible, of any public release of information regarding the incident;
- Be treated with respect by College officials;
- Have College policies and procedures followed without material deviation;
- Have reports of sexual misconduct/discrimination responded to promptly and with sensitivity by campus officials;
- Be notified of available counseling, mental health, victim advocacy, health, legal assistance, student financial aid, visa and immigration assistance or other student services, both on campus and in the community;
- A campus no contact order (or a trespass order against a non-affiliated third party) when someone has engaged in or threatens to engage in stalking, threatening, harassing or other improper behavior that presents a danger to the welfare of the party or others;
- Notification of, options for and available assistance in changing academic situations after an alleged sexual misconduct incident, if so requested and if such changes are reasonably available (no formal report or investigation — campus or criminal — need occur before this option is available). Accommodations may include:
  - o Exam (paper, assignment) rescheduling;
  - o Taking an incomplete in a class;
  - o Transferring class sections;
  - o Temporary withdrawal;
  - o Alternative course completion options.



## Student Rights and Responsibilities

- Have the College maintain such accommodations for as long as is necessary and for protective measures to remain confidential, provided confidentiality does not impair the institution's ability to provide the accommodations or protective measures;
- Be fully informed of campus policies and procedures as well as the nature and extent of all alleged violations contained within the report;
- Be informed of the names of all witnesses whose information will be used to render a finding, in advance of that finding, except in cases where a witness's identity will not be revealed to a party for compelling safety reasons (this does not include the name of the reporting party, which will always be revealed);
- Not have irrelevant prior sexual history admitted as evidence;
- Regular updates on the status of the investigation and/or resolution;
- Have reports addressed by investigators and Title IX Coordinator who have received annual training;
- Preservation of privacy, to the extent possible and permitted by law;
- Meetings and/or interviews that are closed to the public;
- Petition that any College representative in the process be recused (removed) on the basis of demonstrated bias or conflict-of-interest;
- Have the College compel the participation of faculty and staff witnesses and the opportunity (if desired) to provide the investigators with a list of potential questions to ask of witnesses and the right to challenge documentary evidence;
- Submit a written statement describing the impact of the alleged discrimination/misconduct to the Title IX investigator following determination of responsibility, but prior to sanctioning;
- Be promptly informed of the outcome and sanction of the resolution process in writing, without undue delay between the notifications to the parties;
- Be informed in writing of when a decision by the College is considered final, any changes to the sanction to occur before the decision is finalized, to be informed of the right to appeal the finding and sanction of the resolution process and the procedures for doing so in accordance with the standards for appeal established by the College.

In addition, the reporting party shall have the right to:

- Not have any personally identifiable information released to the public, without their consent;
- Not be pressured to mediate or otherwise informally resolve any reported misconduct involving violence, including sexual violence;
- Not be discouraged by College officials from reporting sexual misconduct or discrimination to both on-campus and off-campus authorities;
- Be informed by College officials of options to notify proper law enforcement authorities, including on-campus and local police and the option to be assisted by campus authorities in notifying such authorities, if the reporting party so chooses. This also includes the right not to be pressured to report, as well.

### Resolution Procedure for Allegations of Harassment, Sexual Misconduct and Other Forms of Discrimination

*The following are highlights from Policy H-120. Please read the entire policy at [gtc.edu/TitleIX](https://gtc.edu/TitleIX).*

Upon notice to the Director of Compliance, this resolution process involves a prompt preliminary inquiry to determine if there is reasonable cause to believe the nondiscrimination policy has been violated. If so, the College will initiate a private investigation that is thorough, reliable, impartial, prompt and fair. The investigation and the subsequent resolution process determines whether policy H-110 has been

## Student Rights and Responsibilities

violated. If so, the College will promptly implement effective remedies designed to end the discrimination, prevent its recurrence and address its effects.

Allegations of violation of this policy are resolved using one of two methods, depending on the agreement of the parties and the nature of the allegations.

- **Informal Resolution** – used for less serious offenses and only when both parties agree to mediation. If informal resolution is desired by the reporting party and appears appropriate given the nature of the alleged behavior, then the report does not proceed to investigation, unless a pattern of misconduct is suspected or there is an actual or perceived threat of further harm to the community or any of its members.
- **Administrative Resolution** – resolution by a trained administrator. The process followed considers the preference of the parties, but is ultimately determined at the discretion of the Title IX Coordinator.

Students who make a report (reporting party) or are accused of violating this policy (responding party) are entitled to bring an advisor of their choice to any meeting with college officials. For details on the role of the advisor and a list of all rights of each party, please review the full policy.

The following steps, though the order of the steps may vary depending on the situation, will be followed by Gateway Technical College in response to discrimination allegations and/or sexual harassment and misconduct in which information indicates a violation of Policy H-110.

- In coordination with campus partners (e.g.: the Campus or Academic Dean), initiate or assist with any necessary interim remedial actions;
- Determine the identity and contact information of the reporting party;
- Identify all policies allegedly violated;
- In cases where there is reasonable cause to believe other college policies were violated the complaint will be referred to the appropriate office unless investigated as a collateral allegation as described in the Administrative Resolution section, below;
- Commence a thorough, reliable and impartial investigation by developing a strategic investigation plan, including a witness list, evidence list, intended timeframe and order of interviews for all witnesses and the responding party, who will be given notice prior to interview;
- The Title IX Coordinator (or designee) will prepare the notice of allegation on the basis of the preliminary inquiry;
- Meet with the reporting party to finalize their statement, if necessary;
- Provide written notification to the parties prior to their interviews that they may have the assistance of an advisor of their choosing present for all meetings attended by the advisee;
- Provide reporting party and responding party with a written description of the alleged violation(s), a list of all policies allegedly violated, a description of the applicable procedures and a statement of the potential sanctions/responsive actions that could result;
- Allow each party the opportunity to suggest questions they wish the investigators to ask of the other party and witnesses.
- Provide parties with all relevant evidence to be used in rendering a determination and provide each with a full and fair opportunity to address that evidence prior to a finding being rendered;
- Once the report is complete, the report is shared with the parties for their review and comment. Both parties have five days to review the report and all material evidence collected during the investigation and which was used to make a determination. The investigators may conduct additional investigations based on the feedback and incorporate feedback from the parties as appropriate;

## Student Rights and Responsibilities

- Make a finding, based on a preponderance of the evidence (which means whether a policy violation is more likely than not to have occurred);
- The Title IX Coordinator will make recommendations for sanctions if the policy was violated;
- The Equal Opportunity Officer will review and approve the report, findings and sanctions, if applicable;
- The investigator will finalize and present the findings to the parties in writing.

At any point during the investigation, if it is determined there is no reasonable cause to believe that College policy has been violated, the Title IX Coordinator has authority to terminate the investigation and end resolution proceedings.

Witnesses (as distinguished from the parties) are expected to cooperate with and participate in the College's investigation and the Equity Resolution Process. Failure of a witness to cooperate with and/or participate in the investigation or Equity Resolution Process constitutes a violation of policy and may be subject to discipline. Witnesses may provide written statements in lieu of interviews during the investigation and may be interviewed remotely by phone or Skype (or similar technology), if they cannot be interviewed in person or if the investigators determine that timeliness or efficiency dictate a need for remote interviewing. Parties who elect not to participate in the investigation or to withhold information from the investigation do not have the ability to offer evidence later during the appeal if it could have been offered during the investigation. Failure to offer evidence prior to an appeal does not constitute grounds for appeal on the basis of new evidence.

### Disabilities Accommodation in the Equity Resolution Process

Gateway is committed to providing qualified students, employees or others with disabilities with reasonable accommodations and support needed to ensure equal access to the Equity Resolution Process at the College. Students needing such accommodations or support should contact the Director of Disability Support Services, and employees should contact the Title IX Coordinator, who will review the request and, in consultation with the person requesting the accommodation, determine which accommodations are appropriate and necessary for full participation.

### Sanctions

Factors considered when determining a sanction/responsive action may include, but are not limited to:

- The nature, severity of and circumstances surrounding the violation
- An individual's disciplinary history
- Previous allegations or allegations involving similar conduct
- The need for sanctions/responsive actions to bring an end to the discrimination, harassment and/or retaliation
- The need for sanctions/responsive actions to prevent the future
- The need to remedy the effects of the discrimination, harassment and/or retaliation on the reporting party and the community
- Any other information deemed relevant by the Title IX Coordinator

These factors can modify the typical sanction range.

The following are the usual sanctions that may be imposed upon students or student organizations singly or in combination.

- Warning: verbal or written notice to a student that serves to remind the student of the policy and prohibited behaviors, and that continued behavior may result in more significant sanctions.
- Restriction: a limitation on the student's access to identified services, locations, education, community activities or persons. Issued for a specified time frame.

## Student Rights and Responsibilities

- Restitution: Issued to a student who has committed a violation of this policy that resulted in staff, institutional or another student's financial loss. May be issued as a condition of return or continued attendance in the college.
- Referral: Issued to a student who has committed a violation of this policy and it is determined that continued participation at the college is contingent upon the student attending designated services (college or private vendor) or programs. May be issued for a specified time frame or as permanent and may be issued as a condition of return to or continued attendance at the College.
- Loss of Privileges: Issued to a student who has committed a violation of this policy and it is determined that the student may continue attendance at the College with permanent or temporary limitations on the student's access to identified services, locations or educational community activities.
- No Contact: Issued to a student who has committed a violation of this policy and it is determined that the student may continue attendance at the College with permanent or temporary limitations on the student's access to or contact with an identified individual or group(s) of student and/or staff.
- Disciplinary Probation: Issued to a student who has committed a violation of this policy and will face additional sanctions if any additional violations occur during a specified time frame.
- Suspension: Issued to a student, for a specified time frame, who has committed a major, egregious or continued violation(s) of this policy.
- Expulsion/Dismissal: Permanent removal, issued to a student who has committed a major, egregious or continued violation(s) of this policy.
- Other Actions: In addition to or in place of the above sanctions, the College may assign any other sanction, including:
  - Sex discrimination: verbal warning to expulsion/dismissal
  - Hostile environment sexual harassment: verbal warning to expulsion/dismissal
  - Intimate Partner Violence: verbal warning to expulsion/dismissal
  - Sexual exploitation: verbal warning to expulsion/dismissal
  - Stalking: verbal warning to expulsion/dismissal
  - Non-consensual sexual contact: verbal warning to expulsion/dismissal
  - Non-consensual sexual intercourse: verbal warning to expulsion/dismissal
  - Retaliation: verbal warning to expulsion/dismissal as deemed appropriate.

Sanctions range from a verbal warning to expulsion from the college, based on the offense and the factors noted above in addition to any mitigating, aggravating and/or compounding factors.

### Appeal

All requests for appeal consideration must be submitted in writing to the Equal Opportunity Officer within five (5) calendar days of the delivery of the written finding (outcome letter) of the Title IX Coordinator. Any party may appeal the findings and/or sanctions only under the following grounds.

- To determine whether a procedural error or omission occurred that significantly impacted the outcome (e.g. substantiated bias, material deviation from established procedures, etc.).
- To consider new evidence, unknown or unavailable during the original investigation, that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact must be included.
- The sanctions imposed are not proportionate to the violation(s) and the cumulative record of the responding party.

## Student Rights and Responsibilities

- The appeals officer will review the appeal request(s). The original finding and sanction/responsive actions will stand if the appeal is not timely or is not based on the grounds listed above, and such a decision is final. The party requesting appeal must show that the grounds for an appeal request have been met, and the other party or parties may show either that the grounds have not been met or that additional grounds are met. The original finding and sanction are presumed to have been decided reasonably and appropriately. When any party requests an appeal, the Equal Opportunity Officer will share the appeal request with the other party(ies), who may file a response within three days and/or bring their own appeal on separate grounds. If new grounds are raised, the original appealing party will be permitted to submit a written response to these new grounds within three (3) days. These responses or appeal requests will be shared with each party.
- Decisions by the appeals officer are to be deferential to the original decision, making changes to the finding only where there is clear error and to the sanction/responsive action only if there is a compelling justification to do so. In most cases, appeals are confined to a review of the written documentation or record of the investigation and pertinent documentation regarding the grounds for appeal. An appeal is not an opportunity for the appeals officer to substitute their judgment for that of the original investigator(s) or Title IX Coordinator merely because they disagree with its finding and/or sanctions.
- Appeals granted based on new evidence should normally be sent back (remanded) to the investigator(s) for reconsideration. Other appeals may be remanded at the discretion of the Equal Opportunity Officer or, in limited circumstances, heard by the appeals officer.
- Sanctions imposed as the result of Administrative Resolution are implemented immediately unless the Equal Opportunity Officer or designee stays (puts a hold on) their implementation in extraordinary circumstances, pending the outcome of the appeal.
- For students: Graduation, study abroad, internships/externships or other academic events and programs do NOT in and of themselves constitute extraordinary circumstances, and students may not be able to participate in those activities during their appeal.
- In rare cases where a procedural or substantive error cannot be cured by the original investigator(s) and/or Title IX Coordinator (as in cases of bias), the appeals officer may recommend a new investigation and/or Administrative Resolution process. The results of a remand cannot be appealed. The results of a new Administrative Resolution process can be appealed on any of the applicable grounds for appeals.
- Once an appeal is decided, the outcome is final: further appeals are not permitted, even if a decision or sanction is changed on remand.
- The Title IX Coordinator will consult with the appeals officer, incorporate the results of any remanded grounds and render a written decision on the appeal to all parties within three (3) days of the resolution of the appeal or remand.
- All parties will be informed in writing within three (3) days of the outcome of the Appeals Officer, without significant time delay between notifications and in accordance with the standards for notice of outcome as defined above.
- In cases where the appeal results in reinstatement to the College or resumption of privileges, all reasonable attempts will be made to restore the responding party to their prior status, recognizing that some opportunities lost may be unable to be restored in the short term.

### **Principles governing appeals involving a student suspension or expulsion will include the following:**

Where the Administrative Resolution Process has resulted in a finding that a student responding party violated policy H-110 and the recommended sanction includes suspension or expulsion, prior to the implementation of the suspension or expulsion, the student may file an appeal. Under such

## Student Rights and Responsibilities

circumstances, the matter will proceed to a hearing on the issue of whether a preponderance of the evidence demonstrates that the responding party violated Policy H-110 and, if so, what sanctions shall be implemented.

- At least fourteen (14) calendar days prior to the hearing or as far in advance as is reasonably possible if an accelerated resolution process is scheduled with the consent of the parties, the Appeals Officer (or designee) will send a letter by at least one of the following methods: in person; mailed to the local or permanent address of the parties as indicated in official College records; or emailed to the parties' College issued email account. The letter will include the following: (1) an indication that the parties may have the assistance of an Advisor of their choosing, at the hearing, though the Advisor's attendance at the hearing is the responsibility of the respective parties; (2) the time, date and location of the hearing; and (3) a copy of the investigation determination. For good cause, the Appeals Officer may grant requests to reschedule the hearing date.
- At least seven (7) calendar days prior to the hearing, the parties provide the Appeals Officer a list of the names of the proposed witnesses and copies of all proposed documentary evidence. At least five (5) business days prior to the hearing, the Appeals Officer (or designee) will have the names of proposed witnesses and copies of all applicable documentary evidence available for the parties.
- The Appeals Officer in consultation with the parties, the Title IX Coordinator and the Investigator(s), may decide in advance of the hearing that certain witnesses do not need to be physically present if their testimony can be adequately summarized by the Investigator in the investigation report or during the hearing. All parties will have ample opportunity to present facts and arguments in full and question all present witnesses during the hearing, though formal cross-examination is not used between the parties. If alternative attendance or questioning methods are desired, the parties should request them from the Appeals Officer at least two (2) business days prior to the hearing. Gateway will make reasonable accommodations for both parties in keeping with the principles of equity and fairness.

### Safety steps

Victims of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence are encouraged to review some or all of these safety suggestions designed to guide you after an incident has occurred:

1. Go to a safe place and speak with someone you trust. Tell this person what happened. If there is any immediate danger, call 911.
2. Consider securing immediate professional support (e.g.: counseling, victim advocacy, medical services, etc.) to assist you in the crisis.
3. If you are on campus during regular business hours, you may go to the Student Services Center to speak with a licensed professional counselor for support and guidance. These licensed counselors are confidential resources and in most cases, do not have a legal duty to report to the Title IX Officer.
4. For your safety and well-being, immediate medical attention is encouraged. Further, being examined as soon as possible, ideally within 120 hours, is important in the case of rape or sexual assault. The health care provider will arrange for a specific medical examination at no charge. To preserve evidence, it is recommended that you do not bathe, shower, douche, eat, drink, smoke, brush your teeth, urinate, defecate or change clothes before receiving medical attention.
5. Even after the immediate crisis has passed, consider seeking support from Student Support Services, the Student Support Counselor and/or the local sexual assault hotline as identified below:

# Student Rights and Responsibilities

Student Support Services Contact Information		
	Student Support	Local Sexual Assault Hotline
Elkhorn	1-800-247-7122	1-262-723-4653
Burlington	1-800-247-7122	1-262-637-7233
Kenosha	1-800-247-7122	1-800-823-3503
Racine	1-800-247-7122	1-262-637-7233
National hotline		1-800-656-4673

6. Gateway will provide written notification to victims about options for available assistance in and how to request changes to academic, living, transportation and working situations or protective measures. Contact the Associate Vice President of Facilities and Security (262-564-2812) or Director of Compliance (262-564-3062) if you need assistance with Gateway related concerns, such as no-contact orders or other protective measures. The Office for Equal Opportunity and/or Associate Vice President of Facilities and Security will also assist in any needed advocacy for students who wish to obtain protective or restraining orders from local authorities. The college is able to offer reasonable academic accommodations, escorts, no contact orders, counseling services access and other supports and resources as needed by a victim.
7. Additional information and resources for victims is available at [gtc.edu/TitleIX](http://gtc.edu/TitleIX).

## Education Program

The Director of Compliance is responsible for overseeing sexual misconduct awareness programming that is offered to college community members. Educational sessions and training opportunities are provided to students and employees at various times and through various means throughout the year. Students can attend a variety of sexual assault prevention programming and are strongly encouraged to complete the Know Your (Title IX) Rights online student training at [gtc.edu/TitleIX](http://gtc.edu/TitleIX).

## Reasonable Accommodations – Policy H-150

### Equal Opportunities for Students with Disabilities

Gateway Technical College is committed to assisting the academic needs of every learner to ensure scholastic excellence is achieved and maintained.

Gateway offers accommodations within every Disability Support Services office at every campus. Disability Support Services provides a full range of support services/reasonable accommodations at the request of learners with documented disabilities to give them equal access to learning opportunities at Gateway in order to reach their educational goals.

### Accommodations for Pregnant and Parenting Students

Students who are pregnant or providing for the medically necessary care of their child are entitled to Title IX protections and accommodations.

Students who are pregnant or parenting have the right to:

- Not be told to drop out or change education plans
- Be provided a comfortable space to breastfeed or pump milk
- Be excused from class due to pregnancy-related appointments (prenatal, give birth, have an abortion, attend a prenatal visit or be on doctor ordered bed rest)
- Not have excused absences count against a grade
- Be provided the opportunity to make up missed work from excused absences
- Not be harassed as a result of a pregnancy

You have rights as a pregnant/parenting student. If you need accommodations or want to know more about those rights, contact Disability Support Services. Students are strongly encouraged to connect with Disability Support Services early in their pregnancy even if they do not yet need accommodations.

### Service Animals

The Americans with Disabilities Act (“ADA”) and Wisconsin law define a service animal as a dog or other animal that is individually trained to do work or perform tasks for a person with a disability. Examples include, but are not limited to, guiding individuals who are blind, alerting individuals with a hearing loss to sounds, alerting and protecting a person who is having a seizure, pulling a wheelchair or retrieving dropped items. Service dogs or other animals are working animals, not pets. The work or task a service dog or animal has been trained to provide must be directly related to the person’s disability. Dogs or other animals whose sole function is to provide comfort or emotional support do not qualify as service animals.

Gateway welcomes service animals in all areas in which the public is allowed to go, though in limited circumstances the college may impose restrictions (such as in food preparation areas or certain clinical practica).

Students with service animals are required to maintain current vaccinations of their animal as well as make sure their service animal is under control and not disruptive to college operations, such as barking or running around and housebroken. If a service animal is not controlled and the owner is asked to have the service animal removed from campus as a result, the individual with a disability will be allowed to obtain education, goods and services without having the service animal on campus.

### Personal Needs/Lactation Rooms

Gateway provides private personal needs rooms that can be used for any need, including pumping breast milk, prayer, meditation and medication administration. Below is a list of rooms on each campus and how to obtain access to the private needs room. For those who pump milk, please note that the college does not provide storage for breast milk. Advance planning is recommended so that you will have guaranteed access to the room.

#### *Locations:*

#### **Racine, Kenosha and Elkhorn campuses - Personal Needs Rooms**

Obtain a fob for access from Disability Support Services located in the Learning Success Center.

#### **SC Johnson iMET Center - Room 130**

Obtain a fob for access from Erika Bernhardt, Room 230, phone: 262-564-2684.

#### **Horizon Center for Transportation Technology - Room 105**

Contact Kelly Kendra (located at the front desk), phone: 262-564-3902.

#### **Hero Center - H109**

Obtain a fob for access from Lauren LeMieux, Room H111, phone: 262-564-2071.

#### **Burlington Center - 123A**

Contact Nancy Jorgensen, Room 106, 262-564-2097.

### Student Religious Accommodations – Policy J-170

In compliance with Wisconsin Administrative Code and the Civil Rights Act of 1964, Title IV, Gateway Technical College will make reasonable accommodation of a student’s religious beliefs. A student may request reasonable accommodation from his/her instructor with regard to examinations and other academic requirements. The student request must be in writing and submitted to the instructor five (5) working days prior to the date(s) of the anticipated absence. Instructors will provide a means by which a student can perform the make-up examination or other academic requirements in a timely manner without penalty. Should the student deem the accommodation unreasonable, the student should contact the Dean of the appropriate school/division. If the student is still unsatisfied with the accommodation, the student may contact the Office for Equal Opportunity and Civil Rights at 262-564-3062.



## Computer, Networking and Information Resources - Policy H-190

### Introduction

1. The H-190 policy set constitutes Gateway Technical College's (Gateway or college) policy for the management of the college's computing, networking and information resources. These resources include, but are not limited to, the central computing facilities, District-wide network, campus local area networks, email, nodal labs, classroom multimedia equipment, video conferencing equipment, access to the Internet, wireless access, voicemail, departmental and public computing facilities, scanners, printers, WebAdvisor, Blackboard, software, data and related equipment and services.
2. Your use of Gateway computing and networking resources and information systems is governed by federal and state law; acceptable Internet use practices; Gateway policies; this Computing, Networking and Information Resources policy; and sub-policies under this policy set. Additionally, all Gateway policies regarding the appropriate use of Gateway resources and responsible personal conduct apply to your use of Gateway computing and networking resources and information systems.
3. Your use of any of the college's computing, networking and information resources constitutes your acceptance of this policy set.

### Policy

1. Gateway provides computing and networking facilities and information resources to support its educational mission. These facilities include Gateway centralized computer systems, personal computer labs, standalone Gateway computers and kiosks, communications networks, information systems and associated software, files and data. Your access to and use of Gateway computing and network resources is a privilege that depends on your using the resources appropriately. In general, appropriate use means respecting the rights of other users, the integrity of the physical equipment and systems and following all pertinent license and contractual agreements. Also, users must apply the highest level of ethical conduct to their use of computing, networking and information resources. Users do not own accounts on Gateway computing systems but are granted the temporary privilege of exclusive use.
2. Faculty, staff and students may use the college's computing and networking resources for purposes related to their studies, their responsibilities for providing instruction and performing research, the discharge of their duties as employees, their official business with the college and other Gateway-sanctioned or authorized activities. Personal use of these resources should be brief and limited. (See Policy H-190b - Digital Communications for additional information). In addition, residents of the District who have library cards may use computers in the public areas of Gateway libraries for word processing and Internet access, subject to compliance with all other rules and policies. The use of college computing and networking resources and information systems for any sort of solicitation is prohibited, absent prior written permission of a current officer of the college.
3. Computing resources may be used only for legal purposes and may not be used for any of the following purposes or any other purpose which is illegal, immoral, unethical, dishonest, damaging to the reputation of the college, inconsistent with the mission of the college or likely to subject the college to liability. Impermissible uses (some of which may also constitute illegal uses) include, but are not limited to, the following:
  - a. Sending messages with the intent to frighten, intimidate, threaten, abuse or harass another person;
  - b. Defamation;
  - c. Fraud or misrepresentation;
  - d. Intentionally and without authorization:
    - 1) Accessing, modifying, destroying, taking possession of or copying data, computer programs or supporting documentation;
    - 2) Disclosing restricted access codes, passwords or other restricted access information to unauthorized persons;

## Student Rights and Responsibilities

- 3) Modifying computer equipment;
- 4) Destroying or damaging a computer, computer system or computer network;
- e. Sending messages while intentionally preventing or attempting to prevent the disclosure of one's own identity;
- f. Disruption or unauthorized monitoring of electronic communications;
- g. Unauthorized copying or transmission of copyright-protected material;
- h. Use of the college's trademarks, logos, insignia or copyrights without prior approval;
- i. Breaking into or attempting to break into Gateway systems, networks or user accounts;
- j. Unauthorized attempts to circumvent data protection schemes or uncover security loopholes. This includes creating and/or running programs that are designed to identify security loopholes and/or decrypt intentionally secure data. This also includes the use of unauthorized operating systems installed on external devices that can be plugged into a workstation to subvert or avoid the use of the intended operating system on that workstation.
- k. Using Gateway systems or networks as any part of an attempt to break into or attempt to break into other systems or networks;
- l. Downloading files or installing unauthorized software of any kind to computer hard drives;
- m. Unauthorized use of internet, computer accounts, access codes (including passwords) or network;
- n. Use of identification numbers, usernames and/or authentication credentials (including email/internet/intranet addresses) assigned to others;
- o. Development or use of unapproved mailing lists;
- p. Use of computing facilities:
  - 1) For private business purposes unrelated to the mission of the college or to college life;
  - 2) For campaign or political purposes;
- q. Use which constitutes academic dishonesty;
- r. Violation of software license agreements;
- s. Violation of network usage policies and regulations;
- t. Violation of privacy;
- u. Accessing, displaying or sending obscene, pornographic, sexually explicit or offensive material;
- v. Using any obscene, lewd or profane language or suggesting any lewd or lascivious act;
- w. Intentional or negligent distribution of destructive programs such as computer viruses;
- x. Creating, sending or forwarding chain letters (SPAM) (messages that are forwarded many times to people who have not solicited the information);
- y. Permitting, encouraging or directing another person to send a message prohibited by this policy from any Gateway computer or system under the user's control;
- z. Unauthorized solicitations such as creating and promoting products or services for sale;
- aa. Use that is deemed unnecessary or excessive; use which facilitates violating other Gateway policies; and use which interferes or disrupts Gateway employees from performing their jobs.

## Account Guidelines

1. Once you are given access to computing resources at Gateway, you are responsible for any and all use made of those resources with your user identification. The following responsibilities apply to users accessing any of the college's computer and networking resources and information systems. The user is responsible for correct and sufficient use of the tools available for maintaining the security of information stored on each computer system.
  - a. Computer accounts, usernames, passwords and other types of authorization that are assigned to individual users may not be shared with others.
  - b. The user should assign an obscure account password and change it frequently.
  - c. The user should be aware of computer viruses and other destructive computer programs and take steps to avoid being a victim or unwitting distributor of these programs/viruses.
  - d. No unauthorized persons may use Gateway computer and network resources. Authorized users include only Gateway employees, currently enrolled students and residents of the District who have obtained library cards.
2. Be sensitive to the needs of others, and use only your fair share of computing resources. Collegiality requires:
  - a. Regular deletion of unneeded files from one's accounts on shared computing resources;
  - b. Refraining from overuse of college-provided file storage space, printing facilities, processing capacity or network services;
  - c. Refraining from use of sounds and visuals which might be disruptive or offensive to others
  - d. Refraining from use of computing resources in an irresponsible manner

## Role of Learning Innovation Division

1. Responsible system maintenance may require that files be backed up, data cached, activity logs kept and overall system activity monitored. In the process of these activities, Gateway staff may see your email/internet/intranet activity and files. The college shall also have access to and may monitor non-Gateway computer and network resources used by Gateway employees in the course of their official duties.
2. Computers and networks are for use by authorized users only. Individuals using these systems are subject to having their activities on these systems monitored and recorded by LID personnel. An account will also be inspected or monitored when:
  - a. Activity from an account prevents access to the college's computing or networking resources by others.
  - b. Activity from an account is disrupting or threatening the integrity of the network or network systems.
  - c. General usage patterns indicate that an account is responsible for illegal activity.
  - d. There are reports of violations of policy or law taking place.
  - e. It appears necessary to do so to protect Gateway from legal liability.
  - f. It is required by and consistent with law.
3. Whenever possible evidence of criminal activity is discovered, Gateway personnel will provide the evidence of such activity to law enforcement officials in accordance with state and federal statutes.

## Sanctions for Inappropriate or Illegal Use of College Computing, Networking and Information Resources

1. If you violate any of the Gateway computer and network use policies, you may be subject to disciplinary actions or the loss of privileges, including but not limited to, loss of access to computing resources as well as to Gateway disciplinary action up to and including termination and/or legal action.

## Student Rights and Responsibilities

2. Any offense that violates federal, state and/or local laws may result in the immediate loss of all Gateway computing privileges and will be referred to appropriate Gateway administrators and/or law enforcement authorities.
3. If Gateway Learning Innovation Division staff has evidence of misuse of computing and networking resources or information systems through a specific account, they will take the following steps to protect the systems, networks and the user community:
  - a. The suspected accounts will be suspended immediately pending the outcome of any investigation.
  - b. The user's email/internet/intranet, files, assigned drives and/or other data and computer accessible storage media on the account will be inspected for evidence.
  - c. Investigation of a student will be reported to the Student Success Division, and investigation of a faculty or staff member will be reported to that individual's supervisor when appropriate.
  - d. Any violation will be reported to the appropriate authorities:
    - 1) Policy violations by a faculty or staff member will be reported to the individual's supervisor and to the Human Resources Department
    - 2) Policy violations by a student will be reported to the campus dean and the Executive Vice President/Provost.
    - 3) Policy violations by a District resident will be reported to the campus dean and the Executive Vice President/Provost.
    - 4) Illegal activity by a faculty or staff member, student or District resident will be reported to the police and other appropriate law enforcement officials.

### Data Security and Integrity

1. Gateway provides reasonable security against intrusion and damage to files stored on the central computing facilities. In the event that data have been corrupted as a result of intrusion, Gateway Learning Innovation Division staff should be notified immediately. Gateway also provides limited facilities for archiving and retrieving files specified by users and for recovering files after accidental loss of data. However, Gateway cannot be held accountable for unauthorized access by other users and is not liable for the inadvertent or unavoidable loss or disclosure of the contents of stored files.
2. Gateway recommends that students backup their own data/files on a regular basis. Gateway is not responsible for backup or any lost data.

## Digital Communications – Policy H-190b

### Introduction - Purpose

Access to Gateway Technical College (Gateway or college) provided digital communications services, along with their responsible use, is critical for academic, administrative and promotional/marketing purposes. In addition to outlining required behaviors related to digital communications services, this policy is enacted in a spirit of presenting a positive, professional college image and enhancing Gateway's customer service efforts. This policy applies to all college employees, contractors, volunteers and students (all users).

### Definitions

Digital communications include: content in college-provided Google Apps accounts, email, calendars, Google Drive, content posted on college-administered websites, postings on college social media websites, usage of internet bandwidth and other tools that allow for the sharing/transmission of digital information.

## Policy

1. Gateway's digital communication services are college resources intended to be used for instruction, instructional support, faculty advising, service, administration and college-related correspondence in support of the college's mission.
2. Email remains an effective means of communicating official college information to students, employees and our community stakeholders. To this end, the college provides an email address for students, faculty, staff and other authorized persons who are affiliated with the college for their use when engaging in activities related to their roles in the college.
3. The college uses Gateway-provided email to communicate with students, faculty and staff and the college expects that those communications will be received and read in a timely fashion.
4. Employees of Gateway must use the college-provided email system for all official email communications. Employees may not use their own personal email accounts in any business or student-related correspondences.
5. Users are responsible for safeguarding their account username and password and for using them only as authorized. Each user is responsible for all digital communications made under the authorization of his or her account. Instances of accounts being compromised must be reported to the Learning Innovation Division (LID) Tech Central Help Desk immediately.
6. Unauthorized access of other users' accounts is strictly prohibited.
7. Access to digital communication services, while essential, also imposes on users certain accompanying responsibilities. The same standards of conduct that are expected of students, faculty and staff regarding the use of the college facilities, services and resources also apply to the use of college digital communication services.
8. Users may not access, use or disclose personal or confidential information in the college's custody without appropriate authorization and they must take necessary precautions to protect the confidentiality of personal or confidential information in compliance with college policy and applicable law, regardless of whether the information is maintained on paper or whether it is found in email or other digital records.
9. In no instance may digital communication services or college computing resources be used for commercial, campaign or political purposes. Any promotion of outside businesses or groups must be related to college goals/initiatives and approved by a vice president of the college.
10. Digital communications may not be used with the intent to disrupt communication or other system services.
11. Digital communications that are interpreted as harassment by any recipient are prohibited. Please refer to policy H-110, Equal Opportunity, Sexual Misconduct and Civil Rights Policy Statement for definitions and further information.
12. Using Gateway digital communication systems for malicious purposes (e.g. phishing, spamming, denial of service attacks, etc.) is prohibited.
13. Use of college-provided digital communication services for personal communications shall be comparable to what is allowed for personal local use of college telephones (See Policy D-110, Telephone Usage).
14. Limited personal use of digital communication services is permitted so long as that use:
  - a. does not create any cost to the college;
  - b. (in the case of employees) does not interfere with or take precedence over an employee's assigned duties;
  - c. is limited in volume and frequency;
  - d. is brief in duration;
  - e. does not disrupt college business;
  - f. does not compromise the security or integrity of college information, systems or software;

## Student Rights and Responsibilities

- g. is not illegal;
  - h. is not otherwise prohibited by this policy, the employee Code of Conduct or any other college policy, college directive or departmental rule.
15. Digital communications must meet the same standards for distribution or display as if they were physical documents. Individuals must identify themselves clearly and accurately on all digital communications. Willful misrepresentation of oneself or another individual is not permitted on the college's network or in any other digital communication with other parties.

### Email Retention, Archiving and Privacy

1. Be advised that state law (Section 19.35 Wisconsin Statutes) requires that records created or kept by Gateway, including digital communications and electronic files, must be made available for public inspection and copying, subject to limited exceptions. In addition, unless protected by legal privilege, digital communications and electronic files can and will be discoverable in litigation that involves the college. Email backups will be retained for three (3) years, unless they are archived longer due to ongoing investigation/litigation.
2. While Gateway respects the privacy of users and does not routinely inspect or monitor an individual's use of the college's computing and network resources, the college cannot provide a guarantee of privacy of an individual's digital communication activities, electronic files or system access records, etc. This information may be used in investigations and/or disciplinary proceedings at the college's discretion.
3. There should be no expectation of privacy in regard to digital communications of any kind sent or received from college email accounts or from college systems or computers.

### Mass Communications

1. Email should not be used for mass mailings to the entire college community except when the message is of benefit to the District as a whole. Announcements intended for the use of individual groups within the college community should be sent only to those smaller groups.
2. Using the '\_Everyone' email distribution list for the sole purpose of expressing one's personal opinion or to make appeals to the college-at-large is expressly prohibited.
3. Before sending a message to the \_Everyone distribution list, please ask yourself the following questions:
  - a. Is your message about a Gateway-sanctioned program, event or issue?
  - b. Will the vast majority of Gateway employees on every campus and center know what or who you are talking about and will benefit from the information?
  - c. Is the event truly open and accessible to all Gateway employees?
  - d. Should the information be public knowledge?
  - e. Is this the only communication channel that is appropriate for your message?
4. If the answer is 'no' to any of these questions, please do not use the '\_Everyone' email distribution list.
5. If your message meets the standards for use of the '\_Everyone' distribution list and you have authorization from your divisional vice president, you must put the '\_Everyone' address in the bcc field of your email message. This limits the ability of recipients to 'reply all' to the message.

### Email Formatting Requirements

1. Email Body Requirements:
  - a. Background formats/images may not be used on emails.
  - b. Recommended font, color and size for Gateway email text:
    - 1) Sans Serif, Black, Normal
    - 2) Arial, Black, 12 pt.

## Student Rights and Responsibilities

### 2. Email Signature Line Requirements:

- a. In the interest of presenting a consistent and professional image, the use of an official email signature template is required.
- b. Template Information Includes:
  - Your Name
  - Official Gateway Job Title
  - Gateway Technical College
  - Address
  - Office phone number (262-xxx-xxxx), FAX number (if used) and cell phone number (if applicable)
  - Email Address
  - Approved Gateway Logos - These are available on the Gateway Marketing and Communications Department webpage
- c. Department Specific Message - as directed by departmental leadership (if required)
  - You may include a department-specific message as directed by your supervisor.
  - If your supervisor has determined that your department should include a confidentiality statement in your Gateway email communications, you must use the following language:

Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized use, disclosure, forwarding or distribution is prohibited. If you are not the intended recipient, please notify the sender by reply e-mail and destroy all copies of the original message.
- d. You may include one additional item from the list below:
  - The current Gateway Mission Statement
  - 'Think green before printing. Please consider the environment before printing this email. Save a tree.'
  - Your Clifton StrengthsFinder top 5 strengths.
- e. Other phrases or graphics may not be included in Gateway email signature lines.

### Gateway Provided Google Apps Account Images for Personnel

1. In the interest of presenting a professional, consistent image to recipients of Gateway college's digital communications, the personnel profile images in our Google Mail Software will be populated from our Gateway issued ID system image files.
  - a. Use of other images as well as modifications to any posted images are strictly prohibited.
  - b. If a new photo is taken by Gateway for a new ID, any new photos taken with the ID card system will automatically replace previous images.
  - c. Personnel may opt out of use of a personal ID photo in connection with his/her Google App Account in which case a Gateway logo will be used as his/her Google App profile image instead of the ID photo. All such opt out requests should be submitted to Human Resources.
2. If Gateway personnel choose to use the Google+ feature associated with the employee's Gateway provided Google account, the applicable personnel ID photo will not automatically be associated with the Google+ feature. If personnel choose to include an image as part of his/her Google+ profile, the image must adhere to the following image requirements:

## Student Rights and Responsibilities

- a. The image must be a head shot of YOU, not of any other individual.
  - b. Your face must be recognizable and take up most of the image space.
  - c. Pictures must adhere to Gateway dress policy and other standards.
  - d. If you do not have a suitable head shot image, you can contact Tech central to request a copy of your Gateway photo ID picture.
  - e. If Gateway requests that you remove any image from your Google+ or Google Apps profile because the image, in Gateway's opinion, does not satisfy the above requirements, you must remove the photo as soon as reasonably practicable.
3. Personnel ID photos may only be used for Gateway authorized purposes.

### Student ID Photos

1. We do not currently use ID photos on student accounts.
2. Student ID photos may only be released for security or safety purposes and only to authorized Gateway, security or law enforcement personnel.
3. Any other uses of Student ID photos must be authorized in advance by a divisional vice president. Any such uses will only be granted in the discretion of a divisional vice president and only for purposes related to Gateway business will be considered.

### Shared College Email Account Images (Accessed by Multiple Staff Members)

1. Gateway approved logos may be used only for shared college email accounts with authorization from your divisional vice president.
2. Approved logos for these shared email accounts will be provided by the college Marketing department.

### Violations

Please refer to Policy H-190, Computer, Networking and Information Resources, for sanctions for inappropriate or illegal use of college computing resource.



## **Associate of Applied Science Degrees**

Accounting . . . . .	88
Administrative Professional . . . . .	92
Advanced Manufacturing Technology . . . . .	96
Aeronautics – Pilot Training . . . . .	100
Arboriculture/Urban Forestry Technician . . . . .	104
Architectural – Structural Engineering Technician . . . . .	108
Automotive Technology . . . . .	112
Business Management . . . . .	116
Civil Engineering Technology – Highway Technology . . . . .	120
Civil Engineering Technology – Fresh Water Resources . . . . .	124
Criminal Justice Studies . . . . .	128
Culinary Arts . . . . .	132
Diesel Equipment Technology . . . . .	136
Early Childhood Education . . . . .	140
Electrical Engineering Technology . . . . .	144
Electronics . . . . .	148
Fire Medic . . . . .	152
Foundations of Teacher Education . . . . .	154
Graphic Communications . . . . .	158
Greenhouse Operations . . . . .	162
Health Information Technology . . . . .	162
Hospitality Management . . . . .	170
Human Service Associate . . . . .	174
Individualized Technical Studies . . . . .	178
Individualized Technical Studies – Journeyworker . . . . .	179
Information Technology – Computer Support Specialist . . . . .	180
Information Technology – Cybersecurity Specialist . . . . .	184
Information Technology – Data Analytics Specialist . . . . .	188
Information Technology – Network Specialist . . . . .	192
Information Technology – Software Developer . . . . .	196
Information Technology – Web Software Developer . . . . .	200
Interior Design . . . . .	203
Leadership Development . . . . .	208
Marketing . . . . .	212
Mechanical Design Technology . . . . .	216
Nursing – Associate Degree (ADN/RN) . . . . .	220
Paramedic Technician . . . . .	224
Physical Therapist Assistant . . . . .	226
Professional Communications . . . . .	228
Supply Chain Management . . . . .	232
Surgical Technology . . . . .	236
Veterinary Technician . . . . .	238

## **Technical Diplomas**

Advanced EMT . . . . .	240
Accounting Assistant . . . . .	242
Automotive Maintenance Technician . . . . .	246
Barber Technologist . . . . .	250
Building Trades-Carpentry . . . . .	252
Business Services Manager . . . . .	256
CNC Production Technician . . . . .	260
CNC Programmer . . . . .	264
Construction Management Technician . . . . .	268

# Program Curricula Index

Cosmetology . . . . .	272
Criminal Justice – Law Enforcement 720 Academy . . . . .	274
Culinary Assistant . . . . .	278
Dental Assistant . . . . .	282
Diesel Equipment Mechanic . . . . .	284
Emergency Medical Technician . . . . .	288
EMT – Paramedic . . . . .	290
Electromechanical Maintenance Technician . . . . .	292
Electronics Technician Fundamentals . . . . .	296
Facilities Maintenance . . . . .	300
Firefighter Technician . . . . .	302
Foundations of Lodging and Hospitality Management . . . . .	306
Horticulture Technician . . . . .	310
Information Technology – Computer Support Technician . . . . .	314
Information Technology – Web Programmer . . . . .	318
Medical Assistant . . . . .	322
Motorcycle, Marine and Outdoor Power Products . . . . .	326
Nursing Assistant . . . . .	328
Office Assistant . . . . .	330
Pharmacy Technician . . . . .	334
Refrigeration, Air Conditioning and Heating Service Technician . . . . .	338
Small Business Entrepreneurship . . . . .	342
Truck Driving . . . . .	346
Welding . . . . .	348
Welding/Maintenance and Fabrication . . . . .	352

## Advanced Technical Certificates

Urban Farming . . . . .	354
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## Shared Programs

Dental Hygiene . . . . .	details at gtc.edu
(Shared program with Milwaukee Area Technical College)	
Ophthalmic Medical Assistant . . . . .	details at gtc.edu
(Shared program with Lakeshore Technical College)	

## Special Notices

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take more than seven years to complete.

Tuition and material fees are determined by the Board of the Wisconsin Technical College System. Please consult the Gateway website [gtc.edu](http://gtc.edu) for exact fee amounts.

Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

Course materials listed in this catalog were effective for the 2020-2021 academic year.

Course descriptions are merely general summaries of various courses which may be offered at Gateway Technical College during the 2020-2021 academic year. Gateway reserves the right to modify course content at any time and to cancel any tentatively scheduled course due to low enrollment. Course descriptions were accurate as of February 1, 2020. Some courses offered by Gateway Technical College require successful completion, concurrent enrollment, or waiver.

Some courses offered by Gateway Technical College have enrollment which is restricted to persons formally accepted for admission into specific programs.



**Accounting (10-101-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F/S/SU
1	*101-100	1	Accounting Program Orientation		F	F/S/SU
1	*101-114	4	🎓 Accounting Principles <sup>4</sup>		F	F/S/SU
1	*101-154	2	🎓 Accounting Software Applications <sup>4</sup>	Coreq: 101-114 OR 101-112	F	F/S/SU
1	103-143	3	Computers for Professionals <sup>4</sup>		F	F/S/SU
1	804-135	3	Quantitative Reasoning <sup>2</sup>	Prereq: 834-109	F	F/S/SU
2	*101-119	3	Payroll Accounting <sup>4</sup>		S	F/S/SU
2	*101-106	3	Accounting Spreadsheet Applications <sup>4</sup>	Prereq: 101-112 OR 101-114; 103-143 OR 103-102	S	F/S/SU
2	*101-104	4	Income Tax Accounting <sup>4</sup>		S	F/S/SU
2	*101-116	3	🎓 Corporate Accounting	Prereq: 101-114; Coreq: 804-135; 801-136; 101-100; 103-134 OR 103-102	S	F/S/SU
2	801-136	3	English Composition I <sup>2,4</sup>	Prereq: 831-103 OR 831-107	S	F/S/SU
3	801-196 OR 801-198	3	Oral/Interpersonal Communication OR Speech		SU	F/S/SU
3	809-195 OR 809-143	3	Economics <sup>2,4</sup> OR Microeconomics <sup>2,4</sup>	Prereq: 838-105 OR 831-107	SU	F/S/SU
4	*102-160	3	Business Law <sup>4</sup>		F	F/S/SU
4	*101-121	4	Intermediate Accounting	Prereq: 804-135; 801-136; Coreq: 101-100; 103-143 OR 103-102	F	F/S/SU
4	*101-131	4	Management Accounting	Prereq: 101-114	F	F/S/SU
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.		
5	*101-105 OR *101-103	2	Accounting Career Readiness OR Internship for Accounting	Prereq: 101-121; Coreq: 101-121 Prereq: Instr. Consent; Coreq: 101-121	S	F/S/SU
5	*101-155	3	Financial Analysis/Management	Prereq: 101-106; Coreq: 101-121	S	F/S/SU
5	*101-107	3	Accounting Capstone	Prereq: 101-104; 101-119 OR 101-143; 101-121; 101-131; 101-154; Coreq: 101-155	S	F/S/SU
5	809-198	3	Psychology, Intro to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	S	F/S/SU
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	F/S/SU

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Accounting (10-101-1)

*Accounting* covers the principles of accounting, including budgeting, financial analysis, cost accounting, tax preparation, and other commercial aspects. Students are taught to interpret figures and what they actually mean to the company or organization. Entry level jobs for the accounting graduate include junior or assistant accountant, bookkeeper, cost accountant, property accountant, and payroll accountant. If taken full-time, this is a two-year course of study.

### Program Learning Outcomes

Graduates will be able to:

1. Apply Generally Accepted Accounting Principles to financial transactions throughout the accounting cycle.
2. Analyze financial and business information to support planning and decision-making.
3. Use a commercial software package to record and report financial information.
4. Prepare payroll journal entries, related reports and filings.
5. Perform cost accounting calculations, journal entries, reporting, and analysis tasks.
6. Perform individual tax accounting preparation, reporting and analysis tasks.
7. Apply employability skills for entry into the accounting field.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 64 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

101-162 Accounting – Serving the Public Interest	101-159 Income Tax Accounting II
102-122 Investments	114-101 Personal Financial Planning
804-189 Introductory Statistics	806-196 Sociology, Intro to
801-197 Technical Reporting	809-172 Diversity Studies, Intro to

### Notes

1. Accounting is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the classroom. Please note MAC computers are not compatible with some of the required software.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Accounting program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**  
School of Business and Transportation

**Accounting (10-101-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-E = Kenosha/evenings, E-E = Elkhorn/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E	E-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F/S/SU
1	*101-100	1	Accounting Program Orientation		F	F	F/S/SU
1	*101-114	4	🎓 Accounting Principles <sup>4</sup>		F	F	F/S/SU
1	103-143	3	Computers for Professionals <sup>4</sup>		F	F	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>2</sup>	Prereq: 834-109	S	S	F/S/SU
2	*101-154	2	🎓 Accounting Software Applications <sup>4</sup>	Coreq: 101-112 OR 101-114	S	S	F/S/SU
2	*101-119	3	Payroll Accounting <sup>4</sup>		S	S	F/S/SU
3	*101-116	3	🎓 Corporate Accounting	Prereq: 101-114; Coreq: 804-135; 801-136; 101-100; 103-134 OR 103-102	SU	SU	F/S/SU
3	801-136	3	English Composition I <sup>2,4</sup>	Prereq: 831-103 OR 831-107	SU	SU	F/S/SU
4	*102-160	3	Business Law <sup>4</sup>		F	F	F/S/SU
4	*101-106	3	Accounting Spreadsheet Applications <sup>4</sup>	Prereq: 101-112 OR 101-114; 103-143 OR 103-102	F	F	F/S/SU
4	*101-104	4	Income Tax Accounting <sup>4</sup>		F	F	F/S/SU
5	*101-121	4	Intermediate Accounting	Prereq: 804-135; 801-136; Coreq: 101-100; 103-143 OR 103-102	S	S	F/S/SU
5	*101-131	4	Management Accounting	Prereq: 101-114	S	S	F/S/SU
6	801-196 OR 801-198	3	Oral/Interpersonal Communication OR Speech		SU	SU	F/S/SU
6	809-195 OR 809-143	3	Economics <sup>2,4</sup> OR Microeconomics <sup>2,4</sup>	Prereq: 838-105 OR 831-107	SU	SU	F/S/SU
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F	F/S/SU
7	101-155	3	Financial Analysis/Management	Prereq: 101-106; Coreq: 101-121	F	F	F/S/SU
7	101-107	3	Accounting Capstone	Prereq: 101-104; 101-119 OR 101-143; 101-121; 101-131; 101-154; Coreq: 101-155	F	F	F/S/SU
8	809-198	3	Psychology, Intro to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	S	S	F/S/SU
8	101-105 OR 101-103	2	Accounting Career Readiness OR Internship for Accounting	Prereq: 101-121; Coreq: 101-121 Prereq: Instructor Consent; Coreq: 101-121	S	S	F/S/SU
8	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S	F/S/SU

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Accounting (10-101-1)

*Accounting* covers the principles of accounting, including budgeting, financial analysis, cost accounting, tax preparation, and other commercial aspects. Students are taught to interpret figures and what they actually mean to the company or organization. Entry level jobs for the accounting graduate include junior or assistant accountant, bookkeeper, cost accountant, property accountant, and payroll accountant. If taken full-time, this is a two-year course of study.

### Program Learning Outcomes

Graduates will be able to:

1. Apply Generally Accepted Accounting Principles to financial transactions throughout the accounting cycle.
2. Analyze financial and business information to support planning and decision-making.
3. Use a commercial software package to record and report financial information.
4. Prepare payroll journal entries, related reports and filings.
5. Perform cost accounting calculations, journal entries, reporting, and analysis tasks.
6. Perform individual tax accounting preparation, reporting and analysis tasks.
7. Apply employability skills for entry into the accounting field.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 64 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

101-162 Accounting – Serving the Public Interest	101-159 Income Tax Accounting II
102-122 Investments	114-101 Personal Financial Planning
804-189 Introductory Statistics	806-196 Sociology, Intro to
801-197 Technical Reporting	809-172 Diversity Studies, Intro to

### Notes

1. Accounting is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the classroom. Please note MAC computers are not compatible with some of the required software.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Accounting program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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## Administrative Professional (10-106-6)

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F/S/SU
1	*106-021	3	Business Office Fundamentals		F	F/S/SU
1	*106-028	3	Office Technologies Essentials		F	F/S/SU
1	*106-137	3	🎓 Keyboarding Applications <sup>3</sup>		F	F/S/SU
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F	F/S/SU
2	*106-024	3	🎓 Professionalism in Business		S	F/S/SU
2	*106-025	3	Spreadsheets for Business	Prereq: 106-137	S	F/S/SU
2	*106-030	3	Word Processing for Business	Prereq: 106-137	S	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	F/S/SU
3	101-112	3	Accounting for Business		SU	F/S/SU
	OR		OR			
	101-114	4	Accounting Principles <sup>3</sup>			
3	801-196	3	Oral/Interpersonal Communication		SU	F/S/SU
3	*106-026	3	Business Publications	Prereq: 106-137	SU	F/S/SU
4	*106-019	1	Admin. Services Internship I	Prereq: Instr. Consent & 106-137; Coreq: 106-024; 801-136; 804-135	F	F/S/SU
4	*106-029	3	Presentations for Business	Prereq: 106-137	F	F/S/SU
4	*106-022	3	Info Management for Business	Prereq: 106-137	F	F/S/SU
4	*106-027	3	Integrated Business Projects	Prereq: 106-025; 804-135	F	F/S/SU
5	*106-190	3	Administrative Office Procedures	Prereq: 106-025	S	F/S/SU
5	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	S	F/S/SU
5	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	S	F/S/SU
6	*106-006	3	Business Communication Skills	Prereq: 106-137; 106-030; 801-136	SU	F/S/SU
6	*106-020	1	Admin. Services Internship II	Prereq: Instr. Consent; 106-137; 024	SU	F/S/SU
6	*106-023	3	Office Management		SU	F/S/SU
6	809-195		Economics <sup>1,3</sup>		SU	F/S/SU
	OR		OR			
	809-143	3	Microeconomics <sup>1,3</sup>	Prereq: 838-105 OR 831-107		

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Administrative Professional (10-106-1)**

The *Administrative Professional* program prepares individuals to perform administrative and office support activities. Students will develop skills in word processing, spreadsheets, presentation software, filing/records management, and production of business documents. Extensive software skills are acquired, as well as Internet research abilities and oral and written communication skills. Professional development training includes ethics, group interaction, problem-solving, self-awareness, and professionalism.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Manage administrative tasks.
5. Maintain internal and external relationships.
6. Model professionalism in the workplace.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum grade of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### **Accreditation Statement**

Gateway Technical College's Administrative Professional program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs.

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**Part-Time Pathway to Success**  
School of Business and Transportation

## Administrative Professional (10-106-6)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	Gateway to Success (G2S)		F	F/S/SU
1	*106-021	3	Business Office Fundamentals		F	F/S/SU
1	*106-137	3	Keyboarding Applications <sup>3</sup>		F	F/S/SU
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	F/S/SU
2	*106-024	3	Professionalism in Business		S	F/S/SU
2	*106-028	3	Office Technologies Essentials		S	F/S/SU
3	*106-025	3	Spreadsheets for Business	Prereq: 106-137	SU	F/S/SU
3	*106-030	3	Word Processing for Business	Prereq: 106-137	SU	F/S/SU
4	*106-026	3	Business Publications	Prereq: 106-137	F	F/S/SU
4	801-196	3	Oral/Interpersonal Communication		F	F/S/SU
4	*106-022	3	Info Management for Business	Prereq: 106-137	F	F/S/SU
5	*106-019	1	Admin. Services Internship I	Prereq: Instructor Consent & 106-137; Coreq: 106-024; 801-136; 804-135	S	F/S/SU
5	*106-029	3	Presentations for Business	Prereq: 106-137	S	F/S/SU
5	*106-190	3	Administrative Office Procedures	Prereq: 106-025	S	F/S/SU
6	*106-006	3	Business Communication Skills	Prereq: 106-137; 106-030; 801-136	SU	F/S/SU
6	*106-023	3	Office Management		SU	F/S/SU
6	*106-027	3	Integrated Business Projects	Prereq: 106-025; 804-135	SU	F/S/SU
7	*106-020	1	Admin. Services Internship II	Prereq: Instructor Consent; 106-137; 106-024	F	F/S/SU
7	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F	F/S/SU
7	809-195	3	Economics <sup>1,3</sup>		F	F/S/SU
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 838-105 OR 831-107	F	
	809-143	3	Microeconomics <sup>1,3</sup>			
8	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	S	F/S/SU
8	101-112	3	Accounting for Business		S	F/S/SU
	<b>OR</b>	<b>3</b>	<b>OR</b>			
	101-114	4	Accounting Principles <sup>3</sup>			

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Administrative Professional (10-106-1)**

The *Administrative Professional* program prepares individuals to perform administrative and office support activities. Students will develop skills in word processing, spreadsheets, presentation software, filing/records management, and production of business documents. Extensive software skills are acquired, as well as Internet research abilities and oral and written communication skills. Professional development training includes ethics, group interaction, problem-solving, self-awareness, and professionalism.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Manage administrative tasks.
5. Maintain internal and external relationships.
6. Model professionalism in the workplace.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum grade of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### **Accreditation Statement**

Gateway Technical College's Administrative Professional program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs.

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Advanced Manufacturing Technology (10-664-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*664-110	2	🎓 Intro to Mechatronics		F
1	*664-100	2	🎓 Intro to Industrial Control Systems		F
1	*605-113	3	DC/AC I <sup>2</sup>		F
1	804-115	5	🎓 College Technical Math 1 <sup>1,2</sup>	Prereq: 834-110	F+
2	*664-105	2	🎓 Intro to Industrial Robots		S
2	*664-115	2	Interpreting Engineering Drawings		S
2	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	S+
2	*605-114	3	🎓 DC/AC II <sup>2</sup>	Prereq: 605-113; Coreq: 804-115	S
2	*605-130	4	Digital Electronics <sup>2</sup>	Coreq: 605-114	S
3	*605-136	3	PLC System Design	Prereq: 605-130	SU
3	*664-102	3	Motor Controls for Advanced Manufacturing	Prereq: 664-100; Coreq: 801-136	SU
3	809-195	3	Economics <sup>1,4</sup>	Prereq: 838-105 OR 831-107	SU+
3	*664-120	2	🎓 Intro to Industrial Internet of Things (IIoT)		SU
3	801-198	3	Speech		SU+
4	*606-160	3	Fluid Power and Design		F
4	*664-117	2	Materials and Processes	Prereq: 664-100; 664-110; 801-136	F
4	*664-111	3	Machine Mechanisms	Prereq: 664-100; 664-110; 804-115	F
4	*664-116	2	Intro to Mfg Quality Control Systems	Prereq: 664-115	F
4	*664-121	2	Vision and Smart Sensors	Prereq: 605-130; 664-102	F
5	*664-112	3	Fundamentals of Machining Processes		S
5	*664-122	2	Engineering Project Management	Prereq: 801-136	S
5	*664-101	2	PLC Industrial Control System Applications	Prereq: 605-136; 664-102	S
5	*606-138	2	Design Problems	Prereq: Instructor Consent; 801-136	S
5	809-198	3	Psychology, Introduction to <sup>1,2,4</sup>	Prereq: 838-105 OR 831-107	S+

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Advanced Manufacturing Technology (10-664-2)

Advanced Manufacturing Technology combines mechanical, electronic, and information technology into a single discipline that crosses the traditional boundaries of a skilled technician. Advanced Manufacturing technicians need a broad understanding of mechanical and electrical principles, and the use of data to optimize the manufacturing process through intelligent automation. These industry certifications are embedded in the program: Snap on Hand tool Safety, Snap on Multimeter, OSHA 10, and Starrett Precision Measurement.

### Program Learning Outcomes

Graduates will be able to:

1. Apply state and national safety rules to the manufacturing systems environment.
2. Analyze automation within a complex manufacturing system.
3. Manage advanced manufacturing systems for operational efficiency and cost control.
4. Analyze technical specifications for implementation of manufacturing systems, modules, and components.
5. Explore a Proportional Integral Derivative (PID) control system to achieve a desired outcome in a manufacturing outcome.
6. Integrate industrial control systems into manufacturing processes.
7. Apply electronic principles to devices within a complex manufacturing systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.



Foxconn preferred programs prepare students for potential career opportunities at Foxconn. Completion of a preferred program does not guarantee employment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Advanced Manufacturing Technology (10-664-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-D = iMET Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq-before/ coreq-with)	I-D
1	890-155	1	Gateway to Success (G2S)		F+
1	*664-110	2	Intro to Mechatronics		F
1	*605-113	3	DC/AC I <sup>2</sup>		F
1	804-115	5	College Technical Math 1 <sup>1,2</sup>	Prereq: 834-110	F+
2	*664-105	2	Intro to Industrial Robots		S
2	*605-114	3	DC/AC II <sup>2</sup>	Prereq: 605-113; Coreq: 804-115	S
2	*664-115	2	Interpreting Engineering Drawings		S
2	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	S+
3	*664-102	3	Motor Controls for Advanced Manufacturing	Prereq: 664-100; Coreq: 801-136	SU
3	*664-120	2	Intro to Industrial Internet of Things (IIoT)		SU
3	*605-130	4	Digital Electronics <sup>2</sup>	Coreq: 605-114	SU+
4	*664-100	2	Intro to Industrial Control Systems		F
4	*664-116	2	Intro to Mfg Quality Control Systems	Prereq: 664-115	F
4	*664-121	2	Vision and Smart Sensors	Prereq: 605-130; 664-102	F
4	*605-136	3	PLC System Design	Prereq: 605-130	F
5	*664-101	2	PLC Industrial Control System Applications	Prereq: 605-136; 664-102	S
5	*664-122	2	Engineering Project Management	Prereq: 801-136	S
5	809-198	3	Psychology, Introduction to <sup>1,2,4</sup>	Prereq: 838-105 OR 831-107	S+
6	*664-111	3	Machine Mechanisms	Prereq: 664-100; 664-110; 804-115	SU
6	809-195	3	Economics <sup>1,4</sup>	Prereq: 838-105 OR 831-107	SU
7	*664-117	2	Materials and Processes	Prereq: 664-100; 664-110; 801-136	F
7	*606-160	3	Fluid Power and Design		F
7	801-198	3	Speech		F+
8	*664-112	3	Fundamentals of Machining Processes		S
8	*606-138	2	Design Problems	Prereq: Instructor Consent: 801-136	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Advanced Manufacturing Technology (10-664-2)

Advanced Manufacturing Technology combines mechanical, electronic, and information technology into a single discipline that crosses the traditional boundaries of a skilled technician. Advanced Manufacturing technicians need a broad understanding of mechanical and electrical principles, and the use of data to optimize the manufacturing process through intelligent automation. These industry certifications are embedded in the program: Snap on Hand tool Safety, Snap on Multimeter, OSHA 10, and Starrett Precision Measurement.

### Program Learning Outcomes

Graduates will be able to:

1. Apply state and national safety rules to the manufacturing systems environment.
2. Analyze automation within a complex manufacturing system.
3. Manage advanced manufacturing systems for operational efficiency and cost control.
4. Analyze technical specifications for implementation of manufacturing systems, modules, and components.
5. Explore a Proportional Integral Derivative (PID) control system to achieve a desired outcome in a manufacturing outcome.
6. Integrate industrial control systems into manufacturing processes.
7. Apply electronic principles to devices within a complex manufacturing systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.



Foxconn preferred programs prepare students for potential career opportunities at Foxconn. Completion of a preferred program does not guarantee employment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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## Aeronautics – Pilot Training (10-402-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*402-140	3	Flight Private Pilot <sup>2,3,4,5,7,8,9,10</sup>	Coreq: 402-129	F
1	*402-129	3	🎓 Aviation / Introduction <sup>7</sup>		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
1	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	F+
1	*402-139	3	Aero Science – Engine/ Structure/ System		F
2	*402-136	3	Aero Science – Aviation Weather	Coreq: 402-129	S
2	*402-137	3	Aero Science – Instrument	Prereq: 402-140	S
2	*402-170	3	🎓 Professional Piloting I <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent, 402-140; Coreq: 402-137	S
2	801-197	3	Technical Reporting	Prereq: 801-136	S+
3	*402-173	2	Professional Piloting II <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; Coreq: 402-137	F
3	*402-133	3	Aero Science – Commercial	Prereq: 402-140	F
3	*402-135	3	Aero Science – Aerophysics/Aerodynamics	Prereq: 804-135; 801-136	F
3	809-198	3	Psychology, Introduction to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	F+
3	801-198	3	Speech		F+
4	*402-175	2	Professional Piloting III <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 402-173; Coreq: 402-133	S
4	*402-177	2	Professional Piloting IV <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 804-135; 801-136; Coreq: 402-175	S
4	*402-138	3	Aero Science – Aviation Safety		S
4	*402-120	2	Aero Decision Making	Prereq: Dept. Consent; 402-173; Coreq: 402-138	S
4	*402-123	2	Aircraft Systems – Advanced	Prereq: 402-139	S
4	*402-131	2	Aero Science Fund/Instr.	Prereq: 402-133	S
5	*402-145	2	Flight-Certified Flight Instructor <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 402-177; Coreq: 402-131; 402-134	F
5	*402-134	2	Aero Science Certified Flight Inst. Airplane	Coreq: 402-145	F
5	*402-146	1	Flight Certified Flight Instructor Instrument <sup>2,3,4,5,8,9</sup>	Prereq: Dept. Consent; 402-145	F
5	809-196	3	Sociology, Introduction to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	F+

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Aeronautics – Pilot Training (10-402-1)

*Aeronautics-Pilot Training* develops the skills and knowledge, through academic and practical application, necessary for an entry-level career as a professional pilot. Required aircraft training and electives include commercial certificate with single engine, multi-engine, and instrument ratings, and certified flight instructor certificate with single engine, multi-engine, and instrument ratings. Actual certification is dependent upon successful completion of an external assessment by the individual student.

### Program Learning Outcomes

Graduates will be able to:

1. Maintain compliance with procedures and practices contained in the Federal Aviation Regulations (FAR's), Aeronautical Information Manual (AIM), and other applicable FAA publications. Criteria– You must pass the practical tests for instrument rating airplane, commercial pilot airplane multi-engine land and commercial pilot single-engine land.
2. Obtain the Federal Aviation Administration (FAA) certification as a Commercial Pilot for single and multi-engine land planes with an instrument rating. Criteria – You must comply with as well as explain the purpose and value of instrument rating airplane and commercial pilot airplane procedures and practices.
3. Demonstrate Single-pilot Resource Management (SRM). Criteria – You must demonstrate task management, risk management, situational awareness, aeronautical decision-making, controlled flight into terrain awareness and automation management.
4. Act as a professional member of the aviation community. Criteria – You must act professional at all times, be sincere, present a professional appearance and personal habits, maintain a calm demeanor, practice safety and accident prevention at all times, use appropriate language, continue professional development, admit errors and be punctual.
5. Obtain the Federal Aviation Administration (FAA) certification as a Certificated Flight instructor for single- and multi-engine land airplanes with an instrument rating. Criteria – You must comply with as well as explain the purpose and value of CFI-ASEL and CFI-Instrument procedures and practices.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students must maintain a 2.0 GPA in Aviation Core courses (402 courses) to continue with flight training.
3. A student supplied tablet computer is required for all flight courses. Please contact the department prior to purchasing a tablet for the minimum specification sheet.
4. A valid FAA 2<sup>nd</sup> class (or higher) medical certificate is required prior to beginning 402-140. All other flight courses require only a 3<sup>rd</sup> class medical certificate.
5. Proof of U.S. Citizenship or TSA approval required prior to beginning any flight course.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
8. Students must meet current petition requirements at the time they are eligible to enroll.
9. Students are selected for core courses based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/admissions/additional-resources/petitioning/petitioning-eligibility>.
10. In order to meet the FAA requirements for proficiency, and to successfully complete the course under FAA Part 141, students may need to enroll in a non-degree course to purchase additional flight time.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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## Aeronautics – Pilot Training (10-402-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*402-139	3	Aero Science – Engine/ Structure/ System		F
1	*402-129	3	🎓 Aviation / Introduction <sup>7</sup>		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*402-140	3	Flight Private Pilot <sup>2,3,4,5,7,8,9,10</sup>	Coreq: 402-129	S
2	*402-136	3	Aero Science – Aviation Weather	Coreq: 402-129	S
2	*402-137	3	Aero Science – Instrument	Prereq: 402-140	S
3	*402-170	3	🎓 Professional Piloting I <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent, 402-140; Coreq: 402-137	SU
3	801-136	3	English Composition I <sup>1,7</sup>	Prereq: 831-103 OR 831-107	SU+
4	*402-173	2	Professional Piloting II <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; Coreq: 402-137	F
4	*402-133	3	Aero Science – Commercial	Prereq: 402-140	F
4	*402-135	3	Aero Science – Aerophysics/Aerodynamics	Prereq: 804-135; 801-136	F
5	*402-175	2	Professional Piloting III <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 402-173; Coreq: 402-133	S
5	*402-123	2	Aircraft Systems – Advanced	Prereq: 402-139	S
8	*402-131	2	Aero Science Fund/Instr.	Prereq: 402-133	S
5	801-198	3	Speech		S+
6	*402-177	2	Professional Piloting IV <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 804-135; 801-136; Coreq: 402-175	SU
6	801-197	3	Technical Reporting	Prereq: 801-136	SU+
6	809-198	3	Psychology, Introduction to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	SU+
7	*402-138	3	Aero Science – Aviation Safety		F
7	*402-134	2	Aero Science Certified Flight Inst. Airplane	Coreq: 402-145	F
7	*402-145	2	Flight-Certified Flight Instructor <sup>2,3,4,5,8,9,10</sup>	Prereq: Dept. Consent; 402-177; Coreq: 402-131; 402-134	F
8	*402-120	2	Aero Decision Making	Prereq: Dept. Consent; 402-173; Coreq: 402-138	S
8	*402-146	1	Flight Certified Flight Instructor Instrument <sup>2,3,4,5,8,9</sup>	Prereq: Dept. Consent; 402-145	S
8	809-196	3	Sociology, Introduction to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	S+

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Aeronautics – Pilot Training (10-402-1)

*Aeronautics-Pilot Training* develops the skills and knowledge, through academic and practical application, necessary for an entry-level career as a professional pilot. Required aircraft training and electives include commercial certificate with single engine, multi-engine, and instrument ratings, and certified flight instructor certificate with single engine, multi-engine, and instrument ratings. Actual certification is dependent upon successful completion of an external assessment by the individual student.

### Program Learning Outcomes

Graduates will be able to:

1. Maintain compliance with procedures and practices contained in the Federal Aviation Regulations (FAR's), Aeronautical Information Manual (AIM), and other applicable FAA publications. Criteria– You must pass the practical tests for instrument rating airplane, commercial pilot airplane multi-engine land and commercial pilot single-engine land.
2. Obtain the Federal Aviation Administration (FAA) certification as a Commercial Pilot for single and multi-engine land planes with an instrument rating. Criteria – You must comply with as well as explain the purpose and value of instrument rating airplane and commercial pilot airplane procedures and practices.
3. Demonstrate Single-pilot Resource Management (SRM). Criteria – You must demonstrate task management, risk management, situational awareness, aeronautical decision-making, controlled flight into terrain awareness and automation management.
4. Act as a professional member of the aviation community. Criteria – You must act professional at all times, be sincere, present a professional appearance and personal habits, maintain a calm demeanor, practice safety and accident prevention at all times, use appropriate language, continue professional development, admit errors and be punctual.
5. Obtain the Federal Aviation Administration (FAA) certification as a Certificated Flight instructor for single- and multi-engine land airplanes with an instrument rating. Criteria – You must comply with as well as explain the purpose and value of CFI-ASEL and CFI-Instrument procedures and practices.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
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- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students must maintain a 2.0 GPA in Aviation Core courses (402 courses) to continue with flight training.
3. A student supplied tablet computer is required for all flight courses. Please contact the department prior to purchasing a tablet for the minimum specification sheet.
4. A valid FAA 2<sup>nd</sup> class (or higher) medical certificate is required prior to beginning 402-140. All other flight courses require only a 3<sup>rd</sup> class medical certificate.
5. Proof of U.S. Citizenship or TSA approval required prior to beginning any flight course.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
8. Students must meet current petition requirements at the time they are eligible to enroll.
9. Students are selected for core courses based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/admissions/additional-resources/petitioning/petitioning-eligibility>.
10. In order to meet the FAA requirements for proficiency, and to successfully complete the course under FAA Part 141, students may need to enroll in a non-degree course to purchase additional flight time.

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Arboriculture/Urban Forestry Technician (10-001-5)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*001-133	2	Chainsaw Safety and Operation		F
1	*001-173	2	🎓 Urban Tree Maintenance		F
1	*001-124	2	🎓 Fundamentals of Aerial Tree Work		F
1	*001-118	2	🎓 Landscape Plant ID		F
1	801-136	3	English Composition 11. <sup>3</sup>	Prereq: 831-103 OR 831-107	F
2	*001-110	2	🎓 Tree Growth and Development	Prereq: 001-118; Coreq: 001-185; 801-136; 804-135	S
2	*001-156	2	Tree Care Practicum 1	Prereq: 001-124; 001-133; 001-173	S
2	*001-184	3	Ecological Basis for Natural Resource Management		S
2	*001-185	3	Intro to Horticulture		S
2	*001-186	3	People, Resources, and Sustainability		S
2	*001-188	2	🎓 Integrated Pest Management		S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
3	103-143	3	Computers for Professionals <sup>3</sup>		SU
3	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU
4	*001-105	3	Dendrology and Silvics	Prereq: 001-118; 801-136; 804-135	F
4	*001-157	2	Tree Care Practicum 2	Prereq: 001-156	F
4	*001-136	3	Landscape Management		F
4	*001-199	3	Fish, Forestry, and Wildlife		F
4	809-166 OR 809-195	3	Intro to Ethics: Theory & Apps <sup>1</sup> OR Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	F
5	*001-113	3	Ornamental Plant Health Care	Prereq: 001-118; 001-188; 001-105	S
5	*001-115	1	Tree Care Capstone	Prereq: 001-157; 001-105	S
5	*001-183	2	Applied Urban Forestry	Prereq: 001-110; 001-173; 001-105	S
5	*001-198	3	Intro to Soil and Water Resources	Prereq: 001-184; 001-185; 001-186	S
5	809-198	3	Psychology, Intro to <sup>1,3</sup>	Prereq: 838-105 OR 831-107	S
5	801-196 OR 801-198	3	OR Oral/Interpersonal Communication OR Speech		S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Arboriculture/Urban Forestry Technician (10-001-5)

The *Arboriculture/Urban Forestry Technician* associate degree prepares individuals for year-round, entry level work in tree care operations as an Arborist (commercial, municipal, golf course, utility), or a person who maintains tree health and improves tree growing conditions in the urban environment. Through exploration of natural resources, arboriculture, and urban forestry, students acquire skills in tree and plant biology, tree and plant identification, insect and disease management, aerial tree pruning and removal (tree climbing is optional), and tree planting. Students will operate tools and equipment used within the industry according to safety standards. Through coursework, students may become Wisconsin certified pesticide applicators. Summer employment in industry is available and encouraged between spring and fall semesters.

### Program Learning Outcomes

Graduates will be able to:

1. Diagnose ornamental plant disorders.
2. Identify wood plants by common and scientific names.
3. Apply tree biology for arboricultural maintenance practices.
4. Adhere to industry safety standards.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

104-101 Marketing Principles	104-104 Selling Principles
102-137 Intro to Business	001-158 Arboriculture/Urban Forestry Internship

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Arboriculture/Urban Forestry Technician (10-001-5)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*001-133	2	Chainsaw Safety and Operation		F
1	*001-118	2	🎓 Landscape Plant ID		F
1	801-136	3	English Composition <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F
2	*001-110	2	🎓 Tree Growth and Development	Prereq: 001-118; Coreq: 001-185; 801-136; 804-135	S
2	*001-185	3	Intro to Horticulture		S
2	*001-188	2	🎓 Integrated Pest Management		S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
3	103-143	3	Computers for Professionals <sup>3</sup>		SU
3	809-166	3	Intro to Ethics: Theory & Apps <sup>1</sup>		SU
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 838-105 OR 831-107	SU
	809-195		Economics <sup>1</sup>		
4	*001-173	2	🎓 Urban Tree Maintenance		F
4	*001-124	2	🎓 Fundamentals of Aerial Tree Work		F
4	*001-136	3	Landscape Management		F
4	*001-199	3	Fish, Forestry, and Wildlife		F
5	*001-156	2	Tree Care Practicum 1	Prereq: 001-124; 001-133; 001-173	S
5	*001-186	3	People, Resoures, and Sustainability		S
5	*001-184	3	Ecological Basis for Natural Resource Management		S
6	809-198	3	Psychology, Intro to <sup>1,3</sup>	Prereq: 838-105 OR 831-107	SU
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU
7	*001-105	3	Dendrology and Silvics	Prereq: 001-118; 801-136; 804-135	F
7	*001-157	2	Tree Care Practicum 2	Prereq: 001-156	F
7	801-196	3	Oral/Interpersonal Communication		F
	<b>OR</b>	<b>3</b>	<b>OR</b>		F
	801-198		Speech		
8	*001-113	3	Ornamental Plant Health Care	Prereq: 001-118; 001-188; 001-105	S
8	*001-115	1	Tree Care Capstone	Prereq: 001-157; 001-105	S
8	*001-183	2	Applied Urban Forestry	Prereq: 001-110; 001-173; 001-105	S
8	*001-198	3	Intro to Soil and Water Resources	Prereq: 001-184; 001-185; 001-186	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Arboriculture/Urban Forestry Technician (10-001-5)

The *Arboriculture/Urban Forestry Technician* associate degree prepares individuals for year-round, entry level work in tree care operations as an Arborist (commercial, municipal, golf course, utility), or a person who maintains tree health and improves tree growing conditions in the urban environment. Through exploration of natural resources, arboriculture, and urban forestry, students acquire skills in tree and plant biology, tree and plant identification, insect and disease management, aerial tree pruning and removal (tree climbing is optional), and tree planting. Students will operate tools and equipment used within the industry according to safety standards. Through coursework, students may become Wisconsin certified pesticide applicators. Summer employment in industry is available and encouraged between spring and fall semesters.

### Program Learning Outcomes

Graduates will be able to:

1. Diagnose ornamental plant disorders.
2. Identify wood plants by common and scientific names.
3. Apply tree biology for arboricultural maintenance practices.
4. Adhere to industry safety standards.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

104-101 Marketing Principles	104-104 Selling Principles
102-137 Intro to Business	001-158 Arboriculture/Urban Forestry Internship

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Architectural – Structural Engineering Technician (10-614-6)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-E = iMET Center/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F
1	*607-141 OR *607-103	2	📍 Construction Basics <sup>3,6</sup> OR Introduction to Civil Engineering & Architecture <sup>3,6</sup>		F	F
1	*607-104	3	🎓 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135 OR 804-115	3 OR 5	🎓 Quantitative Reasoning <sup>1</sup> OR College Technical Math 1 <sup>1</sup>	Prereq: 834-109  Prereq 834-110	F+	F
1	*607-169	2	Surveying Basics <sup>3</sup>		F	F
1	*607-102	2	Conflict Resolution in CET <sup>3,6</sup>		F	F
1	*607-136	2	🎓 Construction Project Management <sup>3</sup>		F	F
2	*607-132	3	🎓 Structural Mechanics <sup>3</sup>	Prereq: 804-135	S	S
2	801-136	3	🎓 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	S+	S
2	*607-170	2	AutoCAD for Construction Sciences <sup>3,6</sup>		S	S
2	*614-102	2	Construction Project Management 2 <sup>3</sup>	Prereq: 607-136	S	S
2	*607-128	3	Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
2	*607-129	2	Future Trends Civil/Archi Tech <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
3	*607-148	1	Wood-Design & Detailing <sup>3</sup>	Prereq: 607-132	SU	SU
3	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU
3	*614-150	2	🎓 3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
3	*607-187	2	3D CAD: Dig Terrain Model <sup>3</sup>		SU	SU
4	*607-134	2	Steel – Design and Detailing <sup>3</sup>	Prereq: 607-132	F	F
4	*614-108	1	Residential Code <sup>3</sup>	Prereq: 801-136	F	F
4	*614-110	3	Architectural Drafting – Residential <sup>3</sup>	Prereq: 614-150; Coreq: 614-108	F	F
4	*614-140	3	Mechanical Systems for Buildings <sup>3</sup>	Prereq: 607-104	F	F
4	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F+	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F+	F
5	*607-135	2	Reinforced Concrete-Design & Detailing <sup>3</sup>	Prereq: 607-132	S	S
5	*614-107	3	Residential and Commercial Inspection <sup>3</sup>	Prereq: 607-104; 614-108 ; Coreq: 614-114	S	S
5	*614-114	2	Commercial Code <sup>3</sup>	Prereq: 801-136	S	S
5	*614-115	3	Architectural Drafting – Commercial <sup>3</sup>	Prereq: 614-150; Coreq: 614-114	S	S
5	*614-123	1	Capstone: Architectural Structural Tech <sup>3</sup>	Prereq: 607-134 OR 614-100; Coreq: 614-115; 607-135 OR 614-101	S	S
5	*614-138	1	3D Modeling and Virtualization <sup>3</sup>	Prereq: 614-150; 607-187	S	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Architectural – Structural Engineering Technician (10-614-6)**

*Architectural-Structural Engineering Technician* focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see notes). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The second year focuses on aspects specific to buildings, both design and structural components. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four-year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of architecture.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Develop Construction Documents
2. Evaluate Building Materials
3. Develop building designs
4. Integrate building systems

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
3. Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
7. Students wishing to pursue Calculus courses at Gateway should take 804-115 College Technical Math 1. Please see an advisor for details.
8. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2<sup>nd</sup> semester.

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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Architectural – Structural Engineering Technician (10-614-6)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-E = iMET Center/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F
1	*607-141 OR *607-103	2	📍 Construction Basics <sup>3,6</sup> OR Introduction to Civil Engineering & Architecture <sup>3,6</sup>		F	F
1	*607-104	3	📍 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135 OR 804-115	3 5	📍 Quantitative Reasoning <sup>1</sup> OR 📍 College Technical Math 1 <sup>1</sup>	Prereq: 834-109 Prereq 834-110	F+	F
1	*607-169	2	📍 Surveying Basics <sup>3</sup>		F	F
2	*607-102	2	📍 Conflict Resolution in CET <sup>3,6</sup>		S	S
2	*607-129	2	📍 Future Trends Civil/Archi Tech <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
2	*607-136	2	📍 Construction Project Management <sup>3</sup>		S	S
2	*607-170	2	📍 AutoCAD for Construction Sciences <sup>3,6</sup>		S	S
3	*607-132	3	📍 Structural Mechanics <sup>3</sup>	Prereq: 804-135	SU	SU
3	*614-150	2	📍 3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
3	801-136	3	📍 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	SU+	SU
4	*614-108	1	Residential Code <sup>3</sup>	Prereq: 801-136	F	F
4	*614-110	3	Architectural Drafting – Residential <sup>3</sup>	Prereq: 614-150; Coreq: 614-108	F	F
4	*614-140	3	Mechanical Systems for Buildings <sup>3</sup>	Prereq: 607-104	F	F
5	*614-102	2	Construction Project Management 2 <sup>3</sup>	Prereq: 607-136	S	S
5	*607-128	3	Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
5	614-114	2	Commercial Code <sup>3</sup>	Prereq: 801-136	S	S
5	614-115	3	Architectural Drafting – Commercial <sup>3</sup>	Prereq: 614-150; Coreq: 614-114	S	S
6	*607-148	1	Wood-Design & Detailing <sup>3</sup>	Prereq: 607-132	SU	SU
6	*607-187	2	3D CAD: Dig Terrain Model <sup>3</sup>		SU	SU
6	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU
7	*607-134	2	Steel – Design and Detailing <sup>3</sup>	Prereq: 607-132	F	F
7	801-197	3	Technical Reporting	Prereq: 801-136	F+	F
7	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F+	F
8	607-135	2	Reinforced Concrete-Design & Detailing <sup>3</sup>	Prereq: 607-132	S	S
8	614-107	3	Residential and Commercial Inspection <sup>3</sup>	Prereq: 607-104; 614-108 ; Coreq: 614-114	S	S
8	614-123	1	Capstone: Architectural Structural Tech <sup>3</sup>	Prereq: 607-134 OR 614-100; Coreq: 614-115; 607-135 OR 614-101	S	S
8	614-138	1	3D Modeling and Virtualization <sup>3</sup>	Prereq: 614-150; 607-187	S	S

**Minimum Program Total Credits Required: 65**

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## **Architectural – Structural Engineering Technician (10-614-6)**

*Architectural-Structural Engineering Technician* focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see notes). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The second year focuses on aspects specific to buildings, both design and structural components. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four-year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of architecture.

### **Program Learning Outcomes**

Graduates will be able to:

1. Develop Construction Documents
2. Evaluate Building Materials
3. Develop building designs
4. Integrate building systems

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
3. Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
7. Students wishing to pursue Calculus courses at Gateway should take 804-115 College Technical Math 1. Please see an advisor for details.
8. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2<sup>nd</sup> semester.

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## Automotive Technology (10-602-3)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	Gateway to Success (G2S)		F+
1	*602-130	3	Auto Shop Essentials		F
1	*602-107	2	Auto Service Fundamentals <sup>5</sup>	Prereq: 602-130	F
1	*602-104	3	Brake Systems <sup>5</sup>	Prereq: 602-107; 602-130	F
1	*602-124	3	Steering & Suspension Systems <sup>5</sup>	Prereq: 602-107; 602-130	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*602-125	2	Electrical & Electronic Systems 1 <sup>5</sup>	Prereq: 602-107; 602-130; Coreq: 804-135	S
2	*602-127	3	Electrical & Electronic Systems 2	Prereq: 602-125	S
2	*602-196	3	Climate Control Systems <sup>5</sup>	Prereq: 602-127	S
2	*602-204	3	Engine Repair 1 <sup>5</sup>	Prereq: 602-107; 602-130	S
2	801-136	3	English Composition 1 <sup>1,5</sup>	Prereq: 831-103 OR 831-107	S+
3	801-196	3	Oral/Interpersonal Communication		SU+
3	809-196	3	Sociology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	SU+
4	*602-197	3	Engine Performance 1 <sup>5</sup>	Prereq: 602-127; 602-204; 804-135; Coreq: 801-136	F
4	*602-129	3	Auto Scope and Scanner Diagnosis	Prereq: 602-197; 801-136	F
4	*602-128	3	Electrical & Electronic Systems 3	Prereq: 602-127	F
4	*602-149	4	Manual Drive Train & Axles	Prereq: 602-107; 602-130	F
4	809-198	3	Psychology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	F+
5	*602-195	2	Advanced Chassis Systems	Prereq: 602-104; 602-124; 602-127	S
5	*602-205	2	Engine Repair 2	Prereq: 602-204	S
5	*602-109	4	Auto Transmission/Transaxle <sup>5</sup>	Prereq: 602-127	S
5	*602-198	4	Engine Performance 2 <sup>5</sup>	Prereq: 602-197	S
5	*602-120		Auto Service Simulation	Prereq: 602-104; 602-124; 602-128; 602-129;	
	<b>OR</b>	<b>2</b>	<b>OR</b>	602-196; 602-198; 602-205	S
	*602-131		Automotive Service Internship	Prereq: Instructor Consent	

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Automotive Technology (10-602-3)

*Automotive Technology* is a two-year repair and maintenance curriculum, totaling over 1,800 hours of automotive instruction. Students desiring to become entry-level line technicians at automotive dealerships or independent repair facilities will be prepared for ASE Master Certification in all areas of automotive mechanical repairs. Students will become competent in engine performance, engine repair, manual and automatic drive lines, transmissions and transaxles, electrical systems, and electronics, using a simulated work environment on vehicles.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate professionalism appropriate to the auto service industry.
2. Perform diagnosis, service and repair of automotive internal combustion engines.
3. Perform diagnosis, service and repair of automotive automatic transmission / transaxle systems.
4. Perform diagnosis, service and repair of automotive manual drive train and axles systems.
5. Perform diagnosis, service and repair of automotive steering and suspension steering systems.
6. Perform diagnosis, service and repair of automotive brake systems.
7. Perform diagnosis, service and repair of auto electrical/electronic systems.
8. Perform diagnosis, service and repair of automotive heating and air conditioning systems.
9. Perform diagnosis, service and repair of automotive engine performance systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
3. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.
5. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**  
School of Business and Transportation

**Automotive Technology (10-602-3)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-E = Horizon Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-E
1	890-155	1	Gateway to Success (G2S)		F+
1	*602-130	3	Auto Shop Essentials		F
1	*602-107	2	Auto Service Fundamentals <sup>5</sup>	Prereq: 602-130	F
1	*602-104	3	Brake Systems <sup>5</sup>	Prereq: 602-107; 602-130	F
1	*602-124	3	Steering & Suspension Systems <sup>5</sup>	Prereq: 602-107; 602-130	F
2	*602-125	2	Electrical & Electronic Systems 1 <sup>5</sup>	Prereq: 602-107; 602-130 Coreq: 804-135	S
2	*602-127	3	Electrical & Electronic Systems 2	Prereq: 602-125	S
2	*602-196	3	Climate Control Systems <sup>5</sup>	Prereq: 602-127	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S+
3	*602-204	3	Engine Repair 1 <sup>5</sup>	Prereq: 602-107; 602-130	SU
3	*602-197	3	Engine Performance 1 <sup>5</sup>	Prereq: 602-127; 602-204; 804-135 Coreq: 801-136	SU
3	801-136	3	English Composition 1 <sup>1,5</sup>	Prereq: 831-103 OR 831-107	SU+
4	*602-129	3	Auto Scope and Scanner Diagnosis	Prereq: 602-197; 801-136	F
4	*602-128	3	Electrical & Electronic Systems 3	Prereq: 602-127	F
4	*602-149	4	Manual Drive Train & Axles	Prereq: 602-107; 602-130	F
5	*602-195	2	Advanced Chassis Systems	Prereq: 602-104; 602-124; 602-127	S
5	*602-205	2	Engine Repair 2	Prereq: 602-204	S
5	*602-109	4	Auto Transmission/Transaxle <sup>5</sup>	Prereq: 602-127	S
5	801-196	3	Oral/Interpersonal Communication		S+
6	*602-198	4	Engine Performance 2 <sup>5</sup>	Prereq: 602-197	SU
6	*602-120		Auto Service Simulation	Prereq: 602-104; 602-124; 602-128; 602-129; 602-196; 602-198; 602-205	SU
	<b>OR</b>	<b>2</b>	<b>OR</b>		
	*602-131		Automotive Service Internship	Prereq: Instructor Consent	
6	809-196	3	Sociology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	SU+
6	809-198	3	Psychology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	SU+

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Automotive Technology (10-602-3)

*Automotive Technology* is a two-year repair and maintenance curriculum, totaling over 1,800 hours of automotive instruction. Students desiring to become entry-level line technicians at automotive dealerships or independent repair facilities will be prepared for ASE Master Certification in all areas of automotive mechanical repairs. Students will become competent in engine performance, engine repair, manual and automatic drive lines, transmissions and transaxles, electrical systems, and electronics, using a simulated work environment on vehicles.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate professionalism appropriate to the auto service industry.
2. Perform diagnosis, service and repair of automotive internal combustion engines.
3. Perform diagnosis, service and repair of automotive automatic transmission / transaxle systems.
4. Perform diagnosis, service and repair of automotive manual drive train and axles systems.
5. Perform diagnosis, service and repair of automotive steering and suspension steering systems.
6. Perform diagnosis, service and repair of automotive brake systems.
7. Perform diagnosis, service and repair of auto electrical/electronic systems.
8. Perform diagnosis, service and repair of automotive heating and air conditioning systems.
9. Perform diagnosis, service and repair of automotive engine performance systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
3. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.
5. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Business Management (10-102-3)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	Gateway to Success (G2S)		F/S/SU
1	*101-114 <b>OR</b> *101-112 <b>AND</b> *103-103	4 <b>OR</b> 3 <b>AND</b> 1	Accounting Principles <sup>3</sup> <b>OR</b> Accounting for Business <b>AND</b> Excel II		F/S/SU
1	*102-137	3	Intro to Business <sup>3</sup>		F/S/SU
1	*102-160	3	Business Law <sup>3</sup>		F/S/SU
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F/S/SU
2	*104-101	3	Marketing Principles <sup>3</sup>		F/S/SU
2	*104-104	3	Selling Principles		F/S/SU
2	*105-106 <b>OR</b> *801-197	3 <b>OR</b> 3	Business Communications <b>OR</b> Technical Reporting	Prereq: 801-136	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F/S/SU
3	801-198 <b>OR</b> 801-196	3 <b>OR</b> 3	Speech <b>OR</b> Oral/Interpersonal Communication		F/S/SU
3	*103-143	3	Computers for Professionals <sup>3</sup>		F/S/SU
4	*104-105	3	Promotion Principles		F/S/SU
4	*102-121	3	Credit Management	Prereq: 804-135; 801-136	F/S/SU
4	*196-190 <b>OR</b> *809-166	3 <b>OR</b> 3	Leadership Development <sup>1,3</sup> <b>OR</b> Ethics Theory & Applications, Intro	Prereq: 838-105 OR 831-107	F/S/SU
4	*196-191	3	Supervision <sup>3</sup>		F/S/SU
4	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S/SU
5	*102-186 <b>OR</b> *806-112	3 <b>OR</b> 3	Business Management Internship <b>OR</b> Principles of Sustainability <sup>1</sup>	Prereq: Instructor Consent Prereq: 838-105	F/S/SU
5	*102-196	4	Business Decision Management	Prereq: 101-114; 104-101 OR 101-112; 103-103; 104-101	F/S/SU
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F/S/SU
6	809-195 <b>OR</b> 809-143	3 <b>OR</b> 3	Economics <sup>1</sup> <b>OR</b> Microeconomics <sup>3</sup>	Prereq: 838-105 OR 831-107	F/S/SU
6	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F/S/SU
<b>Minimum Program Total Credits Required: 63</b>					

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Business Management (10-102-3)

*Business Management* is designed to provide a broad background in management theory, human resource management and behavior, accounting, marketing, and business decision making. Students learn how to effectively plan, organize, direct, and evaluate business functions essential to efficient and productive business organizations. Graduates will have the business knowledge and skills to prepare them for a management trainee, assistant, manager, or team leader position in a wide cross-section of business, government, and not-for-profit sectors of our economy.

### Program Learning Outcomes

Graduates will be able to:

1. Plan the operations of a business.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

104-194 International Marketing	196-193 Human Resource Management
196-189 Team Building/Problem Solving	809-143 Microeconomics

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Business Management program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [www.acbsp.org].

Accreditation Council for Business Schools and Programs (ACBSP)  
 11520 West 119th Street  
 Overland Park, KS 66213  
 Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**Part-Time Pathway to Success**  
School of Business and Transportation

## Business Management (10-102-3)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-E = Elkhorn/days, K-E = Kenosha/evenings, K-D = Kenosha/days, R-D = Racine/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	K-E	K-D	R-D	O
1	890-155	1	Gateway to Success (G2S)		F	F	F	F	F/S/SU
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F	F	F	F	F/S/SU
1	*102-137	3	Intro to Business <sup>3</sup>		F	F	F	F	F/S/SU
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F	F	F/S/SU
2	*104-101	3	Marketing Principles <sup>3</sup>		S	S	S	S	F/S/SU
2	*104-104	3	Selling Principles		S	S	S	S	F/S/SU
2	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	S	S	S	S	F/S/SU
3	809-195 <b>OR</b> 809-143	3 <b>OR</b> 3	Economics <sup>1</sup> <b>OR</b> Microeconomics <sup>3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU	F/S/SU
3	801-198 <b>OR</b> 801-196	3 <b>OR</b> 3	Speech <b>OR</b> Oral/Interpersonal Communication		SU	SU	SU	SU	F/S/SU
4	*101-114 <b>OR</b> (*101-112 <b>AND</b> *103-103)	4 <b>OR</b> (3 <b>AND</b> 1)	Accounting Principles <sup>3</sup> <b>OR</b> (Accounting for Business <b>AND</b> Excel II)		F	F	F	F	F/S/SU
4	*103-143	3	Computers for Professionals <sup>3</sup>		F	F	F	F	F/S/SU
4	*105-106 <b>OR</b> *801-197	3 <b>OR</b> 3	Business Communications <b>OR</b> Technical Reporting	Prereq: 801-136 Prereq: 801-136	F	F	F	F	F/S/SU
5	*102-160	3	Business Law <sup>3</sup>		S	S	S	S	F/S/SU
5	*104-105	3	Promotion Principles		S	S	S	S	F/S/SU
5	*102-121	3	Credit Management	Prereq: 804-135; 801-136	S	S	S	S	F/S/SU
6	*102-186 <b>OR</b> *806-112	3 <b>OR</b> 3	Business Management Internship <b>OR</b> Principles of Sustainability <sup>1</sup>	Prereq: Instructor Consent Prereq: 838-105 OR 831-107	SU	SU	SU	SU	F/S/SU
6	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU	F/S/SU
7	*196-190 <b>OR</b> *809-166	3 <b>OR</b> 3	Leadership Development <sup>1,3</sup> <b>OR</b> Ethics Theory & Applications, Intro	Prereq: 838-105 OR 831-107	F	F	F	F	F/S/SU
7	*196-191	3	Supervision <sup>3</sup>		F	F	F	F	F/S/SU
8	*102-196	4	Business Decision Management	Prereq: 101-114; 104-101 OR 101-112; 103-103; 104-101	S	S	S	S	F/S/SU
8	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S	S	S	F/S/SU

**Minimum Program Total Credits Required: 63**

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### Business Management (10-102-3)

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### Program Learning Outcomes

Graduates will be able to:

1. Plan the operations of a business.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

104-194 International Marketing	196-193 Human Resource Management
196-189 Team Building/Problem Solving	809-143 Microeconomics

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Business Management program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [www.acbsp.org].

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 11520 West 119th Street  
 Overland Park, KS 66213  
 Phone: (913) 339-9356  
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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Civil Engineering Technology-Highway Technology (10-607-4)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-E = iMET Center/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F
1	*607-141 OR *607-103	2	📍 Construction Basics <sup>3,6</sup> OR 📍 Introduction to Civil Engineering & Architecture <sup>3,6</sup>		F	F
1	*607-104	3	📍 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135 OR 804-115	3 5	📍 Quantitative Reasoning <sup>1</sup> OR 📍 College Technical Math 1 <sup>1</sup>	Prereq: 834-109 Prereq: 834-110	F+	F
1	*607-169	2	📍 Surveying Basics <sup>3</sup>		F	F
1	*607-102	2	📍 Conflict Resolution in CET <sup>3,6</sup>		F	F
1	*607-136	2	📍 Construction Project Management <sup>3</sup>		F	F
2	*607-132	3	📍 Structural Mechanics <sup>3</sup>	Prereq: 804-135	S	S
2	*607-139	4	📍 Material Testing and Inspection <sup>3</sup>	Prereq: 607-104	S	S
2	801-136	3	📍 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	S+	S
2	*607-128	3	📍 Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
2	*607-170	2	📍 AutoCAD for Construction Science <sup>3,6</sup>		S	S
3	*607-187	2	📍 3D CAD: Digital Terrain Modeling <sup>3</sup>		SU	SU
3	*614-150	2	3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
3	809-195	3	Economics	Prereq: 838-105 OR 831-107	SU+	SU
4	*607-127	3	📍 Civil Engineering Drafting <sup>3</sup>	Prereq: 607-187; 801-136	F	F
4	*607-173	3	📍 Surveying Fundamentals <sup>3</sup>	Prereq: 607-169; 607-187; 804-135	F	F
4	607-189	2	📍 Geospatial Data Processing <sup>3</sup>	Prereq: 607-169	F	F
4	809-198	3	📍 Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F+	F
4	801-197	3	📍 Technical Reporting	Prereq: 801-136	F+	F
5	*607-150	4	📍 Survey Construction/ Route/ Highway <sup>3</sup>	Prereq: 607-173; 801-136	S	S
5	*607-117	2	📍 Geographical Information Systems I <sup>3</sup>		S	S
5	*614-138	1	📍 3D Modeling and Virtualization <sup>3</sup>	Prereq: 614-150; 607-187	S	S
5	*607-154	2	📍 Sewer and Water Systems <sup>3</sup>	Prereq: 607-104; 804-135	S	S
5	*607-166	1	📍 Capstone: CET-Highway Technology <sup>3</sup>	Prereq: Instructor Consent; Coreq: 607-150; 607-154	S	S
5	607-129	2	📍 Future Trends in Construction Science <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
5	614-102	2	📍 Construction Project Management 2 <sup>3</sup>	Prereq: 607-136	S	S

**Minimum Program Total Credits Required: 65**

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- 📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details
- 📍 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.
- (\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.
- (+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## **Civil Engineering Technology – Highway Technology (10-607-4)**

*Civil Engineering Technology – Highway Technology* focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to Highway and Public Works. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four-year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Highway Technology.

### **Program Learning Outcomes**

Graduates will be able to:

1. Utilize graphic techniques to produce engineering drawings.
2. Conduct standardized field and laboratory testing on civil engineering materials.
3. Utilize modern surveying methods for land measurements and/or construction layout.
4. Estimate material quantities and costs for civil engineering projects.
5. Utilize geometric elements to develop corridors.
6. Design storm systems to meet given design requirements.
7. Determine forces and stresses in elementary structural systems.
8. Employ productivity software to solve technical problems.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
3. Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
7. Students wishing to pursue Calculus courses at Gateway should take 804-115 College Technical Math 1. Please see an advisor for details.
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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Civil Engineering Technology-Highway Technology (10-607-4)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-E = iMET Center/evenings, E-E = Elkhorn Campus/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F
1	*607-141	2	📍 Construction Basics <sup>3,6</sup>		F	F
	<b>OR</b>	<b>2</b>	<b>OR</b>			
	*607-103		📍 Introduction to Civil Engineering & Architecture <sup>3,6</sup>			
1	*607-104	3	📍 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135	3	📍 Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+	F
	<b>OR</b>	<b>5</b>	<b>OR</b>			
	804-115		📍 College Technical Math 1 <sup>1</sup>	Prereq: 834-110		
1	*607-169	2	📍 Surveying Basics <sup>3</sup>		F	F
2	*607-102	2	📍 Conflict Resolution in CET <sup>3,6</sup>		S	S
5	607-129	2	📍 Future Trends in Construction Science <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
2	*607-139	4	📍 Material Testing and Inspection <sup>3</sup>	Prereq: 607-104	S	S
3	*607-132	3	📍 Structural Mechanics <sup>3</sup>	Prereq: 804-135	SU	SU
3	*607-187	2	📍 3D CAD: Digital Terrain Modeling <sup>3</sup>		SU	SU
3	801-136	3	📍 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	SU+	SU
4	*607-127	3	📍 Civil Engineering Drafting <sup>3</sup>	Prereq: 607-187; 801-136	F	F
4	*607-173	3	📍 Surveying Fundamentals <sup>3</sup>	Prereq: 607-169; 607-187; 804-135	F	F
4	607-189	2	📍 Geospatial Data Processing <sup>3</sup>	Prereq: 607-169	F	F
5	*607-128	3	📍 Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
5	*607-154	2	📍 Sewer and Water Systems <sup>3</sup>	Prereq: 607-104; 804-135	S	S
5	801-197	3	📍 Technical Reporting	Prereq: 801-136	S+	S
6	*614-150	2	📍 3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
6	809-195	3	📍 Economics	Prereq: 838-105 OR 831-107	SU+	SU
6	809-198	3	📍 Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	S+	S
7	*607-117	2	📍 Geographical Information Systems I <sup>3</sup>		F	F
7	*607-136	2	📍 Construction Project Management <sup>3</sup>		F	F
7	*607-170	2	📍 AutoCAD for Construction Science <sup>3,6</sup>		F	F
8	*607-150	4	📍 Survey Construction/ Route/ Highway <sup>3</sup>	Prereq: 607-173; 801-136	S	S
8	*607-166	1	📍 Capstone: CET-Highway Technology <sup>3</sup>	Prereq: Instructor Consent Coreq: 607-150; 607-154	S	S
8	614-102	2	📍 Construction Project Management 2 <sup>3</sup>	Prereq: 607-136	S	S
8	*614-138	1	📍 3D Modeling and Virtualization <sup>3</sup>	Prereq: 614-150; 607-187	S	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details

📍 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## **Civil Engineering Technology – Highway Technology (10-607-4)**

*Civil Engineering Technology – Highway Technology* focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to Highway and Public Works. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four-year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Highway Technology.

### **Program Learning Outcomes**

Graduates will be able to:

1. Utilize graphic techniques to produce engineering drawings.
2. Conduct standardized field and laboratory testing on civil engineering materials.
3. Utilize modern surveying methods for land measurements and/or construction layout.
4. Estimate material quantities and costs for civil engineering projects.
5. Utilize geometric elements to develop corridors.
6. Design storm systems to meet given design requirements.
7. Determine forces and stresses in elementary structural systems.
8. Employ productivity software to solve technical problems.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
3. Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
7. Students wishing to pursue Calculus courses at Gateway should take 804-115 College Technical Math 1. Please see an advisor for details.
8. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2<sup>nd</sup> semester.

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Civil Engineering Technology – Fresh Water Resources (10-607-9)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-E = iMET Center/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F
1	*607-141 OR *607-103	2	📍 Construction Basics <sup>3,6</sup> OR Introduction to Civil Engineering & Architecture <sup>3,6</sup>		F	F
1	*607-104	3	📍 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135 OR 804-115	3 5	📍 Quantitative Reasoning <sup>1</sup> OR 📍 College Technical Math 1 <sup>1</sup>	Prereq: 834-109 Prereq: 834-110	F+	F
1	*607-169	2	Land Surveying Basics <sup>3</sup>		F	F
1	*607-102	2	Conflict Resolution in CET <sup>3,6</sup>		F	F
2	*607-136	2	📍 Construction Project Management <sup>3</sup>		S	S
2	801-136	3	📍 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	S+	S
2	607-128	3	Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
2	*607-170	2	AutoCAD for Construction Sciences <sup>3,6</sup>		S	S
2	806-127	4	Chemistry 1	Prereq: 804-197 OR 804-135	S+	S
3	*607-181	2	Hydrology and Conservation <sup>3</sup>	Prereq: 804-135	SU	SU
3	*607-182	2	Sampling and Testing <sup>3</sup>	Prereq: 607-104; 801-136	SU	SU
3	*607-187	2	3D CAD: Digital Terrain Modeling <sup>3</sup>		SU	SU
3	*614-150	2	3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
3	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU
4	*607-117	2	Geographical Information Systems I <sup>3</sup>		F	F
4	*607-186	2	Erosion Control <sup>3</sup>	Prereq: 607-104; 804-135	F	F
4	*607-183	3	Fresh Water Treatment <sup>3</sup>	Prereq: 607-182; 806-127	F	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F+	F
4	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F+	F
5	*607-154	2	Sewer and Water Systems <sup>3</sup>	Prereq: 607-104; 804-135	S	S
5	*607-167	1	Capstone: CET-Freshwater Resources <sup>3</sup>	Prereq: Instructor Consent Coreq: 607-184; 607-185	S	S
5	*607-184	2	Environmental Impact <sup>3</sup>	Prereq: 801-136	S	S
5	*607-185	3	Waste Water Treatment <sup>3</sup>	Prereq: 607-183	S	S
5	614-102	2	Construction Project Management 2 <sup>3</sup>	Prereq: 607-136	S	S
5	607-129	2	Future Trends in Construction Sciences <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
5	607-118	2	Geographical Information Systems 2 <sup>3</sup>	Prereq: 607-117	S	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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## **Civil Engineering Technology – Fresh Water Resources (10-607-9)**

*Civil Engineering Technology - Fresh Water Resources* focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to fresh water, from rainfall to testing to cleaning. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a 4-year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Fresh Water Resources.

### **Program Learning Outcomes**

Graduates will be able to:

1. Develop 3D computer models, maps, and drawings based on field measurements.
2. Develop a hydrograph model.
3. Develop a surface/groundwater water storage model. Differentiate between the various areas and functions within the profession.
4. Exhibit proper sampling and testing skills.
5. Design storm systems to meet given design requirements.
6. Develop an Erosion Control Plan.
7. Develop a plan to treat freshwater.
8. Develop a plan to treat wastewater.
9. Develop Environmental Reports exhibiting proper and clear documentation and reporting skills.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
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### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

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2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Civil Engineering Technology – Fresh Water Resources (10-607-9)**

Associate of Applied Science

**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
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1	*607-104	3	📍 Building Material & Construction Method <sup>3</sup>		F	F
1	804-135 OR 804-115	3 5	📍 Quantitative Reasoning <sup>1</sup> OR 📍 College Technical Math 1 <sup>1</sup>	Prereq: 834-109 Prereq: 834-110	F+	F+
1	*607-169	2	Land Surveying Basics <sup>3</sup>		F	F
2	*607-102	2	Conflict Resolution in CET <sup>3,6</sup>		S	S
2	607-129	2	Future Trends in Construction Sciences <sup>3</sup>	Prereq: 607-104; 607-141; 607-169	S	S
2	*607-136	2	📍 Construction Project Management <sup>3</sup>		S	S
2	*607-170	2	AutoCAD for Construction Sciences <sup>3,6</sup>		S	S
3	*607-187	2	3D CAD: Digital Terrain Modeling <sup>3</sup>		SU	SU
3	801-136	3	📍 English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	SU+	SU+
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4	*607-117	2	Geographical Information Systems I <sup>3</sup>		F	F
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5	607-118	2	Geographical Information Systems 2 <sup>3</sup>	Prereq: 607-117	S	S
5	607-128	3	Construction Estimating <sup>3</sup>	Prereq: 804-135; Coreq: 801-136	S	S
5	*607-154	2	Sewer and Water Systems <sup>3</sup>	Prereq: 607-104; 804-135	S	S
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6	*614-150	2	3D CAD: Building Information Modeling <sup>3</sup>		SU	SU
6	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
7	801-197	3	Technical Reporting	Prereq: 801-136	F+	F+
7	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F+	F+
8	*607-167	1	Capstone: CET-Freshwater Resources <sup>3</sup>	Prereq: Instructor Consent Coreq: 607-184; 607-185	S	S
8	*607-184	2	Environmental Impact <sup>3</sup>	Prereq: 801-136	S	S
8	*607-185	3	Waste Water Treatment <sup>3</sup>	Prereq: 607-183	S	S

**Minimum Program Total Credits Required: 65**

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## **Civil Engineering Technology-Fresh Water Resources (10-607-9)**

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### **Program Learning Outcomes**

Graduates will be able to:

1. Develop 3D computer models, maps, and drawings based on field measurements.
2. Develop a hydrograph model.
3. Develop a surface/groundwater water storage model. Differentiate between the various areas and functions within the profession.
4. Exhibit proper sampling and testing skills.
5. Design storm systems to meet given design requirements.
6. Develop an Erosion Control Plan.
7. Develop a plan to treat freshwater.
8. Develop a plan to treat wastewater.
9. Develop Environmental Reports exhibiting proper and clear documentation and reporting skills.

### **Essential Career Competencies**

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- Critical Thinking and Problem Solving
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### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 65 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
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**Criminal Justice Studies (10-504-5)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	R-D
1	890-155	1	Gateway to Success (G2S)		F/S	F
1	*504-900	3	Intro to Criminal Justice <sup>4</sup>		F/S	F
1	*504-902	3	Criminal Law		F/S	F
1	*504-174	3	Intro to Security		F/S	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F/S	F
1	103-143	3	Computers for Professionals <sup>4</sup>		F/S	F
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S/F	S
2	*504-903	3	Professional Communications		S/F	S
2	*504-905	3	Report Writing		S/F	S
2	*504-141	3	Interview, Interrogations, Confessions <sup>4</sup>		S/F	S
2	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S/F	S
3	*504-117	3	Police Administration		F/S	SU
3	809-198	3	Psychology, Introduction to <sup>1,4</sup>	Prereq: 838-105 OR 831-107	F/S	SU
3	*504-148	3	Rules of Evidence	Prereq: 801-136	F/S	SU
3	*504-907	3	Community Policing Strategies		F/S	SU
3	*504-908	3	Traffic Theory	Prereq: 804-135	F/S	SU
4	*504-901	3	Constitutional Law	Prereq: 504-902; Coreq: 504-148	S/F	F
4	*504-904	3	Juvenile Law		S/F	F
4	*504-906	3	Criminal Investigation Theory	Prereq: 504-908; Coreq: 504-148	S/F	F
4	801-196	3	Oral/Interpersonal Communications		S/F	F
4	809-159	3	Psychology, Abnormal	Prereq: 809-198	S/F	F
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S/F	F

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Criminal Justice Studies (10-504-5)**

*Criminal Justice Studies* is a two-year associate degree program that prepares students for positions in a variety of law enforcement careers at the state, local, and federal levels, as well as in the field of private security. Students study the law enforcement field plus physical and behavioral sciences to meet the demands of the police profession, including criminal investigation, traffic law, patrol procedures, and scientific crime laboratory.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Examine the components of interrelationships in the criminal justice system.
2. Analyze situational responses.
3. Apply communication skills as a criminal justice professional.
4. Conduct investigations.
5. Adhere to professional code of ethics for a criminal justice practitioner.
6. Maintain personal wellness.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 64 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Suggested Electives**

504-167 Phys Fitness for Law Enforcement	514-173 Cyber Crime
504-124 Forensic Science	802-125 Spanish II
504-175 Terrorism/Homeland Security	802-119 Spanish III
504-152 Police Internship	504-176 Spanish for Law Enforcement
802-124 Spanish I	

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students wishing to demonstrate proficiency in Spanish are encouraged to enroll in 90-801-3 Spanish Proficiency for Law Enforcement (internal certificate). See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@qtc.edu](mailto:cfpl@qtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Criminal Justice Studies (10-504-5)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-E = Kenosha/evenings, R-E = Racine/evenings, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E	R-E	E-E
1	890-155	1	Gateway to Success (G2S)		F	F	F
1	*504-900	3	Intro to Criminal Justice <sup>4</sup>		F	F	F
1	*504-902	3	Criminal Law		F	F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F	F
2	*504-174	3	Intro to Security		S	S	S
2	*504-903	3	Professional Communications		S	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S
3	*504-905	3	Report Writing		SU	SU	F
3	*504-141	3	Interview, Interrogations, Confessions <sup>4</sup>		SU	SU	F
3	103-143	3	Computers for Professionals <sup>4</sup>		SU	SU	F
4	*504-117	3	Police Administration		F	F	S
4	*504-907	3	Community Policing Strategies		F	F	S
4	809-198	3	Psychology, Introduction to <sup>1,4</sup>	Prereq: 838-105 OR 831-107	F	F	S
5	*504-148	3	Rules of Evidence	Prereq: 801-136	S	S	F
5	*504-908	3	Traffic Theory	Prereq: 804-135	S	S	F
5	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S	S	F
6	*504-901	3	Constitutional Law	Prereq: 504-902; Coreq: 504-148	SU	SU	S
6	*504-904	3	Juvenile Law		SU	SU	S
6	801-196	3	Oral/Interpersonal Communications		SU	SU	S
7	*504-906	3	Criminal Investigation Theory	Prereq: 504-908; Coreq: 504-148	F	F	F
7	809-159	3	Psychology, Abnormal	Prereq: 809-198 OR 831-107	F	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F	F

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Criminal Justice Studies (10-504-5)**

*Criminal Justice Studies* is a two-year associate degree program that prepares students for positions in a variety of law enforcement careers at the state, local, and federal levels, as well as in the field of private security. Students study the law enforcement field plus physical and behavioral sciences to meet the demands of the police profession, including criminal investigation, traffic law, patrol procedures, and scientific crime laboratory.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Examine the components of interrelationships in the criminal justice system.
2. Analyze situational responses.
3. Apply communication skills as a criminal justice professional.
4. Conduct investigations.
5. Adhere to professional code of ethics for a criminal justice practitioner.
6. Maintain personal wellness.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 64 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Suggested Electives**

504-167 Phys Fitness for Law Enforcement	514-173 Cyber Crime
504-124 Forensic Science	802-125 Spanish II
504-175 Terrorism/Homeland Security	802-119 Spanish III
504-152 Police Internship	504-176 Spanish for Law Enforcement
802-124 Spanish I	

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students wishing to demonstrate proficiency in Spanish are encouraged to enroll in 90-801-3 Spanish Proficiency for Law Enforcement (internal certificate). See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@qtc.edu](mailto:cfpl@qtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**  
School of Protective and Human Services

**Culinary Arts (10-316-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*316-131	4	Culinary Skills I <sup>4</sup>	Coreq: 316-170; 804-135	F
1	*316-140	3	Basic Baking Techniques		F
1	*316-170	1	🎓 Sanitation and Hygiene <sup>4</sup>		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F
2	*316-109	3	Short Order Deli	Coreq: 316-170; 316-131	S
2	*316-132	4	Culinary Skills II	Prereq: 316-131; Coreq: 801-136	S
2	*316-130	2	🎓 Nutrition <sup>4</sup>		S
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S
3	103-143	3	Computers for Professionals <sup>4</sup>		SU
3	809-195	3	Economics <sup>1,4</sup>	Prereq: 838-105 OR 831-107	SU
4	*316-105	4	International Buffets	Prereq: 316-132	F
4	*316-190	3	Food Service Supervision		F
4	*316-135	2	Catering/Banquets	Prereq: 316-132	F
4	801-196	3	Oral/Interpersonal Communications		F
4	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F
5	196-123	2	Problem Solving/Decision Making		S
5	*316-125	4	Fine Dining	Prereq: 316-105; 131; 132; 135; 170; 804-135; 801-136; OR 316-131 & 109-122	S
5	*316-133	3	Menu Planning, Purchasing, Cost Control		S
5	*316-134	1	Garde Manger		S
5	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S
6	809-166	3	Ethics: Theory & Applications, Intro to <sup>1</sup>	Prereq: 838-105 OR 831-107	SU
6	101-112	3	Accounting for Business		SU

**Minimum Program Total Credits Required: 64**

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Culinary Arts (10-316-1)**

*Culinary Arts* places emphasis on food purchasing, specialty food preparation, dining room operation, and quantity food preparation sanitation. In addition to the business aspects of restaurant operations, this program includes extensive hands-on preparation of different foods. Students completing the program are certified in sanitation and qualified for employment as cafeteria managers, restaurant cooks, concession managers, and specialty cooks.

### **Program Learning Outcomes**

Graduates of the Culinary Arts Associate Degree Program should be able to:

1. Apply principles of safety and sanitation in food service operations.
2. Apply principles of nutrition.
3. Demonstrate culinary skills.
4. Manage food service operations.
5. Plan menus.
6. Analyze food service financial information.
7. Relate food service operations to sustainability.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 64 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A uniform is required for this program.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**  
School of Protective and Human Services

**Culinary Arts (10-316-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*316-131	4	Culinary Skills I <sup>4</sup>	Coreq: 316-170; 804-135	F
1	*316-170	1	🎓 Sanitation and Hygiene <sup>4</sup>		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F
2	*316-132	4	Culinary Skills II	Prereq: 316-131; Coreq: 801-136	S
2	*316-130	2	🎓 Nutrition <sup>4</sup>		S
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S
3	801-196	3	Oral/Interpersonal Communications		SU
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU
4	*316-140	3	Basic Baking Techniques		F
4	*316-190	3	Food Service Supervision		F
5	103-143	3	Computers for Professionals <sup>4</sup>		S
5	*316-133	3	Menu Planning, Purchasing, Cost Control		S
5	*316-134	1	Garde Manger		S
6	809-166	3	Ethics: Theory & Applications, Intro to <sup>1</sup>	Prereq: 838-105 OR 831-107	SU
6	101-112	3	Accounting for Business		SU
7	*316-105	4	International Buffets	Prereq: 316-132	F
7	*316-135	2	Catering/Banquets	Prereq: 316-132	F
8	196-123	2	Problem Solving/Decision Making		S
8	*316-125	4	Fine Dining	Prereq: 316-105; 316-131; 316-132; 316-135; 316-170; 804-135; 801-136; OR 316-131 & 109-122	S
8	*316-109	3	Short Order Deli	Coreq: 316-170; 316-131	S
9	809-195	3	Economics <sup>1,4</sup>	Prereq: 838-105 OR 831-107	SU
9	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU

**Minimum Program Total Credits Required: 64**

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(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Culinary Arts (10-316-1)**

*Culinary Arts* places emphasis on food purchasing, specialty food preparation, dining room operation, and quantity food preparation sanitation. In addition to the business aspects of restaurant operations, this program includes extensive hands-on preparation of different foods. Students completing the program are certified in sanitation and qualified for employment as cafeteria managers, restaurant cooks, concession managers, and specialty cooks.

### **Program Learning Outcomes**

Graduates of the Culinary Arts Associate Degree Program should be able to:

1. Apply principles of safety and sanitation in food service operations.
2. Apply principles of nutrition.
3. Demonstrate culinary skills.
4. Manage food service operations.
5. Plan menus.
6. Analyze food service financial information.
7. Relate food service operations to sustainability.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

- Minimum 64 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A uniform is required for this program.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Diesel Equipment Technology (10-412-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, HZ-E = Horizon Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D	HZ-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	S+
1	*412-111	2	🎓 Diesel Maintenance Fundamentals	Coreq: 804-135	F	S
1	*412-107	4	Diesel Electricity 1 <sup>7</sup>	Prereq: 412-111	F	S
1	*412-114	3	Diesel Heating, Cooling & Air Cond. <sup>7</sup>	Prereq: 412-111; 412-107	F	S
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+	S+
2	*412-106	4	Diesel Brake Systems <sup>7</sup>	Prereq: 412-111; 412-117 OR 412-125	S	SU
2	*412-117	3	Diesel Suspension & Steering Systems <sup>1,7</sup>	Prereq: 412-111	S	SU
2	801-136	3	English Composition 1 <sup>7</sup>	Prereq: 831-103 OR 831-107	S+	SU+
2	801-196	3	Oral/Interpersonal Communication		S+	SU+
3	*412-112	4	Diesel Drive Trains <sup>7</sup>	Prereq: 412-111; 412-106 Coreq: 801-136	F	F
3	*412-116	3	Diesel Preventative Maintenance <sup>7</sup>	Prereq: 412-111; 412-106; 412-112 OR 412-126	F	F
3	*412-110	3	Diesel Fuel Systems	Prereq: 412-111; 801-136; 804-135	F	F
4	*412-109	5	Diesel Engine Service <sup>7</sup>	Prereq: 412-111; 412-110	S	S
4	*412-108	3	Diesel Electricity 2	Prereq: 412-111; 412-107	S	S
4	809-196	3	Sociology, Introduction to <sup>1,7</sup>	Prereq: 838-105 OR 831-107	S+	S+
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S
4	*412-115	2	Diesel Hydraulic Systems	Prereq: 412-111	S	S
5	*412-113	3	Diesel Fuel Systems – Advanced	Prereq: 412-111; 412-107; 412-110; 412-108	F	SU
5	*412-105	4	Diesel Control Systems – Advanced	Prereq: 412-111 & 412-108 & 412-109 & 412-112 OR 412-126 & 412-113 & 412-114	F	SU
5	809-198	3	Psychology, Intro to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	F+	SU+
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	SU

**Minimum Program Total Credits Required: 65**

**AVAILABLE CONCENTRATION: CONSTRUCTION EQUIPMENT REPAIR**

Instead of these courses	Take these alternates	Cr.	HZ-D	HZ-E
412-117 Diesel Susp. & Steering Sys.	*412-125 Const. Equip. Drive/Steer. Sys. Prereq: 412-111	3	S	SU
412-112 Diesel Drive Trains	*412-126 Const. Equip Drive Train Prereq: 412-111; 106; 125	4	F	F
412-105 Diesel Control Sys. Adv.	*412-127 Construction Hydraulic Sys. Prereq: 412-111; 108; 109; 115; 126	4	F	SU

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(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Diesel Equipment Technology (10-412-1)

*Diesel Equipment Technology* is a two-year repair and maintenance program designed to prepare an entry level diesel technician. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on operational fundamentals and repair of diesel engines, and diesel vehicle systems including brakes, heating, and cooling systems. Technical skills will be developed in diagnosing and repair of advanced engine and system controls.

### Program Learning Outcomes

Graduates will be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

412-122 Professional Practices	461-120 Small Power Equipment
412-123 Diesel Equipment Tech. Internship	801-197 Technical Reporting
442-101 Welding Basics	809-195 Economics
442-102 Introduction to Welding	443-101 Forklift Operation & Maintenance

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirements.
3. Work uniforms are required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
5. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College will offer CDL training starting May 2019.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Diesel Equipment Technology (10-412-1)

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-E = Horizon Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-E
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*412-111	2	📖 Diesel Maintenance Fundamentals	Coreq: 804-135	F
1	*412-107	4	📖 Diesel Electricity 1 <sup>7</sup>	Prereq: 412-111	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	801-136	3	English Composition 1 <sup>7</sup>	Prereq: 831-103 OR 831-107	S
2	*412-114	3	Diesel Heating, Cooling & Air Cond. <sup>7</sup>	Prereq: 412-111; 412-107	S
2	*412-117	3	Diesel Suspension & Steering Systems <sup>1,7</sup>	Prereq: 412-111	S
3	801-196	3	Oral/Interpersonal Communication		SU+
3	*412-106	4	Diesel Brake Systems <sup>7</sup>	Prereq: 412-111; 412-117 OR 412-125	SU
3	*412-112	4	Diesel Drive Trains <sup>7</sup>	Prereq: 412-111; 412-106 Coreq: 801-136	SU
4	*412-116	3	Diesel Preventative Maintenance <sup>7</sup>	Prereq: 412-111; 412-106; 412-112 OR 412-126	F
4	*412-110	3	Diesel Fuel Systems	Prereq: 412-111; 801-136; 804-135	F
4	*412-109	5	Diesel Engine Service <sup>7</sup>	Prereq: 412-111; 412-110	F
5	*412-108	3	Diesel Electricity 2	Prereq: 412-111; 412-107	S
5	*412-115	2	Diesel Hydraulic Systems	Prereq: 412-111	S
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S
6	809-196	3	Sociology, Introduction to <sup>1,7</sup>	Prereq: 838-105 OR 831-107	SU+
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU
7	*412-113	3	Diesel Fuel Systems – Advanced	Prereq: 412-111; 412-107; 412-110; 412-108	F
7	*412-105	4	Diesel Control Systems – Advanced	Prereq: (412-111 & 412-108 & 412-109 & 412-112) OR (412-126 & 412-113 & 412-114)	F
7	809-198	3	Psychology, Intro to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	F+

**Minimum Program Total Credits Required: 65**

**AVAILABLE CONCENTRATION: CONSTRUCTION EQUIPMENT REPAIR**

Instead of these courses	Take these alternates	Cr.	HZ-D
412-117 Diesel Susp. & Steering Sys.	*412-125 Const. Equip. Drive/Steer. Sys. Prereq: 412-111	3	S
412-112 Diesel Drive Trains	*412-126 Const. Equip Drive Train Prereq: 412-111; 106; 125	4	SU
412-105 Diesel Control Sys. Adv.	*412-127 Construction Hydraulic Sys. Prereq: 412-111; 108; 109; 115; 126	4	F

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

📖 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Diesel Equipment Technology (10-412-1)

*Diesel Equipment Technology* is a two-year repair and maintenance program designed to prepare an entry level diesel technician. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on operational fundamentals and repair of diesel engines, and diesel vehicle systems including brakes, heating, and cooling systems. Technical skills will be developed in diagnosing and repair of advanced engine and system controls.

### Program Learning Outcomes

Graduates will be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

412-122 Professional Practices	461-120 Small Power Equipment
412-123 Diesel Equipment Tech. Internship	801-197 Technical Reporting
442-101 Welding Basics	809-195 Economics
442-102 Introduction to Welding	443-101 Forklift Operation & Maintenance

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirements.
3. Work uniforms are required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
5. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College will offer CDL training starting May 2019.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Early Childhood Education (10-307-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, O=Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*307-148	3	ECE: Foundations of Early Childhood Education <sup>3,7</sup>		F	F
1	*307-167	3	ECE: Health, Safety & Nutrition <sup>3</sup>		F	F
1	*307-179	3	ECE: Child Development <sup>3</sup>		F	F
1	*307-174	3	🎓 ECE: Introductory Practicum <sup>3,7</sup>	Coreq: 307-148; 307-167; 801-136	F	F+
1	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	F	F
2	*307-110	3	ECE: Soc S, Art, and Music		S	S
2	*307-188	3	ECE: Guiding Children's Behavior		S	S
2	*307-108	3	ECE: Early Language & Literacy		S	S
2	*307-175	3	🎓 ECE: Preschool Practicum <sup>7</sup>	Prereq: Instructor Consent	S	S+
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
3	*307-151	3	ECE: Infant & Toddler Development		F	F
3	*307-195	3	ECE: Family and Community Relationships		F	F
3	*307-112	3	ECE: STEM	Coreq: 307-148	F	F
3	*307-177	3	🎓 ECE: Intermediate Practicum <sup>7</sup>	Prereq: 307-175; 801-136; 804-135; Coreq: 307-151	F	F+
3	809-198	3	Psychology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	F	F
4	*307-187	3	ECE: Children with Differing Abilities		S	S
4	*307-199	3	ECE: Advanced Practicum	Prereq: 307-177	S	S+
4	801-196	3	Oral/Interpersonal Communication		S	S
4	809-196	3	Sociology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	S	S
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students will complete student teaching requirements in an early care and education program. Please see an advisor for details.

## Early Childhood Education (10-307-1)

*Early Childhood Education* prepares students to work as teacher-caregivers in early childhood settings. It combines hands-on fieldwork in area centers with related academic work at the college. Graduates become responsible for the care and education of children in the birth-to-eight-years age range. They create and maintain safe and healthy play environments, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.

### Program Learning Outcomes

Graduates will be able to:

1. Apply child development theory to practice.
2. Cultivate relationships with children, family, and the community.
3. Assess child growth and development.
4. Use best practices in teaching and learning.
5. Demonstrate professionalism.
6. Integrate health, safety, and nutrition practices.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

307-141 ECE: Special Healthcare Needs	307-149 ECE: Child Care Operations Management
307-169 ECE: Infant/Toddler Group Care	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Background checks for the ECE program are valid for five years.
3. Students must submit all health and immunization forms prior to the first day of attending all first-semester courses.
4. Complete the State of Wisconsin Background Check Request. Once complete print the document to physically sign it and email it to [admissionsgroup@gtc.edu](mailto:admissionsgroup@gtc.edu) with Early Childhood Education BCR in the subject line. Directions for ordering your Background Check will be sent to the mailing address you provide on your Background Check Request. Please email your Preliminary or Final Background Check-Eligibility Letter to [admissionsgroup@gtc.edu](mailto:admissionsgroup@gtc.edu) with Early Childhood Education Background Check in the subject line.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
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## Early Childhood Education (10-307-1)

Associate of Applied Science

**Effective 2020/2021**

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**R-E = Racine/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	O
1	890-155	1	Gateway to Success (G2S)		F	F
1	*307-148	3	ECE: Foundations of Early Childhood Education <sup>3,7</sup>		F	F
1	*307-167	3	ECE: Health, Safety & Nutrition <sup>3</sup>		F	F
1	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	F	F
2	*307-110	3	ECE: Soc S, Art, and Music		S	S
2	*307-188	3	ECE: Guiding Children's Behavior		S	S
2	*307-174	3	ECE: Introductory Practicum <sup>3,7</sup>	Coreq: 307-148; 307-167; 801-136	S	S+
3	*307-179	3	ECE: Child Development <sup>3</sup>		SU	SU
3	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	SU	SU
4	*307-175	3	ECE: Preschool Practicum <sup>7</sup>	Prereq: Instructor Consent	F	F+
4	*307-151	3	ECE: Infant & Toddler Development		F	F
4	*307-195	3	ECE: Family and Community Relationships		F	F
5	*307-177	3	ECE: Intermediate Practicum <sup>7</sup>	Prereq: 307-175; 801-136; 804-135; Coreq: 307-151	S	S+
5	*307-108	3	ECE: Early Language & Literacy		S	S
5	801-196	3	Oral/Interpersonal Communication		S	S
6	809-198	3	Psychology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	SU	SU
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU
7	*307-112	3	ECE: STEM	Coreq: 307-148	F	F
7	809-196	3	Sociology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	F	F
8	*307-187	3	ECE: Children with Differing Abilities		S	S
8	*307-199	3	ECE: Advanced Practicum	Prereq: 307-177	S	S+

**Minimum Program Total Credits Required: 61**

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= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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## Early Childhood Education (10-307-1)

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### Program Learning Outcomes

Graduates will be able to:

1. Apply child development theory to practice.
2. Cultivate relationships with children, family, and the community.
3. Assess child growth and development.
4. Use best practices in teaching and learning.
5. Demonstrate professionalism.
6. Integrate health, safety, and nutrition practices.

### Essential Career Competencies

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- Communication Competence
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- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

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3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

307-141 ECE: Special Healthcare Needs	307-181 ECE: Child Care Operations Management
307-169 ECE: Infant/Toddler Group Care	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Background checks for the ECE program are valid for five years.
3. Students must submit all health and immunization forms prior to the first day of attending all first-semester courses.
4. Complete the State of Wisconsin Background Check Request. Once complete print the document to physically sign it and email it to [admissionsgroup@gtc.edu](mailto:admissionsgroup@gtc.edu) with Early Childhood Education BCR in the subject line. Directions for ordering your Background Check will be sent to the mailing address you provide on your Background Check Request. Please email your Preliminary or Final Background Check-Eligibility Letter to [admissionsgroup@gtc.edu](mailto:admissionsgroup@gtc.edu) with Early Childhood Education Background Check in the subject line.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electrical Engineering Technology (10-662-1)**

Associate of Applied Science

**Effective 2020/2021**

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I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+
1	*605-113	3	🎓 DC/AC I <sup>4</sup>		F	F
1	*605-130	4	Digital Electronics <sup>4</sup>		F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F+	F+
1	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	F+	F+
2	*605-114	3	DC/AC II <sup>4</sup>	Prereq: 605-113; Coreq: 804-115	S	S
2	*605-120	4	Electronic Devices I <sup>4</sup>	Prereq: 605-113	S	S
2	801-197	3	Technical Reporting	Prereq: 801-136	S+	S+
2	804-197	5	College Algebra & Trig w Apps <sup>4</sup>	Prereq: 804-115 or 804-114	S	S
2	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S+	S+
3	*605-121	4	Electronic Devices II	Prereq: 605-120	F	F
3	*605-190	4	Microprocessors <sup>4</sup>	Coreq: 605-114; 605-121; 801-197	F	F
3	*662-112	3	DC/AC III	Prereq: 605-114	F	F
3	*804-198	4	Calculus 1 <sup>4</sup>	Prereq: 804-197	F+	F+
3	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F+	F+
4	*662-124	3	Electronic Circuit Analysis	Prereq: 605-120	S	S
4	*804-181	4	Calculus 2	Prereq: 804-198	S	S
4	*806-154	4	General Physics 1	Prereq: 804-114 OR 804-115	S+	S+
4	*605-150	3	Industrial Electronics	Prereq: 605-114; 605-120	S	S
4	*605-133	3	Industrial Data Communications	Prereq: 605-113 OR 605-107	S	S

**Minimum Program Total Credits Required: 69**

<b>AVAILABLE CONCENTRATION: BIOMEDICAL ENGINEERING TECHNOLOGY</b>				
Instead of these courses	Take these alternates	Cr.	I-D	I-E
605-150 Industrial Electronics	*662-102 Medical Devices Func. & Use I	3	S	S
804-181 Calculus 2	*662-103 Medical Devices Func. & Use II	3	S	S
	<b>AND</b>			
	*662-101 Safety in Healthcare	1	S	S

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Electrical Engineering Technology (10-662-1)

*Electrical Engineering Technology* focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics.

### Program Learning Outcomes

Graduates will be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 69 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electrical Engineering Technology (10-662-1)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+
1	*605-113	3	🎓 DC/AC I <sup>4</sup>		F	F
1	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	F+	F+
2	*605-130	4	Digital Electronics <sup>4</sup>		S	S
2	804-197	5	College Algebra & Trig w Apps <sup>4</sup>	Prereq: 804-115 or 804-114	S+	S+
3	*605-114	3	DC/AC II <sup>4</sup>	Prereq: 605-113; Coreq: 804-115	SU	SU
3	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
4	*605-120	4	Electronic Devices I <sup>4</sup>	Prereq: 605-113	F	F
4	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F+	F+
4	*804-198	4	Calculus 1 <sup>4</sup>	Prereq: 804-197	F+	F+
5	*605-121	4	Electronic Devices II	Prereq: 605-120	S	S
5	801-197	3	Technical Reporting	Prereq: 801-136	S+	S+
5	*804-181	4	Calculus 2	Prereq: 804-198	S+	S+
6	*605-150	3	Industrial Electronics	Prereq: 605-114; 605-120	SU	SU
6	*806-154	4	General Physics 1	Prereq: 804-114 OR 804-115	SU+	SU+
6	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
7	*605-190	4	Microprocessors <sup>4</sup>	Coreq: 605-114; 605-121; 801-197	F	F
7	*662-112	3	DC/AC III	Prereq: 605-114	F	F
8	*605-133	3	Industrial Data Communications	Prereq: 605-113 OR 605-107	S	S
8	*662-124	3	Electronic Circuit Analysis	Prereq: 605-120	S	S

**Minimum Program Total Credits Required: 69**

<b>AVAILABLE CONCENTRATION: BIOMEDICAL ENGINEERING TECHNOLOGY</b>			
Instead of these courses	Take these alternates	Cr.	I-E
605-150 Industrial Electronics	*662-102 Medical Devices Func. & Use I	3	S
804-181 Calculus 2	*662-103 Medical Devices Func. & Use II	3	SU
	& *662-101 Safety in Healthcare	1	S

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Electrical Engineering Technology (10-662-1)

*Electrical Engineering Technology* focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics.

### Program Learning Outcomes

Graduates will be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 69 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electronics (10-605-1)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+
1	*605-113	3	🎓 DC/AC I <sup>4</sup>		F	F
1	*605-130	4	Digital Electronics <sup>4</sup>		F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F+	F+
1	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	F+	F+
2	*605-114	3	DC/AC II <sup>4</sup>	Prereq: 605-113; Coreq: 804-115	S	S
2	*605-120	4	Electronic Devices I <sup>4</sup>	Prereq: 605-113	S	S
2	801-197	3	Technical Reporting	Prereq: 801-136	S+	S+
2	804-197	5	College Algebra & Trig w Apps <sup>4</sup>	Prereq: 804-115	S+	S+
3	*605-121	4	Electronic Devices II	Prereq: 605-120	SU	SU
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
4	*605-190	4	Microprocessors	Coreq: 605-114; 605-121; 801-197	F	F
4	*605-133	3	Industrial Data Communications	Prereq: 605-113 OR 605-107	F	F
4	*605-138	3	Circuit Construction and Repair		F	F
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
5	*806-154	4	General Physics 1 <sup>4</sup>	Prereq: 804-115	S+	S+
5	*605-150	3	Industrial Electronics	Prereq: 605-114; 605-120	S	S
5	*605-136	3	PLC System Design	Prereq: 605-130	S	S
5	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	S+	S+

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Electronics (10-605-1)

*Electronics* focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics. The operation and use of various test and diagnostic equipment is included throughout the curriculum. The program prepares the students for a broad range of entry-level electronic technician positions.

### Program Learning Outcomes

Graduates will be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

662-112 DCAC 3	662-124 Electronic Circuit Analysis
809-196 Sociology, Introduction to	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electronics (10-605-1)**  
 Associate of Applied Science  
 Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	Gateway to Success (G2S)		F+	F+
1	*605-130	4	Digital Electronics <sup>4</sup>		F	F
1	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	F+	F+
2	*605-113	3	DC/AC I <sup>4</sup>		S	S
2	804-197	5	College Algebra & Trig w Apps <sup>4</sup>	Prereq: 804-115	S+	S+
3	*605-114	3	DC/AC II <sup>4</sup>	Prereq: 605-113; Coreq: 804-115	SU	SU
3	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	SU+	SU+
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
4	*605-120	4	Electronic Devices I <sup>4</sup>	Prereq: 605-113	F	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F+	F+
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
5	*605-121	4	Electronic Devices II	Prereq: 605-120	S	S
5	*605-133	3	Industrial Data Communications	Prereq: 605-113 OR 605-107	S	S
5	*605-138	3	Circuit Construction and Repair		S	S
6	*605-136	3	PLC System Design	Prereq: 605-130	SU	SU
6	*605-150	3	Industrial Electronics	Prereq: 605-114; 605-120	SU	SU
7	*605-190	4	Microprocessors	Coreq: 605-114; 605-121; 801-197	F	F
7	*806-154	4	General Physics 1 <sup>4</sup>	Prereq: 804-115	F+	F+
7	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	F+	F+

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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## Electronics (10-605-1)

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### Program Learning Outcomes

Graduates will be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

### Essential Career Competencies

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- Communication Competence
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- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

662-112 DCAC 3	662-124 Electronic Circuit Analysis
809-196 Sociology, Introduction to	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
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**Fire Medic (10-531-2)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HE-D = HERO Center/days, HE-E = HERO Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	890-155	1	📍 Gateway to Success (G2S)		F/S+	F/S+
1	801-136	3	English Composition 1 <sup>7</sup>	Prereq: 831-103 OR 831-107	F/S+	F/S+
1	*503-192	3	Principles of Em Serv Safety & Survival		F/S	F/S
1	809-198	3	Psychology, Introduction to <sup>1,6,7</sup>	Prereq: 838-105 OR 831-107	F/S+	F/S+
1	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S+	F/S+
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S/F+	S/F+
2	801-196	3	Oral/Interpersonal Communication		S/F+	S/F+
2	*503-143	3	Building Construction		S/F	S/F
2	*503-130	2	Firefighter Health & Wellness		S/F	S/F
2	*503-120	2	Internship	Prereq: 503-142	S/F	S/F
3	*531-911	2	EMS Fundamental <sup>1,2</sup>	Prereq: 838-105 OR 831-107	SU	SU
4	*531-912	4	🎓 Paramedic Medical Principles	Coreq: 531-911	F	F
4	*531-913	3	🎓 Adv. Patient Asses. Principles	Coreq: 531-911	F	F
4	*531-914	3	Adv. Pre-Hospital Pharmacology	Coreq: 531-911	F	F
4	*531-915	2	Paramedic Respiratory Mgt.	Coreq: 531-914	F	F
4	*531-925	4	Paramedic HPS Lab	Coreq: 531-912	F	F
4	*531-926	1	Paramedic Hospital Field <sup>3,4</sup>	Coreq: 531-912	F	F
4	*531-955	2	Paramedic Cardiology 1	Coreq: 531-915	F	F
5	*531-956	2	Paramedic Cardiology 2	Prereq: 531-955	S	S
5	*531-918	1	Adv. Emergency Resuscitation	Coreq: 531-955	S	S
5	*531-919	4	Paramedic Medical Emergencies	Coreq: 531-955	S	S
5	*531-920	3	🎓 Paramedic Trauma	Coreq: 531-955	S	S
5	*531-921	3	Special Patient Populations	Coreq: 531-955	S	S
5	*531-922	1	EMS Operations	Coreq: 531-955	S	S
5	*531-923	1	Paramedic Capstone	Coreq: 531-955	S	S
5	*531-927	2	Paramedic Hospital Field II <sup>3,4</sup>	Coreq: 531-955	S	S

**Minimum Program Total Credits Required: 64**

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📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Fire Medic (10-531-2)

*Fire Medic* graduates apply Fire Service safety & survival and health & wellness principles to their own professional lives. Students also prepare for the candidate physical ability test (CPAT) certificate and earn a paramedic license. The degree program includes an internship along with building construction and principles of emergency services safety & survival to assure students develop life-long learning and living habits to become safe and effective professional Fire Medic providers.

This program may be completed in two years of study if taken full-time. The Paramedic portion requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Students who successfully complete the 531 courses are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma can be applied to the Paramedic Technician associate degree.

## Program Learning Outcomes

Graduates will be able to:

1. Prepare for incident response and emergency operations.
2. Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
3. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient outcomes.
4. Communicate effectively with others.
5. Demonstrate professional behavior
6. Meet state and national competencies listed for paramedic certification(s).
7. Perform essential firefighting skills to reduce loss of life and property.

## Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete Firefighter 1 certification prior to admission.
4. Students must have current CPR certification.
5. Students must have current Wisconsin EMS licensure.
6. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

## Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
  2. \*Minimum of 2.0 ("C") or above for these major courses.
  3. Complete 890-155 Gateway to Success (G2S) in the first semester.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Prior to enrolling in paramedic level courses (531), a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with program staff.
3. Drug testing and immunizations are required prior to admission to the first clinical course (531-926 or 531-927).
4. Applicants of this program are subject to review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
5. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

## Accreditation Statement

The EMT Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 N., Suite 158  
Clearwater, FL 33763  
727-210-2350  
[www.caahep.org](http://www.caahep.org)

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Foundations of Teacher Education (10-522-2)

Associate of Applied Science  
**Effective 2020/2021**

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**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*522-103	3	EDU: Introduction to Educational Practices		F
1	*522-105	3	EDU: Behavior Management		F
1	*522-106	3	EDU: Child and Adolescent Development		F
1	804-135	3	🎓 Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F
2	*522-102	3	🎓 EDU: Techniques in Reading	Prereq: 838-105	S
2	*522-107	3	EDU: Overview of Special Education		S
2	*522-118	3	EDU: Techniques for Math	Prereq: 804-135	S
2	809-198	3	Psychology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	S
2	801-198	3	Speech		S
3	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	SU
3	809-196	3	Sociology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	SU
4	*522-112	3	EDU: Equity in Education		F
4	*522-114	3	EDU: Techniques in Language Arts	Prereq: 522-102; 801-136	F
4	*522-124	3	EDU: Supporting Students with Disabilities		F
4	*522-129	3	🎓 EDU: Practicum 1 <sup>2,4</sup>	Prereq: Advisor Consent	F
4	809-172	3	Diversity Studies, Introduction to	Prereq: 838-105 or 831-107	F
5	*522-104	3	EDU: Technology in Education		S
5	*522-119	3	EDU: Techniques for Social Studies		S
5	*522-120	3	EDU: Techniques for Science		S
5	*522-131	3	EDU: Practicum 2 <sup>4</sup>	Prereq: 522-129; 522-118; 522-114	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Foundations of Teacher Education (10-522-2)

*Foundations of Teacher Education* is an Associate of Applied Science degree, which prepares qualified individuals to work directly with students under the supervision of a licensed teacher. The duties include assisting children with math, reading, and writing assignments, as well as handling classroom management, clerical, and other tasks related to instruction. This program meets Title I requirements. Duties may also include monitoring student activities, correcting papers, tutoring, one-on-one activities, and small group facilitation. In addition, instructional assistants work on classroom displays, assist children with computers and media, and supervise various classroom and school events. Instructional assistants may be hired to provide instructional services to students from pre-k through high school; however, the focus of this program is on preparing grads to work primarily in elementary and middle school levels.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate instructional support strategies for content areas
2. Implement developmentally appropriate practices to foster learning
3. Adapt instruction to meet the diverse needs of all learners
4. Use proactive classroom management techniques
5. Perform professional responsibilities
6. Incorporate the reflective process to promote professional growth

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a background information form and pay a criminal background check fee. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

## Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. This course requires advisor consent, which will only be given when proper physical and immunization records are submitted. Students must submit all health and immunization forms prior to the first day of attending these courses.
3. Any course may be taken prior to entry in the program, assuming prerequisites and co-requisites have been satisfied (or waived with department approval).
4. Admittance into the Foundations of Teacher Education program is required before taking this course.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@qtc.edu](mailto:cfpl@qtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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## Foundations of Teacher Education (10-522-2)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	Gateway to Success (G2S)		F
1	*522-103	3	EDU: Introduction to Educational Practices		F
1	*522-106	3	EDU: Child and Adolescent Development		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F
2	*522-102	3	EDU: Techniques in Reading	Prereq: 838-105	S
2	*522-119	3	EDU: Techniques for Social Studies		S
2	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	S
3	*522-105	3	EDU: Behavior Management		SU
3	809-196	3	Sociology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	SU
3	801-198	3	Speech		SU
4	*522-114	3	EDU: Techniques in Language Arts	Prereq: 522-102; 801-136	F
4	*522-119	3	EDU: Techniques for Social Studies		F
4	809-198	3	Psychology, Introduction to <sup>1,5,7</sup>	Prereq: 838-105 OR 831-107	F
5	*522-104	3	EDU: Technology in Education		S
5	*522-118	3	EDU: Techniques for Math	Prereq: 804-135	S
5	*522-120	3	EDU: Techniques for Science		S
6	*522-107	3	EDU: Overview of Special Education		SU
6	*522-124	3	EDU: Supporting Students with Disabilities		SU
6	809-172	3	Diversity Studies, Introduction to	Prereq: 838-105 or 831-107	SU
7	*522-112	3	EDU: Equity in Education		F
7	*522-131	3	EDU: Practicum 2 <sup>4</sup>	Prereq: 522-129; 522-118; 522-114	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Foundations of Teacher Education (10-522-2)

*Foundations of Teacher Education* is an Associate of Applied Science degree, which prepares qualified individuals to work directly with students under the supervision of a licensed teacher. The duties include assisting children with math, reading, and writing assignments, as well as handling classroom management, clerical, and other tasks related to instruction. This program meets Title I requirements. Duties may also include monitoring student activities, correcting papers, tutoring, one-on-one activities, and small group facilitation. In addition, instructional assistants work on classroom displays, assist children with computers and media, and supervise various classroom and school events. Instructional assistants may be hired to provide instructional services to students from pre-k through high school; however, the focus of this program is on preparing grads to work primarily in elementary and middle school levels.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate instructional support strategies for content areas
2. Implement developmentally appropriate practices to foster learning
3. Adapt instruction to meet the diverse needs of all learners
4. Use proactive classroom management techniques
5. Perform professional responsibilities
6. Incorporate the reflective process to promote professional growth

### Essential Career Competencies

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- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a background information form and pay a criminal background check fee. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. This course requires advisor consent, which will only be given when proper physical and immunization records are submitted. Students must submit all health and immunization forms prior to the first day of attending these courses.
2. Any course may be taken prior to entry in the program, assuming prerequisites and co-requisites have been satisfied (or waived with department approval).
3. Admittance into the Foundations of Teacher Education program is required before taking this course.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.
5. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Graphic Communications (10-204-3)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, R-D = Racine/days, R-E = Racine/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D	R-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F	S
1	*204-100	4	🎓 Design Concepts		F	F	F	S
1	*204-105	3	Comp. Illustration & Drawing Tech <sup>4</sup>		F	F	F	S
1	*204-107	3	Digital Photography, Intro to <sup>4</sup>		F	F	F	S
1	*204-125	3	Illustration Media Concepts <sup>4</sup>	Coreq: 801-136	F	F	F	S
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F	F	S
2	*204-116	3	Web Page Design For Graphic Designers	Prereq: 204-107	S	S	S	SU
2	*204-120	3	Multimedia Survey	Coreq: 804-135	S	S	S	SU
2	*204-140	4	🎓 Design Publishing & Prepress	Prereq: 204-100	S	S	S	SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S	SU
3	*204-109	3	🎓 Graphic Design Professional Practices <sup>1</sup>	Prereq: 204-140	F	F	F	F
3	*204-134	3	Advanced Problems in Graphic Design	Prereq: 204-140	F	F	F	F
3	*204-135	4	Advanced Design Concepts	Prereq: 204-140	F	F	F	F
3	801-197	3	Technical Reporting	Prereq: 801-136	F	F	F	F
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F	F	F
4	*204-142	3	Applied Exit Strategies/Display Graphic	Prereq: 204-109	S	S	S	S
4	*204-143	3	Advanced Illustration	Prereq: 801-136; 804-135	S	S	S	S
4	801-198	3	Speech		S	S	S	S
4	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S	S	S	S
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S	S	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Graphic Communications (10-204-3)

*Graphic Communications* educates students in the practice of design, illustration, and reproductive processes related to the print and audio visual media. Course work includes basic illustration, visual communication, and reproductive concepts with emphasis on development in computer graphic skills. The program includes certain aspects of commercial art and communication/computer graphics, with emphasis on skills training required for the increasingly technological focus of graphic design in today's workplace.

### Program Learning Outcomes

Graduates will be able to:

1. Apply principles of design to develop strategic marketing and communication products and services.
2. Demonstrate proficiency in the use of design software, tools, and technology.
3. Implement creative solutions from concept through completion using a formal process.
4. Apply effective legal and ethical business practices and project management skills.
5. Communicate artwork rationale in formal and informal settings.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

## Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Suggested Electives

204-115 Advanced Digital Photography	204-149 Advanced Web Page Design
809-166 Ethics	

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

## Accreditation Statement

Gateway Technical College's Graphic Communications program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**Part-Time Pathway to Success**  
School of Business and Transportation

**Graphic Communications (10-204-3)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
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**E-D = Elkhorn/days, R-D = Racine/days, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D	R-E
1	890-155	1	Gateway to Success (G2S)		F	F	F
1	*204-100	4	Design Concepts		F	F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F	F
2	*204-105	3	Comp. Illustration & Drawing Tech <sup>4</sup>		S	S	S
2	*204-107	3	Digital Photography, Intro to <sup>4</sup>		S	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S
3	*204-120	3	Multimedia Survey	Coreq: 804-135	SU	SU	SU
3	*204-140	4	Design Publishing & Prepress	Prereq: 204-100	SU	SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU	SU
4	*204-125	3	Illustration Media Concepts <sup>4</sup>	Coreq: 801-136	F	F	F
4	*204-134	3	Advanced Problems in Graphic Design	Prereq: 204-140	F	F	F
4	*204-135	4	Advanced Design Concepts	Prereq: 204-140	F	F	F
5	*204-109	3	Graphic Design Professional Practices <sup>1</sup>	Prereq: 204-140	S	S	S
5	*204-116	3	Web Page Design For Graphic Designers	Prereq: 204-107	S	S	S
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S	S
6	801-198	3	Speech		SU	SU	SU
6	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
7	*204-142	3	Applied Exit Strategies/Display Graphic	Prereq: 204-109	F	F	F
7	*204-143	3	Advanced Illustration	Prereq: 801-136; 804-135	F	F	F
7	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Graphic Communications (10-204-3)

*Graphic Communications* educates students in the practice of design, illustration, and reproductive processes related to the print and audio visual media. Course work includes basic illustration, visual communication, and reproductive concepts with emphasis on development in computer graphic skills. The program includes certain aspects of commercial art and communication/computer graphics, with emphasis on skills training required for the increasingly technological focus of graphic design in today's workplace.

### Program Learning Outcomes

Graduates will be able to:

1. Apply principles of design to develop strategic marketing and communication products and services.
2. Demonstrate proficiency in the use of design software, tools, and technology.
3. Implement creative solutions from concept through completion using a formal process.
4. Apply effective legal and ethical business practices and project management skills.
5. Communicate artwork rationale in formal and informal settings.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

204-115 Advanced Digital Photography	204-149 Advanced Web Page Design
809-166 Ethics	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

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Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
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[www.acbsp.org](http://www.acbsp.org)

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## Greenhouse Operations (10-001-6)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*001-185	3	🎓 Intro to Horticulture		F
1	*001-143	3	Herbaceous Plants	Coreq: 001-185	F
1	*001-146	1	Sustainable Landscape		F
1	*001-147	1	🎓 Soils and Plant Nutrition		F
1	*001-148	1	Plant Pests and Beneficials		F
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F
2	*001-128	3	Horticulture Marketing		S
2	*001-129	1	Pesticide Applicator Certification		S
2	*001-142	3	Vegetable Science		S
2	*001-151	3	🎓 Greenhouse Crops	Coreq: 804-135; 801-136	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
2	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S
3	*001-111	3	Horticulture Practicum	Prereq: 001-147; 001-151	SU
3	103-143	3	Computers for Professionals <sup>3</sup>		SU
4	*001-104	3	Greenhouse Systems	Prereq: 001-151	F
4	*001-130	3	Landscape Plants Trees/Shrubs Deciduous	Prereq: 001-185	F
4	*001-144	3	Floral Design I/Commercial		F
4	801-196	3	Oral/Interpersonal Communication		F
4	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F
5	*001-149	3	Horticulture Events		S
5	*001-154	3	Alternative Growing Methods	Prereq: 001-104 OR 140; 001-151	S
5	*001-180	1	Horticulture Portfolio	Prereq: 001-111; 128; 130; 143; 147; 151; 801-136; 804-135	S
5	*104-104	3	Selling Principles		S
5	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	S

**Minimum Program Total Credits Required: 63**

**AVAILABLE CONCENTRATION: LANDSCAPE**

Instead of these courses	Take these alternates	Cr.	K-D
001-104 Greenhouse Systems	*001-140 Landscape Design	3	F
001-144 Floral Design I/Commercial	*001-136 Landscape Management	3	F
001-149 Horticulture Events	*001-132 Landscape Plants Evergreen	3	S
104-104 Selling Principles	*001-122 Horticulture Business Ops.	3	S

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Greenhouse Operations (10-001-6)

The Greenhouse Operations program trains students in greenhouse growing and operations, hydroponics, and retail garden center and floral shop management. Hands-on experience in a commercial greenhouse, ornamental gardens and an operating urban farm are part of the learning experience. Plant identification, care and culture are key elements of the program, as are technical and graphic skills, sustainable methods for plant care and creative approaches to problem solving and landscape design. Students can gain a specialized skill set in landscape which emphasizes landscape design, sustainable landscape management, and landscape estimating and business operations. Students engage in various industry visits to enhance the learning experience.

### Program Learning Outcomes

Graduates will be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

001-103 Permaculture	001-108 Business of Urban Farming
001-109 Urban Farming and Mkt. Gard.	001-117 Landscape Design/Advanced
001-150 Floristry	001-105 Dendrology & Silvics
001-153 Fruit Science	001-184 Eco. Basics for Natural Res. Mang.
001-186 People, Resources & Sustainability	001-199 Fish, Forestry & Wildlife

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@qtc.edu](mailto:cfpl@qtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Greenhouse Operations (10-001-6)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*001-185	3	🎓 Intro to Horticulture		F
1	*001-147	1	🎓 Soils and Plant Nutrition		F
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F
2	*001-148	1	Plant Pests and Beneficials		S
2	*001-146	1	Sustainable Landscape		S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
2	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S
3	*001-143	3	Herbaceous Plants	Coreq: 001-185	SU
3	103-143	3	Computers for Professionals <sup>3</sup>		SU
4	*001-130	3	Landscape Plants Trees/Shrubs Deciduous	Prereq: 001-185	F
4	*001-144	3	Floral Design I/Commercial		F
4	801-196	3	Oral/Interpersonal Communication		F
5	*001-129	1	Pesticide Applicator Certification		S
5	*001-128	3	Horticulture Marketing		S
5	*001-149	3	Horticulture Events		S
5	*001-151	3	🎓 Greenhouse Crops	Coreq: 804-135; 801-136	S
6	*001-111	3	Horticulture Practicum	Prereq: 001-147; 001-151	SU
6	*001-142	3	Vegetable Science		SU
7	*001-104	3	Greenhouse Systems	Prereq: 001-151	F
7	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F
7	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F
8	*001-154	3	Alternative Growing Methods	Prereq: 001-104 OR 140; 001-151	S
8	*001-180	1	Horticulture Portfolio	Prereq: 001-111; 128; 130; 143; 147; 151; 801-136; 804-135	S
8	*104-104	3	Selling Principles		S

**Minimum Program Total Credits Required: 63**

<b>AVAILABLE CONCENTRATION: LANDSCAPE</b>				
Instead of these courses	Take these alternates	Cr.	K-D	
001-104 Greenhouse Systems	*001-140 Landscape Design	3	F	
001-144 Floral Design I/Commercial	*001-136 Landscape Management	3	F	
001-149 Horticulture Events	*001-132 Landscape Plants Evergreen	3	S	
104-104 Selling Principles	*001-122 Horticulture Business Ops.	3	S	

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Greenhouse Operations (10-001-6)

The Greenhouse Operations program trains students in greenhouse growing and operations, hydroponics, and retail garden center and floral shop management. Hands-on experience in a commercial greenhouse, ornamental gardens and an operating urban farm are part of the learning experience. Plant identification, care and culture are key elements of the program, as are technical and graphic skills, sustainable methods for plant care and creative approaches to problem solving and landscape design. Students can gain a specialized skill set in landscape which emphasizes landscape design, sustainable landscape management, and landscape estimating and business operations. Students engage in various industry visits to enhance the learning experience.

### Program Learning Outcomes

Graduates will be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

## Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Suggested Electives

001-103 Permaculture	001-108 Business of Urban Farming
001-109 Urban Farming and Mkt. Gard.	001-117 Landscape Design/Advanced
001-150 Floristry	001-105 Dendrology & Silvics
001-153 Fruit Science	001-184 Eco. Basics for Natural Res. Mang.
001-186 People, Resources & Sustainability	001-199 Fish, Forestry & Wildlife

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Health Information Technology (10-530-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*501-101	3	Medical Terminology <sup>1,6</sup>	Prereq: 838-105	F
1	*501-107	2	Digital Literacy for Healthcare		F
1	*530-162	3	🎓 Foundations of HIM	Coreq: 501-107; 501-101	F
1	801-136	3	English Composition 1 <sup>1</sup>	Prereq: 831-103 OR 831-107	F
1	*530-178	2	Healthcare Law & Ethics	Coreq: 530-162	F
2	804-135	3	Quantitative Reasoning	Prereq: 834-109	S
2	*530-167	3	Management of HIM Resources	Prereq: 530-178	S
2	*530-182	3	Human Diseases for the Health Professions	Prereq: 501-101; 530-162; Coreq: 806-177	S
2	809-196	3	Sociology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	S
2	806-177	4	General Anatomy and Physiology		S
3	804-189	3	Introductory Statistics	Prereq: 804-135	SU
3	801-198	3	Speech		SU
4	*530-163	3	🎓 Health Stats & Analytics	Prereq: 530-162; 804-189	F
4	*530-197	3	ICD Diagnosis Coding	Prereq: 501-101; 530-182; 806-177	F
4	*530-161	3	Health Quality Management	Prereq: 530-167	F
4	*530-199	2	ICD Procedural Coding		F
4	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	F
5	*530-184	3	CPT Coding	Prereq: 530-197	S
5	*530-164	3	Intro to Health Informatics	Prereq: 804-189; 530-162	S
5	*530-159	3	Healthcare Revenue Management	Prereq: 530-161	S
5	*530-165	3	Intermediate Coding	Prereq: 530-199	S
5	*530-166	1	HIT Capstone	Coreq: 530-196	S
5	*530-196	3	Professional Practice	Coreq: 530-159; 530-165; 530-166	S

**Minimum Program Total Credits Required: 66**

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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## Health Information Technology (10-530-1)

*Health Information Technology* is a field where healthcare meets the cutting edge of technology. Health Information Technicians are specialists in great demand! The HIM professional can expect to be in high demand as the health sector expands into the century. In fact, the Bureau of Labor Statistics cites health information technology as one of the fastest growing occupations in the U.S. Health Information Technicians contribute to the quality of care by collecting, analyzing, and reporting health care data. This requires knowledge of disease, treatments, computer systems, and organizational skills.

### Program Learning Outcomes

Graduates will be able to:

1. Apply data governance principles to ensure the quality of health data.
2. Apply coding and reimbursement systems.
3. Model professional behaviors and ethics.
4. Apply informatics and analytics in data use.
5. Apply organizational management techniques.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

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2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 66 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Clinical sites may request proof of insurance, criminal background checks, and/or drug testing which could result in additional fees.
3. A liability insurance of approximately \$13 in the fourth semester and summer session is required.
4. Students are allowed to repeat any HIT course only one time.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Health Information Technology (10-530-1)

Associate of Applied Science  
**Effective 2020/2021**

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1	890-155	1	📍 Gateway to Success (G2S)		F
1	*501-101	3	Medical Terminology <sup>1,6</sup>	Prereq: 838-105	F
1	*501-107	2	Digital Literacy for Healthcare		F
1	*530-162	3	🎓 Foundations of HIM	Coreq: 501-107; 501-101	F
2	*530-182	3	Human Diseases for the Health Professions	Prereq: 501-101; 530-162; Coreq: 806-177	S
2	804-135	3	Quantitative Reasoning	Prereq: 834-109	S
2	806-177	4	General Anatomy and Physiology		S
3	801-136	3	English Composition 1 <sup>1</sup>	Prereq: 831-103 OR 831-107	SU
3	804-189	3	Introductory Statistics	Prereq: 804-135	SU
4	*530-163	3	🎓 Health Stats & Analytics	Prereq: 530-162; 804-189	F
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5	*530-184	3	CPT Coding	Prereq: 530-197	S
6	809-196	3	Sociology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	SU
6	809-198	3	Psychology, Introduction to <sup>1,5,6</sup>	Prereq: 838-105 OR 831-107	SU
7	*530-161	3	Health Quality Management	Prereq: 530-167	F
7	*530-199	2	ICD Procedural Coding		F
7	801-198	3	Speech		F
8	*530-159	3	Healthcare Revenue Management	Prereq: 530-161	S
8	*530-165	3	Intermediate Coding	Prereq: 530-199	S
8	*530-166	1	HIT Capstone	Coreq: 530-196	S
8	*530-196	3	Professional Practice	Coreq: 530-159; 530-165; 530-166	S

**Minimum Program Total Credits Required: 66**

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### Program Learning Outcomes

Graduates will be able to:

1. Apply data governance principles to ensure the quality of health data.
2. Apply coding and reimbursement systems.
3. Model professional behaviors and ethics.
4. Apply informatics and analytics in data use.
5. Apply organizational management techniques.

### Essential Career Competencies

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- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

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3. Students must complete a Background Disclosure form and request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 66 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
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3. A liability insurance of approximately \$13 in the fourth semester and summer session is required.
4. Students are allowed to repeat any HIT course only one time.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
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## Hospitality Management (10-109-2)

Associate of Applied Science

**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	Gateway to Success (G2S)		F
1	*109-101	3	Principles of Hospitality		F
1	103-143	3	Computers for Professionals <sup>2</sup>		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F
1	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F
1	*109-122	3	Intro to Service <sup>2</sup>		F
2	*109-114	3	Manag. Serv. in the Hosp. Industry <sup>2</sup>		S
2	*109-121	3	Intro to Hotel Operations		S
2	809-166	3	Into to Ethics: Theory & App <sup>1</sup>	Prereq: 838-105 OR 831-107	S
2	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	S
3	*109-128	2	Hospitality Front Line Internship	Prereq: 109-101; 801-136, 804-135; Instructor Consent	SU
3	*109-129	2	Hospitality Supervisory Internship	Prereq: Instructor Consent; 109-101; Coreq: 109-128	SU
3	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	SU
4	*109-171	3	Hospitality Sales and Marketing <sup>2</sup>		F
4	*109-125	3	Hospitality Managerial Accounting <sup>2</sup>		F
4	801-198	3	Speech		F
4	*109-110	3	Rooms Division Management		F
4	*109-124	3	Hotel Facilities Management	Prereq: 109-121	F
5	*196-190	3	Leadership Development <sup>2</sup>		S
5	*109-127	3	Hotel Strategic Management		S
5	*109-126	3	Advanced Customer Service Mang <sup>1</sup>	Prereq: 109-122	S
5	*109-131	2	Hospitality Capstone	Prereq: 109-122; 109-128; Coreq: 109-129	S

**Minimum Program Total Credits Required: 61**

<b>AVAILABLE CONCENTRATION: TOURISM AND ATTRACTIONS</b>			
Instead of these courses	Take these alternates	Cr.	Online
109-121 Intro to Hotel Operations	*109-112 Intro to Tourism	3	S
109-110 Rooms Division Mgmt.	*109-108 Event Management	3	F
109-124 Hotel Facilities Mgmt.	*109-113 Tourism Attraction Mgmt.	3	F
109-127 Hotel Strategic Mgmt.	*109-106 Adv. Tourism Management	3	S

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= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Hospitality Management (10-109-2)

*Hospitality Management* prepares students for the exciting and customer focused hospitality field. With a focus on customer service, students will explore the tourism, hotel, and foodservice industries within their coursework and internships. Graduates will have the skills for an entry level position in one of the many local tourism and hospitality establishments including entertainment facilities, tourism attractions, conference centers, hotels, restaurants, and food and beverage operations.

### Program Learning Outcomes

Graduates will be able to:

1. Plan the operations within a Hospitality organization.
2. Organize hospitality resources to achieve the goals of the organization.
3. Direct individual and/or processes to meet organizational goals.
4. Control hospitality process/procedures.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Transfer credits in Social Science may substitute for this course.

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## Hospitality Management (10-109-2)

Associate of Applied Science

**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*109-101	3	🎓 Principles of Hospitality		F
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F
1	*109-122	3	🎓 Intro to Service <sup>2</sup>		F
2	103-143	3	Computers for Professionals <sup>2</sup>		S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
2	*109-114	3	Manag. Serv. in the Hosp. Industry <sup>2</sup>		S
3	809-166	3	Intro to Ethics: Theory & App <sup>1</sup>	Prereq: 838-105 OR 831-107	SU
3	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU
4	*109-171	3	Hospitality Sales and Marketing <sup>2</sup>		F
4	*109-125	3	Hospitality Managerial Accounting <sup>2</sup>		F
4	*109-110	3	Rooms Division Management		F
5	*109-121	3	Intro to Hotel Operations		S
5	*109-127	3	Hotel Strategic Management		S
6	*109-128	2	🎓 Hospitality Front Line Internship	Prereq: 109-101; 801-136, 804-135; Instructor Consent	SU
6	*109-129	2	🎓 Hospitality Supervisory Internship	Prereq: Instructor Consent; 109-101; Coreq: 109-128	SU
6	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	SU
7	*109-124	3	Hotel Facilities Management	Prereq: 109-121	F
7	*196-190	3	Leadership Development <sup>2</sup>		F
8	*109-126	3	Advanced Customer Service Mang <sup>1</sup>	Prereq: 109-122	S
8	*109-131	2	Hospitality Capstone	Prereq: 109-122; 109-128; Coreq: 109-129	S
8	801-198	3	Speech		S

**Minimum Program Total Credits Required: 61**

**AVAILABLE CONCENTRATION: TOURISM AND ATTRACTIONS**

Instead of these courses	Take these alternates	Cr.	Online
109-121 Intro to Hotel Operations	*109-112 Intro to Tourism	3	S
109-110 Rooms Division Mgmt.	*109-108 Event Management	3	F
109-124 Hotel Facilities Mgmt.	*109-113 Tourism Attraction Mgmt.	3	F
109-127 Hotel Strategic Mgmt.	*109-106 Adv. Tourism Management	3	S

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Hospitality Management (10-109-2)

*Hospitality Management* prepares students for the exciting and customer focused hospitality field. With a focus on customer service, students will explore the tourism, hotel, and foodservice industries within their coursework and internships. Graduates will have the skills for an entry level position in one of the many local tourism and hospitality establishments including entertainment facilities, tourism attractions, conference centers, hotels, restaurants, and food and beverage operations.

### Program Learning Outcomes

Graduates will be able to:

1. Plan the operations within a Hospitality organization.
2. Organize hospitality resources to achieve the goals of the organization.
3. Direct individual and/or processes to meet organizational goals.
4. Control hospitality process/procedures.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Transfer credits in Social Science may substitute for this course.

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## Human Service Associate (10-520-3)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, K-D – Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F/SU	S
1	103-143	3	Computers for Professionals <sup>3</sup>		F/SU	S
1	*520-101	3	Human Services, Intro to		F/SU	S
1	*520-105	3	🎓 Interviewing Principles & Recordkeeping <sup>3</sup>		F/SU	S
1	801-136	3	English Composition <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F/SU	S
1	809-198	3	Psychology, Introduction to <sup>1,3</sup>	Prereq: 838-105 OR 831-107	F/SU	S
2	*520-110	3	Community Resources & Services		S/F	F
2	*520-115	3	Counseling, Introduction to <sup>3</sup>	Prereq: 520-105	S/F	F
2	*520-127	3	🎓 Professional Practices in Human Services <sup>3</sup>		S/F	F
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S/F	F
2	809-172	3	Diversity Studies, Introduction to <sup>1,2</sup>	Prereq: 838-105 OR 831-107	S/F	F
3	*520-124	3	🎓 Field Experience I / Human Services <sup>3</sup>	Prereq: 520-127; 801-136; 804-135; Coreq: 520-140	SU/S	S
3	*520-140	3	🎓 Group Counseling <sup>3</sup>	Prereq: 520-115	SU/S	S
3	*550-130	3	Alcohol/Drug Abuse Rehabilitation		SU/S	S
3	801-196	3	Oral/Interpersonal Communication		SU/S	S
3	*520-102	3	Crisis Intervention		SU/S	S
4	*520-121	3	Field Experience II / Human Services	Prereq: 520-140; 520-124	F/SU	F
4	*550-150 <b>OR</b> *XXX-XXX	3	Psychopharmacology <b>OR</b> Elective Course	Take 3 elective credits <u>only</u> from suggested electives listed on back.	F/SU	F
4	*520-128	3	Child Welfare <sup>1</sup>		F/SU	F
4	*520-151	3	Family Theory and Practice <sup>1</sup>		F/SU	F
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F/SU	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Human Service Associate (10-520-3)

*Human Service Associate* is designed to prepare people for entry level positions in a variety of human service agencies and social service programs. The Human Service Associate program includes a unique combination of the study of aspects of human services, general education subjects, and 300 hours of actual field experience in a community human service agency under the supervision of a working professional. If taken full-time, this program may be completed in four semesters of study.

### Program Learning Outcomes

Graduates will be able to:

1. Model a commitment to cultural competence.
2. Uphold the Ethical Standards and Values for Human Service Professionals.
3. Demonstrate professionalism.
4. Utilize community resources.
5. Apply human services interventions and best practices.
6. Cultivate professional relationships.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

550-154 Family & Chemical Abuse	520-150 Gerontology/Intro to
550-156 Mental Health/Sub Abuse	520-152 Aspects of Disabilities
520-161 Child and Adolescent Mental Health	699-136 Grant Writing Proposals
809-188 Developmental Psychology	809-159 Abnormal Psychology

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**  
School of Protective and Human Services

## Human Service Associate (10-520-3)

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-E = Elkhorn/evenings, K-E – Kenosha/evenings, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-E	K-E	R-E
1	890-155	1	Gateway to Success (G2S)		F	S	F
1	*520-101	3	Human Services, Intro to		F	S	F
1	*520-105	3	Interviewing Principles & Recordkeeping <sup>3</sup>		F	S	F
1	809-198	3	Psychology, Introduction to <sup>1,3</sup>	Prereq: 838-105 OR 831-107	F	S	F
2	*520-110	3	Community Resources & Services		S	SU	S
2	*520-115	3	Counseling, Introduction to <sup>3</sup>	Prereq: 520-105	S	SU	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	SU	S
3	*520-127	3	Professional Practices in Human Services <sup>3</sup>		SU	F	SU
3	103-143	3	Computers for Professionals <sup>3</sup>		SU	F	SU
3	801-136	3	English Composition <sup>1,3</sup>	Prereq: 831-103 OR 831-107	SU	F	SU
4	*520-140	3	Group Counseling <sup>3</sup>	Prereq: 520-115	F	S	F
4	*550-130	3	Alcohol/Drug Abuse Rehabilitation		F	S	F
4	809-172	3	Diversity Studies, Introduction to <sup>1,2</sup>	Prereq: 838-105 OR 831-107	F	S	F
5	*520-102	3	Crisis Intervention		S	SU	S
5	*520-128	3	Child Welfare <sup>1</sup>		S	SU	S
5	*520-151	3	Family Theory and Practice <sup>1</sup>		S	SU	S
6	*520-124	3	Field Experience I / Human Services <sup>3</sup>	Prereq: 520-127; 801-136; 804-135 Coreq: 520-140	SU	F	SU
6	801-196	3	Oral/Interpersonal Communication		SU	F	SU
7	*520-121	3	Field Experience II / Human Services	Prereq: 520-140; 520-124	F	S	F
7	*550-150	3	Psychopharmacology		F	S	F
7	<b>OR</b> *XXX-XXX	<b>3</b> <b>OR</b>	<b>OR</b> Elective Course	Take 3 elective credits <u>only</u> from suggested electives listed on back.			
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	S	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Human Service Associate (10-520-3)

*Human Service Associate* is designed to prepare people for entry level positions in a variety of human service agencies and social service programs. The Human Service Associate program includes a unique combination of the study of aspects of human services, general education subjects, and 300 hours of actual field experience in a community human service agency under the supervision of a working professional. If taken full-time, this program may be completed in four semesters of study.

### Program Learning Outcomes

Graduates will be able to:

1. Model a commitment to cultural competence.
2. Uphold the Ethical Standards and Values for Human Service Professionals.
3. Demonstrate professionalism.
4. Utilize community resources.
5. Apply human services interventions and best practices.
6. Cultivate professional relationships.

### Essential Career Competencies

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- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

550-154 Family & Chemical Abuse	520-150 Gerontology/Intro to
550-156 Mental Health/Sub Abuse	520-152 Aspects of Disabilities
520-161 Child and Adolescent Mental Health	699-136 Grant Writing Proposals
809-188 Developmental Psychology	809-159 Abnormal Psychology

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Individualized Technical Studies – (10-825-1)

Associate of Applied Science  
Effective 2020/2021

### Individualized Technical Studies (10-825-1)

*Individualized Technical Studies* is designed for employed individuals in partnership with their respective employer, desiring to combine skills and knowledge from different academic disciplines. The degree is designed to meet specific educational needs of students whose career goals do not align with current academic programs. Career goals are identified with the input of the student, a Gateway advisor, and an occupational mentor. A formal portfolio is developed to define career goals, document appropriate learning experiences, and formulate a plan for degree completion. Courses from all departments within the college are available for utilization, with a minimum of 20 of these credits being focused in one specific discipline.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Program Requirements

1. For admission, students must meet the following requirements: submit an application and \$30 fee; complete reading, writing, and math skills placement assessments; and submit official high school, GED, or HSED transcript.
2. The ITS degree is intended for currently employed individuals who have a specific career objective in mind that cannot be met by existing college degree programs.

3. The student is required to work under the direction of an occupational mentor at their current place of employment so that the student and the current employer are in complete agreement as to the curriculum identified, and place value on its contribution to the student and employer. These requirements are in place to prevent students or colleges from designing a program around what they perceive to be a workforce need but which employers do not value, leaving the student with an unmarketable set of skills.
4. Critical to a successful experience and graduation from this program will be the input of an occupational mentor. This real-world business person knows about the requirements and skills needed to be successful in the program of study. The mentor, with the assistance of a Gateway advisor, helps the student decide the combination of technical and general studies courses necessary to meet the job requirements of their employer.

### Graduation Requirements

1. 61 Credit Hours
2. 40 credits Individualized Technical Studies courses (20 *must* be focused in one technical discipline)
3. 21 credits General Studies **required** from the following:
  - 6 credits Communications
  - 3 credits Social Science
  - 3 credits Behavioral Science
  - 3 credits Mathematics and/or Natural Science
  - 6 credits additional from General Studies area
4. 25% of the total program credits must be completed at Gateway. For a complete list of Graduation Requirements, check the Student Handbook.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



## Technical Studies – Journeyworker (10-499-5)

Associate of Applied Science  
Effective 2020/2021

### Technical Studies - Journeyworker (10-499-5)

In response to requests for academic recognition of registered apprenticeship training in the state of Wisconsin, the WTCS provides a TECHNICAL STUDIES – JOURNEYWORKER ASSOCIATE IN APPLIED SCIENCE DEGREE. This degree recognizes the goals, general principles and procedures of the WTCS Credit for Prior Learning Policy (WTCS #323, revised July 2005). The Technical Studies Journeyworker AAS degree is designed to support lifelong learning and accelerate the achievement of individual career goals. Transferability of the Technical Studies portion of the AAS degree to four year institutions will be based on the accepting institution's policies.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Program Requirements

1. For admission, students must meet the following requirements: submit an application and \$30 fee; complete reading, writing, and math placement assessments; and submit official high school, GED, or HSED transcript.
2. Students must possess a Wisconsin Apprenticeship Completion Certificate issued by the Department of Workforce Development-Bureau of Apprenticeship Standards registered program which includes a minimum of 400 hours of prescribed apprentice related instruction in the Wisconsin Technical College System.
3. Complete all prescribed WTCS apprentice related technical instruction. Possession of the DWD-BAS Wisconsin Apprenticeship Completion Certificate AND successful completion of all prescribed coursework fulfills the Technical Studies requirement of the Technical Studies-Journeyworker Associate of Applied Science degree.

### Graduation Requirements

1. 60 Credit Hours
  2. 39 credits Technical Studies courses (awarded as advanced standing)
  3. 21 credits General Studies required from the following:
    - 6 credits Communications
    - 3 credits Social Science
    - 3 credits Behavioral Science
    - 3 credits Mathematics and/or Natural Science
    - 6 credits additional from General Studies area
  4. 25% of the total program credits must be completed at Gateway
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Computer Support Specialist (10-154-3)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-E = Elkhorn/evenings, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-E	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*154-121	1	CSS Program Orientation		F	F
1	*154-119	3	System Software Support <sup>4</sup>	Coreq: 154-121; 801-136	F	F
1	*107-011	3	IT in Business <sup>4</sup>		F	F
1	*107-193	3	🎓 IT Essentials <sup>4</sup>		F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F
2	*154-114	3	🎓 Hardware & Software Support	Prereq: 154-119; 107-193	S	S
2	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>		S	S
2	OR	3	OR	Prereq: 838-105 OR 831-107	S	S
2	809-172	3	Diversity Studies, Introduction to <sup>1</sup>		S	S
2	*154-122	3	🎓 Introduction to Help/Service Desk	Prereq: 107-193 Coreq: 804-135 OR 804-115	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
2	OR	5	OR		S	S
2	804-115	5	College Technical Math 1 <sup>1</sup>	Prereq: 834-110	S	S
3	*150-145	3	IT Scripting		SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU
3	809-143	3	Microeconomics <sup>1,4</sup>		SU	SU
3	OR	3	OR	Prereq: 838-105 OR 831-107	SU	SU
3	809-195	3	Economics <sup>1,4</sup>		SU	SU
3	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU
4	*154-113	3	🎓 IT Apps Server & Support <sup>4</sup>	Prereq: 154-114	F	F
4	*154-112	3	Data Security & Recovery Support	Prereq: 154-114; 804-135 OR 804-115	F	F
4	*154-120	3	Advanced Help/Service Desk	Prereq: 154-122	F	F
4	*150-182	3	IoT: Connecting Devices		F	F
5	*154-116	2	Emerging Technologies and Apps.	Prereq: 154-112	S	S
5	*154-118	3	CSS Skills Implementation & Career Prep	Prereq: 154-113; 801-197	S	S
5	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S	S
5	*107-177	4	IT Project Management <sup>4</sup>	Prereq: 154-113; 801-197	S	S

**Minimum Program Total Credits Required: 62**

**IT – Computer Support Specialist (10-154-3)**

The *IT – Computer Support Specialist* program has been designed to prepare students for a career in Information Technology, providing

end-user service and support in a variety of environments, including small business, not-for-profit and enterprise-sized corporations. Topics include the architecture, use, installation, and upgrading of

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

hardware and software, operating systems, networking, and communications as well as data security and recovery. Students will evaluate user hardware and software needs, function as a liaison between their firm and outside contractors or vendors, research emerging technologies, and provide user training for both hardware and software.

**Program Learning Outcomes**

Graduates will be able to:

1. Manage information technology hardware.
2. Manage software.
3. Support computer networks.
4. Provide end user support.
5. Solve information technology problems.
6. Demonstrate customer service skills as an IT professional.
7. Coordinate technology projects.

**Essential Career Competencies**

Gateway’s six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

**Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

**Graduation Requirements**

- Minimum 62 credits with an average of 2.0 or above.
- \*Minimum of 2.0 (“C”) or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

**Suggested Electives**

801-196 Oral/Interpersonal Communication	102-138 BIZ Internship
154-109 IT-Computer Support Specialist Internship	801-198 Speech

**Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. See your advisor if you have questions about course selection.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

**Accreditation Statement**

Gateway Technical College’s IT-Computer Support Specialist program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
 11520 West 119th Street  
 Overland Park, KS 66213  
 Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Computer Support Specialist (10-154-3)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-E = Elkhorn/evenings, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-E	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*107-011	3	IT in Business <sup>4</sup>		F	F
1	*107-193	3	🎓 IT Essentials <sup>4</sup>		F	F
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S	S
2	*154-121	1	CSS Program Orientation		S	S
2	*154-119	3	System Software Support <sup>4</sup>	Coreq: 154-121; 801-136	S	S
3	*154-114	3	🎓 Hardware & Software Support	Prereq: 154-119; 107-193	SU	SU
3	*154-122	3	🎓 Introduction to Help/Service Desk	Prereq: 107-193 Coreq: 804-135 OR 804-115	SU	SU
3	804-135 OR 804-115	3 OR 5	Quantitative Reasoning <sup>1</sup> OR College Technical Math 1 <sup>1</sup>	Prereq: 834-109 Prereq: 834-110	SU	SU
4	*154-112	3	Data Security & Recovery Support	Prereq: 154-114; 804-135 OR 804-115	F	F
4	*154-113	3	🎓 IT Apps Server & Support <sup>4</sup>	Prereq: 154-114	F	F
4	*154-120	3	Advanced Help/Service Desk	Prereq: 154-122	F	F
5	801-197	3	Technical Reporting	Prereq: 801-136	S	S
5	809-196 OR 809-172	3 OR 3	Sociology, Introduction to <sup>1,3,4</sup> OR Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	S	S
6	*150-145	3	IT Scripting		SU	SU
6	809-143 OR 809-195	3 OR 3	Microeconomics <sup>1,4</sup> OR Economics <sup>1,4</sup>	Prereq: 838-105 OR 831-107	SU	SU
7	*150-182	3	IoT: Connecting Devices		F	F
7	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
8	*107-177	4	IT Project Management <sup>4</sup>	Prereq: 154-113; 801-197	S	S
8	*154-116	2	Emerging Technologies and Apps.	Prereq: 154-112	S	S
8	*154-118	3	CSS Skills Implementation & Career Prep	Prereq: 154-113; 801-197	S	S

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### IT – Computer Support Specialist (10-154-3)

The *IT – Computer Support Specialist* program has been designed to prepare students for a career in Information Technology, providing end-user service and support in a variety of environments, including small business, not-for-profit and enterprise-sized corporations. Topics include the architecture, use, installation, and upgrading of hardware and software, operating systems, networking, and communications as well as data security and recovery. Students will evaluate user hardware and software needs, function as a liaison between their firm and outside contractors or vendors, research emerging technologies, and provide user training for both hardware and software.

#### Program Learning Outcomes

Graduates will be able to:

1. Manage information technology hardware.
2. Manage software.
3. Support computer networks.
4. Provide end user support.
5. Solve information technology problems.
6. Demonstrate customer service skills as an IT professional.
7. Coordinate technology projects.

#### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### Graduation Requirements

- Minimum 62 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### Suggested Electives

801-196 Oral/Interpersonal Communication	102-138 BIZ Internship
154-109 IT-Computer Support Specialist Internship	801-198 Speech

#### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. See your advisor if you have questions about course selection.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

#### Accreditation Statement

Gateway Technical College's IT-Computer Support Specialist program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Cybersecurity Specialist (10-151-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, E-D = Elkhorn/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	E-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F
1	*150-182	3	📍 IoT: Connecting Devices		F	F	F
1	*150-194	3	📍 Network Security <sup>3</sup>		F	F	F
1	*150-114	3	📍 Network Concepts–CCNA 1 <sup>3</sup>	Coreq: 804-135	F	F	F
1	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F
2	*150-106	3	Intrusion Detection Systems	Prereq: 150-194	S	S	S
2	*150-109	3	Network Admin MS I 2016	Prereq: 150-114; Coreq: 801-136	S	S	S
2	*150-145	3	IT Scripting		S	S	S
2	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	S	S	S
3	*150-115	3	IoT: Securing Devices	Prereq: 150-182; 804-135	SU	SU	SU
3	*150-146	4	📍 Cybersecurity	Prereq: 150-194	SU	SU	SU
3	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
3	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU	SU
4	*151-120	4	Cloud Data Security	Prereq: 150-146	F	F	F
4	*151-130	3	Cisco CyberOps (SOC)	Prereq: 150-146	F	F	F
4	*151-131	3	Managing and Configuring Firewalls	Prereq: 150-106; 150-115	F	F	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F	F	F
5	*150-113	4	Network Administration – Linux <sup>3</sup>	Prereq: 150-109	S	S	S
5	*150-143	4	Computer Security/Pen Test	Prereq: 151-130	S	S	S
5	*151-132	3	SOC: Monitor/Secure the Infrastructure	Prereq: 151-130	S	S	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

📍 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Cybersecurity Specialist (10-151-2)

*Cybersecurity Specialists* monitor an organization's computer network, maintain system security and upgrade security measures to prevent computer security incidents and cyberattacks. Learn to protect data confidentiality, integrity and availability while learning ways to implement security mechanisms. Emphasis is placed on vigilant security awareness, identifying network threats and deploying appropriate incident responses. Through hands-on lab work, learners will build practical experience with topics such as penetration testing, log analysis, the implementation of firewalls, wireless security and incident response, as well as defenses and countermeasures. Learners will gain an understanding of legal and ethical issues associated with information security. Learners will analyze a variety of network operating systems, firewalls, virtual private networks (VPN), packet filters and intrusion detection systems (IDS) to maximize information security in the network.

### Program Learning Outcomes

Graduates will be able to:

1. Implement secure infrastructures.
2. Conduct security testing.
3. Analyze security data.
4. Mitigate risk.
5. Develop security documentation.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

150-183 VCP Virtualization	150-131 Network Specialist Internship
150-124 CCNA2	107-177 IT-Project Management

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).



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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Cybersecurity Specialist (10-151-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, R-E = Racine/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F
1	*150-194	3	🎓 Network Security <sup>3</sup>		F	F	F
1	*150-114	3	🎓 Network Concepts–CCNA 1 <sup>3</sup>	Coreq: 804-135	F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F
2	*150-146	4	🎓 Cybersecurity	Prereq: 150-194	S	S	S
2	801-136	3	English Composition 11.3	Prereq: 831-103 OR 831-107	S	S	S
2	*150-106	3	Intrusion Detection Systems	Prereq: 150-194	S	S	S
3	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
3	*150-182	3	🎓 IoT: Connecting Devices		SU	SU	SU
3	*150-109	3	Network Admin MS I 2016	Prereq: 150-114; Coreq: 801-136	SU	SU	SU
4	*150-145	3	IT Scripting		F	F	F
4	*151-120	4	Cloud Data Security	Prereq: 150-146	F	F	F
4	*150-115	3	IoT: Securing Devices	Prereq: 150-182; 804-135	F	F	F
5	*151-131	3	Managing and Configuring Firewalls	Prereq: 150-106; 150-115	S	S	S
5	*151-130	3	Cisco CyberOps (SOC)	Prereq: 150-146	S	S	S
5	*150-113	4	Network Administration – Linux <sup>3</sup>	Prereq: 150-109	S	S	S
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU	SU
6	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU	SU
6	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
7	*150-143	4	Computer Security/Pen Test	Prereq: 151-130	F	F	F
7	*151-132	3	SOC: Monitor/Secure the Infrastructure	Prereq: 151-130	F	F	F

**Minimum Program Total Credits Required: 65**

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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## IT – Cybersecurity Specialist (10-151-2)

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### Program Learning Outcomes

Graduates will be able to:

1. Implement secure infrastructures.
2. Conduct security testing.
3. Analyze security data.
4. Mitigate risk.
5. Develop security documentation.

### Essential Career Competencies

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- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

150-183 VCP Virtualization	150-131 Network Specialist Internship
150-124 CCNA2	107-177 IT Project Management

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).



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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Data Analytics Specialist (10-156-3)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*156-018	3	Fundamentals of IT		F
1	*152-081	3	🎓 Programming in Python		F
1	*150-182	3	🎓 IoT: Connecting Devices		F
1	*150-194	3	Network Security		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*156-100	3	🎓 Data Analytics 1	Prereq: 152-081; 804-135; Coreq: 804-189	S
2	*152-080	3	🎓 Databases	Prereq: 152-081 OR 152-184	S
2	*156-019	3	Intro to MIS	Coreq: 801-136	S
2	804-189	3	Statistics	Prereq: 804-135	S+
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S+
3	*156-101	3	Data Analytics 2	Prereq: 156-100; 152-080	SU
3	*156-120	3	Programming in R	Prereq: 156-100; 804-189	SU
3	*150-115	3	IoT: Securing Devices	Prereq: 150-182; 804-135	SU
3	809-195	3	Economics <sup>1,3</sup>		
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 838-105 OR 831-107	SU+
	809-143		Microeconomics <sup>1,3</sup>		
3	801-197	3	Technical Reporting <sup>1</sup>	Prereq: 801-136	SU+
4	*156-125	3	Business Intelligence and Visualization	Prereq: 156-101; 156-120	F
4	*156-130	3	Data Analytics Capstone	Prereq: 156-101; 156-120; 801-197; Coreq: 156-125	F
4	809-198	3	Psychology, Intro to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F+
4	801-196	3	Oral/Interpersonal Communication		F+
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F

**Minimum Program Total Credits Required: 61**

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## IT – Data Analytics Specialist (10-156-3)

The *IT - Data Analytics Specialist* program trains students to identify, utilize, and interpret data from various sources, and to visualize that data to resolve business questions that impact data-driven decisions. Topics will include using current technologies to work with large data sets, securing data from various sources, database technologies, computer programming in Python and R, statistical analysis of data, creating visualizations and business intelligence, and completing real-world projects. Typical entry-level positions for this training opportunity include Operations Research Analyst, Computer Systems Analyst, Database Specialist, Data Analyst, and Junior Data Scientist.

### Program Learning Outcomes

Graduates will be able to:

1. Collect large data sets from multiple sources.
2. Organize data using software tools.
3. Create visualizations of data to drive decision making.
4. Communicate technical information to stakeholders.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-182 Web Programming 1	152-097 JavaScript
152-184 Java Programming 1	150-106 Intrusion Detection Systems
138-118 International Bizsquad	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution, please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. IT-Data Analytics Specialist is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.



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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Data Analytics Specialist (10-156-3)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E
1	890-155	1	Gateway to Success (G2S)		F
1	*150-182	3	IoT: Connecting Devices		F
1	*150-194	3	Network Security		F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	804-189	3	Statistics	Prereq: 804-135	S+
2	*156-018	3	Fundamentals of IT		S
2	*152-081	3	Programming in Python		S
3	*156-019	3	Intro to MIS	Coreq: 801-136	SU
3	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	SU+
3	*152-080	3	Databases	Prereq: 152-081 OR 152-184	SU
4	*156-100	3	Data Analytics 1	Prereq: 152-081; 804-135; Coreq: 804-189	F
4	*150-115	3	IoT: Securing Devices	Prereq: 150-182; 804-135	F
4	809-195	3	Economics <sup>1,3</sup>		
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 838-105 OR 831-107	F+
	809-143		Microeconomics <sup>1,3</sup>		
5	801-197	3	Technical Reporting <sup>1</sup>	Prereq: 801-136	S+
5	809-198	3	Psychology, Intro to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S+
5	*156-101	3	Data Analytics 2	Prereq: 156-100; 152-080	S
6	*156-120	3	Programming in R	Prereq: 156-100; 804-189	SU
6	801-196	3	Oral/Interpersonal Communication		SU+
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU
7	*156-125	3	Business Intelligence and Visualization	Prereq: 156-101; 156-120	F
7	*156-130	3	Data Analytics Capstone	Prereq: 156-101; 156-120; 801-197; Coreq: 156-125	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## IT – Data Analytics Specialist (10-156-3)

The *IT - Data Analytics Specialist* program trains students to identify, utilize, and interpret data from various sources, and to visualize that data to resolve business questions that impact data-driven decisions. Topics will include using current technologies to work with large data sets, securing data from various sources, database technologies, computer programming in Python and R, statistical analysis of data, creating visualizations and business intelligence, and completing real-world projects. Typical entry-level positions for this training opportunity include Operations Research Analyst, Computer Systems Analyst, Database Specialist, Data Analyst, and Junior Data Scientist.

### Program Learning Outcomes

Graduates will be able to:

1. Collect large data sets from multiple sources.
2. Organize data using software tools.
3. Create visualizations of data to drive decision making.
4. Communicate technical information to stakeholders.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-182 Web Programming 1	152-097 JavaScript
152-184 Java Programming 1	150-106 Intrusion Detection Systems
138-118 International Bizsquad	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution, please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. IT-Data Analytics Specialist is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.



Foxconn preferred programs prepare students for potential career opportunities at Foxconn. Completion of a preferred program does not guarantee employment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Network Specialist (10-150-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, E-E = Elkhorn/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	E-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F
1	*107-011	3	IT in Business <sup>3</sup>		F	F	F
1	*150-114	3	🎓 Network Concepts–CCNA 1 <sup>3</sup>	Coreq: 804-135	F	F	F
1	*150-182	3	IoT: Connecting Devices		F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F
2	*107-193	3	🎓 IT Essentials <sup>3</sup>		S	S	S
2	*150-109	3	🎓 Network Admin MS I 2016	Prereq: 150-114; Coreq: 801-136	S	S	S
2	*150-145	3	IT Scripting		S	S	S
2	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	S	S	S
2	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	S	S	S
3	*150-110	3	Network Admin MS 2 2016	Prereq: 150-109; 804-135	SU	SU	SU
3	*150-124	3	🎓 Routing – CCNA 2 <sup>3</sup>	Prereq: 150-114	SU	SU	SU
3	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
4	*150-181	4	Cloud Technologies <sup>3</sup>	Prereq: 150-124	F	F	F
4	*150-194	3	Network Security <sup>3</sup>		F	F	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F	F	F
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F	F
5	*150-113	4	Network Administration – Linux <sup>3</sup>	Prereq: 150-109	S	S	S
5	*150-183	3	VCP – Virtualization <sup>3</sup>	Prereq: 150-110	S	S	S
5	*150-136	3	Server Technologies <sup>3</sup>	Prereq: 107-193; 801-197	S	S	S
5	*107-013	1	IT Job Skills <sup>3</sup>	Prereq: 150-114	S	S	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Network Specialist (10-150-2)

*IT-Network Specialist* is designed to prepare students for a professional career in the computer network field. The program takes the students from the beginning architectural design process through installation, configuration, administration, and tuning of microcomputer network environments. Additional topics incorporated into the program include cross-platform and enterprise network environments.

### Program Learning Outcomes

Graduates will be able to:

1. Implement computer networks.
2. Implement client systems.
3. Implement server operating systems.
4. Implement network security components.
5. Develop technical documentation.
6. Troubleshoot network systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

150-106 Intrusion Detection Systems	150-180 What's in the Cloud?
150-131 Network Internship	150-146 Cybersecurity
107-177 IT Project Management	150-135 Switching & Wans CCNA 3&4
151-120 Cloud Data Security	150-115 IoT: Securing Devices

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's IT-Network Specialist program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Network Specialist (10-150-2)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-E = Elkhorn/evenings, R-D = Racine/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-E	R-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F
1	*150-114	3	🎓 Network Concepts–CCNA 1 <sup>3</sup>	Coreq: 804-135	F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F
1	*150-194	3	Network Security <sup>3</sup>		F	F	F
2	*107-193	3	🎓 IT Essentials <sup>3</sup>		S	S	S
2	*150-124	3	🎓 Routing – CCNA 2 <sup>3</sup>	Prereq: 150-114	S	S	S
2	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	S	S	S
3	*150-182	3	IoT: Connecting Devices		SU	SU	SU
3	*150-109	3	🎓 Network Admin MS I 2016	Prereq: 150-114; Coreq: 801-136	SU	SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU	SU
4	*150-145	3	IT Scripting		F	F	F
4	*150-110	3	Network Admin MS 2 2016	Prereq: 150-109; 804-135	F	F	F
4	*150-181	4	Cloud Technologies <sup>3</sup>	Prereq: 150-124	F	F	F
5	*150-113	4	Network Administration – Linux <sup>3</sup>	Prereq: 150-109	S	S	S
5	*150-183	3	VCP – Virtualization <sup>3</sup>	Prereq: 150-110	S	S	S
5	*150-136	3	Server Technologies <sup>3</sup>	Prereq: 107-193; 801-197	S	S	S
6	*107-011	3	IT in Business <sup>3</sup>		SU	SU	SU
6	809-196	3	Sociology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU
7	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	F	F	F
7	*107-013	1	IT Job Skills <sup>3</sup>	Prereq: 150-114	F	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F	F

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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## IT – Network Specialist (10-150-2)

*IT-Network Specialist* is designed to prepare students for a professional career in the computer network field. The program takes the students from the beginning architectural design process through installation, configuration, administration, and tuning of microcomputer network environments. Additional topics incorporated into the program include cross-platform and enterprise network environments.

### Program Learning Outcomes

Graduates will be able to:

1. Implement computer networks.
2. Implement client systems.
3. Implement server operating systems.
4. Implement network security components.
5. Develop technical documentation.
6. Troubleshoot network systems.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

150-106 Intrusion Detection Systems	150-180 What's in the Cloud?
150-131 Network Internship	150-146 Cybersecurity
107-177 IT Project Management	150-135 Switching & Wans CCNA 3&4
151-120 Cloud Data Security	150-115 IoT: Securing Devices

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

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Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Software Developer (10-152-1)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D – Racine/days, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	R-E
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*107-011	3	IT in Business <sup>4</sup>		F	F
1	*152-126	4	🎓 Intro to Prog. & Database Concepts		F	F
1	*152-105	2	🎓 IBM Enterprise System Concepts <sup>4</sup>	Coreq: 107-011	F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109		
	<b>OR</b>	<b>OR</b>			F	F
	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110		
2	*152-133	2	IBM Control Language	Prereq: 152-105	S	S
2	*152-141	3	🎓 Java Programming – IBM Systems	Prereq: 152-126; 152-105	S	S
2	*152-145	3	🎓 Internet Programming	Prereq: 152-126	S	S
2	*152-151	3	Microcomputer Prog. Advanced	Prereq: 152-126	S	S
3	809-198	3	Psychology, Introduction to <sup>1,2,4</sup>	Prereq: 838-105 OR 831-107	SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU
4	*152-122	3	Computer Programming RPG/IV (ILE)	Prereq: 152-133; 152-126; 801-136; 804-135 or 804-115	F	F
4	*152-168	3	IBM and .NET Enterprise Programming	Prereq: 152-151	F	F
4	*152-093	3	IBM Advanced Java Programming	Prereq: 152-141; 152-145	F	F
4	*152-164	3	Mobile Device Programming	Prereq: 152-126	F	F
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
5	*152-125	3	Computer Program, RPG/IV (ILE) Adv.	Prereq: 152-122	S	S
5	*152-131	3	Systems Design / Development	Prereq: 152-122	S	S
5	*152-167	3	Zend (PHP) Application Programming	Prereq: 152-141	S	S
5	*152-158	3	DB2/UDB Programming	Prereq: 152-126; 152-105	S	S
5	809-195		Economics <sup>1</sup>			
	<b>OR</b>	<b>OR</b>			S	S
	809-143	3	Microeconomics <sup>1,4</sup>	Prereq: 838-105 OR 831-107		

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

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(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Software Developer (10-152-1)

*IT-Software Developer* covers the rapidly changing field of Information Technology with its multiple job opportunities; it may be completed in four semesters if taken full-time. The curriculum includes various types of programming, program analysis, and system software. Typical entry-level positions are entry-level programmer and computer operator.

### Program Learning Outcomes

Graduates will be able to:

1. Develop interactive programs utilizing structured programming techniques.
2. Code on multiple platforms.
3. Be prepared for entry in the computer field.
4. Assess computer hardware and software needs.
5. Communicate effectively with IT, end-users, teams, and management.
6. Develop and document IT (Information Technology) environments.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-124 Computer Programming C++	809-196 Sociology, Intro to
102-138 Biz Internship	809-172 Diversity Studies, Intro to
801-198 Speech	801-196 Oral/Interpersonal Communication
809-112 Principles of Sustainability	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See and advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. IT-Software Developer is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's IT-Software Developer program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119<sup>th</sup> Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Software Developer (10-152-1)**

Associate of Applied Science

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*107-011	3	IT in Business <sup>4</sup>		F
1	*152-126	4	🎓 Intro to Prog. & Database Concepts		F
1	*152-105	2	🎓 IBM Enterprise System Concepts <sup>4</sup>	Coreq: 107-011	F
2	*152-151	3	Microcomputer Prog. Advanced	Prereq: 152-126	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S
	<b>OR</b>	<b>OR</b>			
	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	
2	*152-133	2	IBM Control Language	Prereq: 152-105	S
3	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	SU
3	*152-141	3	🎓 Java Programming – IBM Systems	Prereq: 152-126; 152-105	SU
3	*152-145	3	🎓 Internet Programming	Prereq: 152-126	SU
4	*152-168	3	IBM and .NET Enterprise Programming	Prereq: 152-151	F
4	*152-093	3	IBM Advanced Java Programming	Prereq: 152-141; 152-145	F
4	*152-164	3	Mobile Device Programming	Prereq: 152-126	F
5	*152-158	3	DB2/UDB Programming	Prereq: 152-126; 152-105	S
5	*152-167	3	Zend (PHP) Application Programming	Prereq: 152-141	S
5	801-197	3	Technical Reporting	Prereq: 801-136	S
6	809-198	3	Psychology, Introduction to <sup>1,2,4</sup>	Prereq: 838-105 OR 831-107	SU
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU
7	*152-122	3	Computer Programming RPG/IV (ILE)	Prereq: 152-133; 152-126; 801-136; 804-135 or 804-115	F
7	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	F
	<b>OR</b>		<b>OR</b>		
	809-143	Microeconomics <sup>1,4</sup>			
8	*152-125	3	Computer Program, RPG/IV (ILE) Adv.	Prereq: 152-122	S
8	*152-131	3	Systems Design / Development	Prereq: 152-122	S

**Minimum Program Total Credits Required: 63**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Software Developer (10-152-1)

*IT-Software Developer* covers the rapidly changing field of Information Technology with its multiple job opportunities; it may be completed in four semesters if taken full-time. The curriculum includes various types of programming, program analysis, and system software. Typical entry-level positions are entry-level programmer and computer operator.

### Program Learning Outcomes

Graduates will be able to:

1. Develop interactive programs utilizing structured programming techniques.
2. Code on multiple platforms.
3. Be prepared for entry in the computer field.
4. Assess computer hardware and software needs.
5. Communicate effectively with IT, end-users, teams, and management.
6. Develop and document IT (Information Technology) environments.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 63 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-124 Computer Programming C++	809-196 Sociology, Intro to
102-138 Biz Internship	809-172 Diversity Studies, Intro to
801-198 Speech	801-196 Oral/Interpersonal Communication
809-112 Principles of Sustainability	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See and advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. IT-Software Developer is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's IT-Software Developer program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119<sup>th</sup> Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Web Software Developer (10-152-4)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	O
1	890-155	1	Gateway to Success (G2S)		F	F
1	*152-081	3	Programming in Python		F	F
1	*152-082	1	Web Developer Orientation	Coreq: 152-182	F	F
1	*152-182	3	Web Programming 1	Coreq: 152-082	F	F
1	*152-184	3	Java Programming 1	Coreq: 804-135 OR 804-115	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F
	<b>OR</b> 804-115	5	<b>OR</b> College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110		
2	*152-097	3	Javascript	Prereq: 152-182	S	S
2	*152-080	3	Databases	Prereq: 152-184 OR 152-081	S	S
2	*152-174	3	Java Programming 2	Prereq: 152-184	S	S
2	*152-188	3	PHP Web Programming	Prereq: 152-182; 152-184 OR 152-081	S	S
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S	S
3	*152-150	3	Web Programming 2	Prereq: 152-182; 152-097	SU	SU
3	*152-178	3	Develop ASP.NET Web Apps	Prereq: 152-182; 152-097 OR 152-184 OR 152-081	SU	SU
3	*152-185	3	Advanced PHP	Prereq: 152-188; 804-135 OR 804-115	SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU	SU
3	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU
4	*152-096	3	Developing ASP.NET Web Apps 2	Prereq: 152-178	F	F
4	*152-083	3	Web Developer Project	Prereq: 152-150; 152-188; 801-197	F	F
4	*152-164	3	Mobile Device Programming	Prereq: 152-184	F	F
4	809-143	3	Microeconomics <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F
	<b>OR</b> 809-195		<b>OR</b> Economics <sup>1,3</sup>			
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Web Software Developer (10-152-4)

The *IT-Web Software Developer* program trains students in the development and maintenance of business and e-Commerce web sites using a variety of software, programming, and scripting languages. Topics will include web site project management, design, development, deployment, and basic maintenance of back-end databases and websites. Typical entry-level positions for this training opportunity include web developer, web programmer, and web designer.

### Program Learning Outcomes

Graduates will be able to:

1. Plan web-based solutions.
2. Design web applications.
3. Build front-end of web-based software applications.
4. Build back-end of web-based software applications.
5. Integrate database technologies.
6. Develop technical documentation for web applications.
7. Test web applications.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 62 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-140 Web Internship	138-118 International Bizsquad
145-119 Entrepreneurship	801-198 Speech
809-172 Diversity Studies	152-001 Front-End Development with React
152-084 Front-End Development with Angular	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. IT-Web Software Developer is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.

### Accreditation Statement

Gateway Technical College's IT-Web Software Developer program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119<sup>th</sup> Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Web Software Developer (10-152-4)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	O
1	890-155	1	Gateway to Success (G2S)		F	F
1	*152-081	3	Programming in Python		F	F
1	*152-082	1	Web Developer Orientation	Coreq: 152-182	F	F
1	*152-182	3	Web Programming 1	Coreq: 152-082	F	F
2	*152-184	3	Java Programming 1	Coreq: 804-135 OR 804-115	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109		
	<b>OR</b>		<b>OR</b>		S	S
	804-115	5	College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110		
2	*152-097	3	Javascript	Prereq: 152-182	S	S
3	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	SU	SU
3	*152-080	3	Databases	Prereq: 152-184 OR 152-081	SU	SU
3	*152-174	3	Java Programming 2	Prereq: 152-184	SU	SU
4	*152-188	3	PHP Web Programming	Prereq: 152-182; 152-184 OR 152-081	F	F
4	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F
4	*152-150	3	Web Programming 2	Prereq: 152-182; 152-097	F	F
5	*152-178	3	Develop ASP.NET Web Apps	Prereq: 152-182; 152-097 OR 152-184 OR 152-081	S	S
5	*152-185	3	Advanced PHP	Prereq: 152-188; 804-135 OR 804-115	S	S
5	801-197	3	Technical Reporting	Prereq: 801-136	S	S
6	*152-096	3	Developing ASP.NET Web Apps 2	Prereq: 152-178	SU	SU
6	*152-164	3	Mobile Device Programming	Prereq: 152-184	SU	SU
6	809-143		Microeconomics <sup>1,3,4</sup>			
	<b>OR</b>	3	<b>OR</b>	Prereq: 838-105 OR 831-107	SU	SU
	809-195		Economics <sup>1,3</sup>			
7	*152-083	3	Web Developer Project	Prereq: 152-150; 152-188; 801-197	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F

**Minimum Program Total Credits Required: 62**

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## IT – Web Software Developer (10-152-4)

The *IT-Web Software Developer* program trains students in the development and maintenance of business and e-Commerce web sites using a variety of software, programming, and scripting languages. Topics will include web site project management, design, development, deployment, and basic maintenance of back-end databases and websites. Typical entry-level positions for this training opportunity include web developer, web programmer, and web designer.

### Program Learning Outcomes

Graduates will be able to:

1. Plan web-based solutions.
2. Design web applications.
3. Build front-end of web-based software applications.
4. Build back-end of web-based software applications.
5. Integrate database technologies.
6. Develop technical documentation for web applications.
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### Essential Career Competencies

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- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 62 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

152-140 Web Internship	138-118 International Bizsquad
145-119 Entrepreneurship	801-198 Speech
809-172 Diversity Studies	152-001 Front-End Development with React
152-084 Front-End Development with Angular	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Gateway has many articulation agreements with four-year colleges and universities. If you are planning on transferring to a four-year institution please review this information online at [gtc.edu/transfer](http://gtc.edu/transfer). If an institution is not listed, please contact them directly to see which courses transfer. You may also contact your advisor for more information.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. IT-Web Software Developer is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.

### Accreditation Statement

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Interior Design (10-304-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*304-101	3	History of Furniture and Decorative Arts		F
1	*304-102	3	Principles of Interior Design		F
1	*304-122	3	Textiles		F
1	*304-128	3	🎓 Basic Architectural Drawing	Coreq: 801-136	F
1	801-136	3	English Composition 1 <sup>2,4</sup>	Prereq: 831-103 OR 831-107	F
2	*304-129	3	Visual Communication for Interior Design	Prereq: 304-102; 304-128	S
2	*304-133	3	Sustainable Materials and Finishes		S
2	*304-137	3	Advanced Architectural Drawing	Prereq: 304-102; 304-128	S
2	*304-156	3	🎓 Residential Design Studio 1	Prereq: 304-102; 304-128; Coreq: 804-135	S
2	804-135	3	Quantitative Reasoning <sup>2</sup>	Prereq: 834-109	S
3	*304-151	1	Center for Sustainable Living Practicum	Prereq: 304-133	SU
3	801-196	3	Oral/Interpersonal Communication		SU
3	809-198	3	Psychology, Introduction to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	SU
4	*304-116	3	Kitchen/Bathroom Plan	Prereq: 304-129; 304-137; 304-156; 801-136; 804-135; Coreq: 304-138	F
4	*304-132	3	Sales and Professional Practice of Interior Design	Prereq: 304-156	F
4	*304-138	3	Residential Design Studio II	Prereq: 304-156	F
4	*304-154	2	Interior Elements of Building Const.	Prereq: 304-156	F
4	801-198	3	Speech		F
5	*304-107	2	Internship for Interior Designers <sup>1</sup>	Prereq: 304-156; 304-132; 304-116; 304-154; Coreq: 304-130	S
5	*304-119	1	Portfolio Presentation	Prereq: Instructor Consent	S
5	*304-130	4	Commercial Design Studio	Prereq: 304-116; 304-132; 304-154; 304-156; Coreq: 304-107	S
5	809-196	3	Sociology, Introduction to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	S
5	809-195	3	Economics <sup>2</sup>	Prereq: 838-105 OR 831-107	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Interior Design (10-304-1)

The *Interior Design* program emphasizes the design of functional, aesthetic, and technically proficient environments that meet the needs of people in spaces that are both safe and universally accessible. Green/sustainable practices are infused throughout the curriculum. Graduates are prepared with the necessary foundation skills in both manual and computer-aided graphics along with exposure to design studio processes and methodologies. Students are prepared to pursue careers in creative positions, as residential or commercial interior designers, kitchen and bath designers, designers in architectural firms, and more. Requires demonstration of the ability to create and execute a design portfolio, creative problem solving, and sustainability practices.

### Program Learning Outcomes

Graduates will be able to:

1. Integrate the codes and standards that impact the interior environment.
2. Model professional practices of the Interior Design industry.
3. Validate the design process.
4. Evaluate design decisions within the parameters of the built environment.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. Students must complete 72 hours of paid or unpaid internship work at an approved business. Transportation must be provided by the student.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**  
School of Protective and Human Services

**Interior Design (10-304-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	Gateway to Success (G2S)		F
1	*304-128	3	Basic Architectural Drawing	Coreq: 801-136	F
1	*304-102	3	Principles of Interior Design		F
1	801-136	3	English Composition 1 <sup>2,4</sup>	Prereq: 831-103 OR 831-107	F
2	*304-129	3	Visual Communication for Interior Design	Prereq: 304-102; 304-128	S
2	*304-137	3	Advanced Architectural Drawing	Prereq: 304-102; 304-128	S
2	804-135	3	Quantitative Reasoning <sup>2</sup>	Prereq: 834-109	S
3	801-196	3	Oral/Interpersonal Communication		SU
3	809-198	3	Psychology, Introduction to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	SU
4	801-198	3	Speech		F
4	*304-122	3	Textiles		F
4	*304-101	3	History of Furniture and Decorative Arts		F
5	*304-133	3	Sustainable Materials and Finishes		S
5	*304-156	3	Residential Design Studio 1	Prereq: 304-102; 304-128; Coreq: 804-135	S
6	*304-151	1	Center for Sustainable Living Practicum	Prereq: 304-133	SU
6	809-196	3	Sociology, Introduction to <sup>2,3,4</sup>	Prereq: 838-105 OR 831-107	SU
6	809-195	3	Economics <sup>2</sup>	Prereq: 838-105 OR 831-107	SU
7	*304-132	3	Sales and Professional Practice of Interior Design	Prereq: 304-156	F
7	*304-138	3	Residential Design Studio II	Prereq: 304-156	F
7	*304-154	2	Interior Elements of Building Const.	Prereq: 304-156	F
8	*304-107	2	Internship for Interior Designers <sup>1</sup>	Prereq: 304-156; 304-132; 304-116; 304-154; Coreq: 304-130	S
8	*304-119	1	Portfolio Presentation	Prereq: Instructor Consent	S
8	*304-130	4	Commercial Design Studio	Prereq: 304-116; 304-132; 304-154; 304-156; Coreq: 304-107	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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### Program Learning Outcomes

Graduates will be able to:

1. Integrate the codes and standards that impact the interior environment.
2. Model professional practices of the Interior Design industry.
3. Validate the design process.
4. Evaluate design decisions within the parameters of the built environment.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. Students must complete 72 hours of paid or unpaid internship work at an approved business. Transportation must be provided by the student.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Leadership Development (10-196-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	📍 Gateway to Success (G2S)		F/S/SU
1	*196-129	1	Management Orientation <sup>3</sup>		F/S/SU
1	*196-190	3	Leadership Development <sup>5</sup>		F/S/SU
1	*196-191	3	Supervision <sup>5</sup>		F/S/SU
1	*196-137	3	🎓 Certified Service Specialist <sup>5</sup>		F/S/SU
1	801-136	3	English Composition 11.5	Prereq: 831-103 OR 831-107	F/S/SU
1	801-196 OR 801-198	3 OR 3	Oral/Interpersonal Communication OR Speech		F/S/SU
2	*196-136	3	Safety in the Workplace <sup>5</sup>		F/S/SU
2	*196-189	3	Team Building and Problem Solving		F/S/SU
2	*196-192	3	🎓 Managing for Quality <sup>5</sup>	Coreq: 196-129	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F/S/SU
2	809-198	3	Psychology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	F/S/SU
3	*196-134	3	Legal Issues for Supervisors	Coreq: 196-129	F/S/SU
3	*196-169	3	Diversity and Change Management	Coreq: 196-129	F/S/SU
3	*196-193	3	🎓 Human Resource Management	Coreq: 196-129	F/S/SU
3	*196-164	3	Personal Skills for Supervisors	Prereq: 801-136; 804-135; Coreq: 196-129	F/S/SU
3	809-166	3	Ethics: Theory & Applications, Intro to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S/SU
4	*196-156	3	Leadership Development Capstone	Prereq: Instructor Consent; 196-129; 137; 164; 192; 193	F/S/SU
4	*196-151	3	Operations Management		F/S/SU
4	*196-133 OR *196-188	3 OR 3	Negotiations OR Project Management		F/S/SU
4	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S/SU
4	101-112	3	Accounting for Business		F/S/SU

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Leadership Development (10-196-1)

*Leadership Development* provides opportunities for those interested in acquiring or improving managerial/supervisory skills. The curriculum provides a blend of human relations and management development disciplines. This background enables the supervisor or manager to better understand how to attain organizational goals through the positive motivation of employees. Emphasis is placed on the "how-to-approach" which allows the instruction to be transferred from the classroom to the job.

### Program Learning Outcomes

Graduates will be able to:

1. Utilize quality strategies and tactics.
2. Apply effective leadership skills.
3. Apply Human Resource policies and procedures.
4. Perform supervisory management functions to achieve organizational objectives.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 62 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. Enrollment for this program is intended for people currently employed in a position closely related to Supervisory Management or who wish to acquire skills to become a supervisor.
3. It is recommended that students enroll in 196-129 Management Orientation as the first course in the program.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.
5. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Leadership Development program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
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[www.acbsp.org](http://www.acbsp.org)

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**  
School of Business and Transportation

## Leadership Development (10-196-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	Gateway to Success (G2S)		F/S/SU
1	*196-129	1	Management Orientation <sup>3</sup>		F/S/SU
1	*196-190	3	Leadership Development <sup>5</sup>		F/S/SU
1	*196-191	3	Supervision <sup>5</sup>		F/S/SU
1	801-136	3	English Composition 11 <sup>5</sup>	Prereq: 831-103 OR 831-107	F/S/SU
2	801-196 <b>OR</b> 801-198	3	Oral/Interpersonal Communication <b>OR</b> Speech		F/S/SU
2	*196-137	3	Certified Service Specialist <sup>5</sup>		F/S/SU
3	*196-136	3	Safety in the Workplace <sup>5</sup>		F/S/SU
3	*196-192	3	Managing for Quality <sup>5</sup>	Coreq: 196-129	F/S/SU
3	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F/S/SU
4	809-198	3	Psychology, Introduction to <sup>1,4,5</sup>	Prereq: 838-105 OR 831-107	F/S/SU
4	*196-164	3	Personal Skills for Supervisors	Prereq: 801-136; 804-135; Coreq: 196-129	F/S/SU
4	*196-189	3	Team Building and Problem Solving		F/S/SU
5	*196-134	3	Legal Issues for Supervisors	Coreq: 196-129	F/S/SU
5	*196-169	3	Diversity and Change Management	Coreq: 196-129	F/S/SU
5	*196-193	3	Human Resource Management	Coreq: 196-129	F/S/SU
6	809-166	3	Ethics: Theory & Applications, Intro to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S/SU
6	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S/SU
6	101-112	3	Accounting for Business		F/S/SU
7	*196-156	3	Leadership Development Capstone	Prereq: Instructor Consent; 196-129; 137; 164; 192; 193	F/S/SU
7	*196-151	3	Operations Management		F/S/SU
7	*196-133 <b>OR</b> *196-188	3 <b>OR</b> 3	Negotiations <b>OR</b> Project Management		F/S/SU

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Leadership Development (10-196-1)

*Leadership Development* provides opportunities for those interested in acquiring or improving managerial/supervisory skills. The curriculum provides a blend of human relations and management development disciplines. This background enables the supervisor or manager to better understand how to attain organizational goals through the positive motivation of employees. Emphasis is placed on the "how-to-approach" which allows the instruction to be transferred from the classroom to the job.

### Program Learning Outcomes

Graduates will be able to:

1. Utilize quality strategies and tactics.
2. Apply effective leadership skills.
3. Apply Human Resource policies and procedures.
4. Perform supervisory management functions to achieve organizational objectives.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 62 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. Enrollment for this program is intended for people currently employed in a position closely related to Supervisory Management or who wish to acquire skills to become a supervisor.
3. It is recommended that students enroll in 196-129 Management Orientation as the first course in the program.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.
5. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

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11520 West 119th Street  
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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Marketing (10-104-3)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, K-E = Kenosha/evenings, R-D = Racine/days, E-D – Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O	K-E	R-D	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F	F
1	*104-101	3	🎓 Marketing Principles		F	F	F	F
1	*104-104	3	🎓 Selling Principles		F	F	F	F
1	801-136	3	English Composition 11,3	Prereq: 831-103 OR 831-107	F	F	F	F
1	103-143	3	Computers for Professionals		F	F	F	F
2	*104-105	3	🎓 Promotion Principles		S	S	S	S
2	*102-137	3	Introduction to Business <sup>3</sup>		S	S	S	S
	OR	3	OR					
	*102-160	3	Business Law <sup>3</sup>					
2	*104-194	3	International Marketing	Coreq: 801-136; 804-135	S	S	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S	S
3	801-196	3	Oral/Interpersonal		SU	SU	SU	SU
	OR	3	Communication OR					
	801-198	3	Speech					
3	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU
4	*104-133	3	Social Media Strategies		F	F	F	F
4	*104-109	3	Marketing/Sports & Event Intro		F	F	F	F
4	*104-173	3	Marketing Research	Prereq: 104-194; 801-136; 804-135	F	F	F	F
4	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F	F	F	F
5	*104-137	3	Digital Marketing		S	S	S	S
5	101-112	3	Accounting for Business		S	S	S	S
	OR	4	OR					
	101-114	4	Accounting Principles <sup>3</sup>					
5	*104-115	3	Marketing Capstone/Internship	Prereq: Instructor Consent; 104-173; 801-136; 804-135	S	S	S	S
5	*104-172	3	Marketing Management	Prereq: 104-173; 801-136; 804-135	S	S	S	S
6	809-143	3	Microeconomics <sup>1,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU	SU	SU

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Marketing (10-104-3)

Marketing is a two-year associate degree program if taken full-time. Project-based learning applications prepare graduates for work in marketing and sales positions with opportunities to advance throughout their career. Students will develop an understanding of marketing strategies for consumers and business customers. Marketing skills acquired are in the emerging areas of promotion, sales, digital, social media, data analysis, and business strategies along with the creation of a complete written marketing plan.

### Program Learning Outcomes

Graduates will be able to:

1. Communicate effectively in a professional environment.
2. Develop strategies to anticipate and satisfy market needs.
3. Promote products, services, images, and/or ideas to achieve a desired outcome.
4. Evaluate information through the marketing research process.
5. Prepare selling strategies.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

105-106 Business Communications	102-160 Business Law
145-119 Entrepreneurship	104-127 Retailing
204-105 Computer Illustration and Drawing Tech	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an Advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Marketing program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
 11520 West 119th Street  
 Overland Park, KS 66213  
 Phone: (913) 339-9356  
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**Part-Time Pathway to Success**  
School of Business and Transportation

**Marketing (10-104-3)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, K-E = Kenosha/evenings, R-D = Racine/days, E-D – Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O	K-E	R-D	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F	F
1	*104-101	3	🎓 Marketing Principles		F	F	F	F
1	*104-104	3	🎓 Selling Principles		F	F	F	F
1	801-136	3	English Composition 1 <sup>1,3</sup>	Prereq: 831-103 OR 831-107	F	F	F	F
2	*104-105	3	🎓 Promotion Principles		S	S	S	S
2	103-143	3	Computers for Professionals		S	S	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S	S
3	801-196		Oral/Interpersonal Communication		SU	SU	SU	SU
	<b>OR</b>	3	<b>OR</b>					
	801-198		Speech					
3	809-198	3	Psychology, Introduction to <sup>1,2,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU
4	*102-137		Introduction to Business <sup>3</sup>		F	F	F	F
	<b>OR</b>	3	<b>OR</b>					
	*102-160		Business Law <sup>3</sup>					
4	*104-133	3	Social Media Strategies		F	F	F	F
5	*104-137	3	Digital Marketing		S	S	S	S
5	*104-194	3	International Marketing	Coreq: 801-136; 804-135	S	S	S	S
5	101-112	3	Accounting for Business		S	S	S	S
	<b>OR</b>	4	<b>OR</b>					
	101-114		Accounting Principles <sup>3</sup>					
6	809-143	3	Microeconomics <sup>1,3</sup>	Prereq: 838-105 OR 831-107	SU	SU	SU	SU
6	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	SU	SU	SU	SU
7	*104-109	3	Marketing/Sports & Event Intro		F	F	F	F
7	*104-173	3	Marketing Research	Prereq: 104-194; 801-136; 804-135	F	F	F	F
7	809-172	3	Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F	F	F	F
8	*104-172	3	Marketing Management	Prereq: 104-173; 801-136; 804-135	S	S	S	S
8	*104-115	3	Marketing Capstone/Internship	Prereq: Instructor Consent; 104-173; 801-136; 804-135	S	S	S	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Marketing (10-104-3)

*Marketing* is a two-year associate degree program if taken full-time. Project-based learning applications prepare graduates for work in marketing and sales positions with opportunities to advance throughout their career. Students will develop an understanding of marketing strategies for consumers and business customers. Marketing skills acquired are in the emerging areas of promotion, sales, digital, social media, data analysis, and business strategies along with the creation of a complete written marketing plan.

### Program Learning Outcomes

Graduates will be able to:

1. Communicate effectively in a professional environment.
2. Develop strategies to anticipate and satisfy market needs.
3. Promote products, services, images, and/or ideas to achieve a desired outcome.
4. Evaluate information through the marketing research process.
5. Prepare selling strategies.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

105-106 Business Communications	102-160 Business Law
145-119 Entrepreneurship	104-127 Retailing
204-105 Computer Illustration and Drawing Tech	

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an Advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Mechanical Design Technology (10-606-1)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-D = iMET Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*606-149	2	Introduction to MET <sup>4</sup>	Coreq: 606-128	F
1	*606-103	2	Material Properties		F
1	*606-128	2	CAD – Solidworks <sup>4</sup>		F
1	*606-141	3	AutoCAD – Mech Design Tech <sup>4</sup>		F
1	804-115	5	🎓 College Technical Math 1 <sup>1,4</sup>	Prereq: 834-110	F+
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S+
2	*606-142	2	Creo/Pro Engineer, Introduction to <sup>4</sup>		S
2	*606-151	3	🎓 Statics	Prereq: 804-115	S+
2	*606-152	2	🎓 Engineering Graphics w/ CAD1	Prereq: 606-128; 606-149	S
2	*606-159	2	Manufacturing Processes	Prereq: 606-103 OR 606-136; Coreq: 801-136	S
3	*606-129	2	CAD Solids / Advanced <sup>4</sup>	Prereq: 606-128	SU
3	806-154	4	General Physics 1 <sup>4</sup>	Prereq: 804-115	SU+
3	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+
3	*606-137	2	Manufacturing Process Appl <sup>2</sup>	Prereq: 606-159	SU
4	*606-153	2	Engineering Graphics w/ CAD 2	Prereq: 606-152	F
4	*606-119	3	Motor Controls <sup>2</sup>		F
4	*606-131	3	Strength of Materials <sup>2</sup>	Prereq: 606-151; 806-154	F
4	801-198	3	Speech		F+
4	*606-118	2	Mechanisms	Prereq: 606-151; 606-152	F
5	*606-138	2	Design Problems	Prereq: Instructor Consent; 801-136	S
5	*606-154	2	Engineering Graphics w/ CAD 3	Prereq: 606-153	S
5	*606-160	3	Fluid Power and Design <sup>2</sup>		S
5	*606-116	3	Machine Design / Elements of	Prereq: 606-151	S
5	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S+

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Mechanical Design Technology (10-606-1)

In *Mechanical Design Technology*, comprehensive instruction is given and practical experience gained in mechanical design, drafting, and computer aided design (CAD). Extensive experience is gained with dimensioning practices, allowances, sections, drafting standards, auxiliary views, exploded views, fabrication drawings detail and assembly drawings, gears and cams, structural shapes, and intersections. Other topics covered through classroom study include practical geometry, basic fabrication methods, engineering geometry, linear velocity, engineering materials and properties, kinematics of machinery, and manufacturing processes.

### Program Learning Outcomes

Graduates will be able to:

1. Prepare detail and assembly drawings for documentation of mechanical components and products.
2. Create CAD geometry, parts, and assemblies.
3. Design mechanical components and products.
4. Analyze mechanical engineering problems.
5. Select purchase parts.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Mechanical Design Technology (10-606-1)**

Associate of Applied Science

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

I-E = iMET Center/evenings, I-D = iMET Center/days, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	I-D
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+
1	*606-128	2	CAD – Solidworks <sup>4</sup>		F	F
1	*606-149	2	Introduction to MET <sup>4</sup>	Coreq: 606-128	F	F
1	804-115	5	🎓 College Technical Math 11 <sup>4</sup>	Prereq: 834-110	F+	F+
2	*606-103	2	Material Properties		S	S
2	*606-151	3	🎓 Statics	Prereq: 804-115	S+	S+
2	*606-152	2	🎓 Engineering Graphics w/ CAD1	Prereq: 606-128; 606-149	S	S
2	801-136	3	English Composition 11 <sup>4</sup>	Prereq: 831-103 OR 831-107	S+	S+
3	*606-129	2	CAD Solids / Advanced <sup>4</sup>	Prereq: 606-128	SU	SU
3	806-154	4	General Physics 1 <sup>4</sup>	Prereq: 804-115	SU+	SU+
4	*606-118	2	Mechanisms	Prereq: 606-151; 606-152	F	F
4	*606-119	3	Motor Controls <sup>2</sup>		F	F
4	*606-131	3	Strength of Materials <sup>2</sup>	Prereq: 606-151; 806-154	F	F
4	*606-141	3	AutoCAD – Mech Design Tech <sup>4</sup>		F	F
5	*606-142	2	Creo/Pro Engineer, Introduction to <sup>4</sup>		S	S
5	*606-153	2	Engineering Graphics w/ CAD 2	Prereq: 606-152	S	S
5	*606-159	2	Manufacturing Processes	Prereq: 606-103 OR 606-136 Coreq: 801-136	S	S
6	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
6	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU+	SU+
7	*606-137	2	Manufacturing Process Appl <sup>2</sup>	Prereq: 606-159	F	F
7	*606-154	2	Engineering Graphics w/ CAD 3	Prereq: 606-153	F	F
7	801-198	3	Speech		F+	F+
8	*606-116	3	Machine Design / Elements of	Prereq: 606-151	S	S
8	*606-138	2	Design Problems	Prereq: Instructor Consent; 801-136	S	S
8	*606-160	3	Fluid Power and Design <sup>2</sup>		S	S

**Minimum Program Total Credits Required: 64**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Mechanical Design Technology (10-606-1)

In *Mechanical Design Technology*, comprehensive instruction is given and practical experience gained in mechanical design, drafting, and computer aided design (CAD). Extensive experience is gained with dimensioning practices, allowances, sections, drafting standards, auxiliary views, exploded views, fabrication drawings detail and assembly drawings, gears and cams, structural shapes, and intersections. Other topics covered through classroom study include practical geometry, basic fabrication methods, engineering geometry, linear velocity, engineering materials and properties, kinematics of machinery, and manufacturing processes.

### Program Learning Outcomes

Graduates will be able to:

1. Prepare detail and assembly drawings for documentation of mechanical components and products.
2. Create CAD geometry, parts, and assemblies.
3. Design mechanical components and products.
4. Analyze mechanical engineering problems.
5. Select purchase parts.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Nursing – Associate Degree (10-543-1)

### Associate of Applied Science

### Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, K-E = Kenosha/evenings, B-D = Burlington Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	K-E	B-D
1	890-155	1	📍 Gateway to Success (G2S)		F/S/SU	F/S/SU	F/S/SU
1	§*806-177	4	🎓 General Anatomy and Physiology <sup>2,10</sup>		F/S/SU	F/S/SU	F/S/SU
1	§801-136	3	English Composition <sup>12,10</sup>	Prereq: 831-103 OR 831-107	F/S/SU	F/S/SU	F/S/SU
1	§809-188	3	Psychology, Developmental <sup>2</sup>	Prereq: 838-105 OR 831-107	F/S/SU	F/S/SU	F/S/SU
1	§801-198	3	Speech		F/S/SU	F/S/SU	F/S/SU
2	§*543-101	2	🎓 Nursing Fundamentals <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177; Coreq: 801-136	F/S/SU	F/S	F/S
2	§*543-102	3	🎓 Nursing Skills <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177	F/S/SU	F/S	F/S
2	§*543-103	2	🎓 Nursing Pharmacology <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177	F/S/SU	F/S	F/S
2	§*543-104	2	Nsg: Intro Clinical Practice <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177; Coreq: 543-101; 543-102; 543-103	F/S/SU	F/S	F/S
2	§*806-179	4	Anatomy & Physiology, Adv. <sup>10</sup>	Prereq: 806-177	F/S/SU	F/S	F/S
3	§*543-105	3	🎓 Nursing Health Alterations <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; 801-136	F/S/SU	S/F	S/F
3	§*543-106	3	Nursing Health Promotion <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; 809-188; 801-136	F/S/SU	S/F	S/F
3	§*543-107	2	Nsg: Clin Care Across Lifespan <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; Coreq: 543-106	F/S/SU	S/F	S/F
3	§*543-108	2	Nsg: Intro Clinical Care Mgt. <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; Coreq: 543-105	F/S/SU	S/F	S/F
3	809-198	3	Psychology, Introduction to <sup>2,7,10</sup>	Prereq: 838-105 OR 831-107	F/S/SU	S/F	S/F
4	*543-109	3	Nursing Complx Health Alter I <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179; Coreq: 806-197	F/S/SU	F/S	F/S
4	*543-110	2	Nursing Mental Health Comm <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179; Coreq: 809-198	F/S/SU	F/S	F/S
4	*543-111	3	Nursing Intrmdt Clinical <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; Coreq: 543-109; 543-110; 543-112	F/S/SU	F/S	F/S
4	*543-112	1	Nursing Advanced Skills <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179	F/S/SU	F/S	F/S
4	§*806-197	4	Microbiology <sup>2,8</sup>	Prereq: 806-177 OR 806-105	F/S/SU	F/S	F/S
5	*543-113	3	Nursing Cmplx Health Alter II	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; 806-197	F/S/SU	S/F	S/F
5	*543-114	2	Nursing Management Concepts	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112	F/S/SU	S/F	S/F
5	*543-115	3	Nursing Advanced Clinical	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; Coreq: 543-113; 543-114	F/S/SU	S/F	S/F
5	*543-116	2	Nursing Clinical Trans.	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; Coreq: 543-113; 543-114; 543-115	F/S/SU	S/F	S/F
5	809-196	3	Sociology, Introduction to <sup>2,7,10</sup>	Prereq: 838-105 OR 831-107	F/S/SU	S/F	S/F

**Minimum Program Total Credits Required: 66**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Nursing – Associate Degree (10-543-1)

*Nursing-Associate Degree* program is the dynamic interpersonal goal-directed process that seeks to promote optimal health within the context of individuals, family, community and society. The concept of caring, which is central to nursing, is communicated through both attitude and action. Nursing uses the nursing process, a problem solving approach to provide holistic care to individuals, families, and groups within the health care system. Nurses assess health and make clinical decisions to provide safe and effective nursing care according to standards of practice within legal, ethical and regulatory frameworks. Nursing practice is based on its own body of knowledge. Through collaboration with other health care professionals, nursing is responsive to the needs of the community across the health-illness continuum. The program may be completed in two academic years of full-time study. Individuals who are Licensed Practical Nurses should contact Gateway for information regarding advanced standing opportunities.

### Program Learning Outcomes

Graduates will be able to:

1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy, and quality care.
2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
3. Integrate social mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making.
4. Provide patient centered care by utilizing the nursing process across diverse populations and health care settings.
5. Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance in participation in system effectiveness.
6. Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan.
7. Use information and technology to communicate, manage data, mitigate error, and support decision-making.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health

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career at Gateway Technical College. Each case will be individually evaluated on all available evidence provided to the college.

### Graduation Requirements

1. Minimum 66 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. § Must be completed to be eligible to take the NCLEX-PN exam.
4. Complete 890-155 Gateway to Success (G2S) in the first semester.

Gateway credits may transfer to colleges and universities offering adv. nurse ed. programs.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. Students are selected based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/student-services/admissions/what-petitioning> for additional information. Students must meet current petition requirements at the time they are eligible to enroll in 543 courses.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. A liability insurance fee per semester is required.
4. A physical examination and immunization are required prior to admission to the first clinical course. Clinical sites may require proof of health insurance.
5. Beginning in January 2015, students must have received a "B-" or better in 806-177 General Anatomy & Physiology before they can enroll in this course.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. Transfer credits in Social Science may substitute for this course. See advisor for details.
8. It is preferred that students in this program complete 806-177 as the prereq for this course.
9. Beginning in May 2016, students must have received a "B-" or better in 806-179 Anatomy and Physiology, Advanced before they can enroll in this course.
10. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

The Nursing program is fully accredited by the Accreditation Commission for Education in Nursing; 3343 Peachtree Rd NE Suite #850, Atlanta, GA 30326. For more information, call (404) 975-5000.

**Eligibility for Licensure Exam:** Student must be a graduate of a state-approved school, be a U.S. citizen, or submit proof of intention to become a citizen or a permanent resident alien.





## Nursing – Associate Degree (10-543-1)

### Associate of Applied Science

### Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, K-E = Kenosha/evenings, B-D = Burlington/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	K-E	B-D
1	890-155	1	📍 Gateway to Success (G2S)		F/S/SU	F/S/SU	F/S/SU
1	§801-136	3	English Composition <sup>12,10</sup>	Prereq: 831-103 OR 831-107	F/S/SU	F/S/SU	F/S/SU
1	§*806-177	4	🎓 General Anatomy and Physiology <sup>2,10</sup>		F/S/SU	F/S/SU	F/S/SU
2	§*543-101	2	🎓 Nursing Fundamentals <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177; Coreq: 801-136	F/S/SU	F/S	F/S
2	§*543-103	2	🎓 Nursing Pharmacology <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177	F/S/SU	F/S	F/S
2	809-188	3	Psychology, Developmental	Prereq: 838-105 OR 831-107	F/S/SU	F/S	F/S
3	§*543-102	3	🎓 Nursing Skills <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177	F/S/SU	F/S	F/S
3	§*543-104	2	Nsg: Intro Clinical Practice <sup>1,5,10</sup>	Prereq: Program Admission; Advisor Consent; 806-177; Coreq: 543-101; 543-102; 543-103	F/S/SU	F/S	F/S
3	§*806-179	4	Anatomy & Physiology, Adv. <sup>10</sup>	Prereq: 806-177	F/S/SU	F/S	F/S
4	§*543-105	3	🎓 Nursing Health Alterations <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; 801-136	F/S/SU	F/S	F/S
4	§*543-106	3	Nursing Health Promotion <sup>10</sup>	Prereq: 543-101; 543-102; 543-103; 543-104; 809-188; 801-136	F/S/SU	F/S	F/S
5	§*543-107	2	Nsg: Clin Care Across Lifespan <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; Coreq: 543-106	F/S/SU	F/S	F/S
5	§*543-108	2	Nsg: Intro Clinical Care Mgt. <sup>10</sup>	Prereq: Program Admission; 543-101; 543-102; 543-103; 543-104; Coreq: 543-105	F/S/SU	F/S	F/S
5	§*806-197	4	Microbiology <sup>2,8</sup>	Prereq: 806-177 OR 806-105	F/S/SU	F/S	F/S
6	*543-109	3	Nursing Complx Health Alter I <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179; Coreq: 806-197	F/S/SU	F/S	F/S
6	*543-112	1	Nursing Advanced Skills <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179	F/S/SU	F/S	F/S
6	809-198	3	Psychology, Introduction to <sup>2,7,10</sup>	Prereq: 838-105 OR 831-107	F/S/SU	F/S	F/S
7	*543-110	2	Nursing Mental Health Comm <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; 806-179; Coreq: 809-198	F/S/SU	F/S	F/S
7	*543-111	3	Nursing Intrmdt Clinical <sup>9</sup>	Prereq: Program Admission; 543-105; 543-106; 543-107; 543-108; Coreq: 543-109; 543-110; 543-112	F/S/SU	F/S	F/S
7	§801-198	3	Speech		F/S/SU	F/S	F/S
8	*543-113	3	Nursing Cmplx Health Alter II	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; 806-197	F/S/SU	F/S	F/S
8	809-196	3	Sociology, Introduction to <sup>2,7,10</sup>	Prereq: 838-105 OR 831-107	F/S/SU	F/S	F/S
9	*543-114	2	Nursing Management Concepts	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112	F/S/SU	F/S	F/S
9	*543-115	3	Nursing Advanced Clinical	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; Coreq: 543-113; 543-114	F/S/SU	F/S	F/S
9	*543-116	2	Nursing Clinical Trans.	Prereq: Program Admission; 543-109; 543-110; 543-111; 543-112; Coreq: 543-113; 543-114; 543-115	F/S/SU	F/S	F/S

**Minimum Program Total Credits Required: 66**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Nursing – Associate Degree (10-543-1)

*Nursing-Associate Degree* program is the dynamic interpersonal goal-directed process that seeks to promote optimal health within the context of individuals, family, community and society. The concept of caring, which is central to nursing, is communicated through both attitude and action. Nursing uses the nursing process, a problem solving approach to provide holistic care to individuals, families, and groups within the health care system. Nurses assess health and make clinical decisions to provide safe and effective nursing care according to standards of practice within legal, ethical and regulatory frameworks. Nursing practice is based on its own body of knowledge. Through collaboration with other health care professionals, nursing is responsive to the needs of the community across the health-illness continuum. The program may be completed in two academic years of full-time study. Individuals who are Licensed Practical Nurses should contact Gateway for information regarding advanced standing opportunities.

### Program Learning Outcomes

Graduates will be able to:

1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy, and quality care.
2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
3. Integrate social mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making.
4. Provide patient centered care by utilizing the nursing process across diverse populations and health care settings.
5. Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance in participation in system effectiveness.
6. Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan.
7. Use information and technology to communicate, manage data, mitigate error, and support decision-making.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Critical Thinking and Problem Solving
- Professionalism and Career Management
- Teamwork and Collaboration
- Cultural Competence
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated on all available evidence provided to the college.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

### Graduation Requirements

1. Minimum 66 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. § Must be completed to be eligible to take the NCLEX-PN exam.
4. Complete 890-155 Gateway to Success (G2S) in the first semester.

Gateway credits may transfer to colleges and universities offering adv. nurse ed. programs.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. Students are selected based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/student-services/admissions/what-petitioning> for additional information. Students must meet current petition requirements at the time they are eligible to enroll in 543 courses.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. A liability insurance fee per semester is required.
4. A physical examination and immunization are required prior to admission to the first clinical course. Clinical sites may require proof of health insurance.
5. Beginning in January 2015, students must have received a "B-" or better in 806-177 General Anatomy & Physiology before they can enroll in this course.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. Transfer credits in Social Science may substitute for this course. See advisor for details.
8. It is preferred that students in this program complete 806-177 as the prereq for this course.
9. Beginning in May 2016, students must have received a "B-" or better in 806-179 Anatomy and Physiology, Advanced before they can enroll in this course.
10. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

The Nursing program is fully accredited by the Accreditation Commission for Education in Nursing; 3343 Peachtree Rd NE Suite #850, Atlanta, GA 30326. For more information, call (404) 975-5000.

**Eligibility for Licensure Exam:** Student must be a graduate of a state-approved school, be a U.S. citizen, or submit proof of intention to become a citizen or a permanent resident alien.



## Paramedic Technician (10-531-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HE-D = HERO Center/days, HE-E = HERO Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	890-155	1	Gateway to Success (G2S)		SU*	SU*
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	SU*	SU*
1	*531-911	2	EMS Fundamental <sup>1,2</sup>	Prereq: 838-105 OR 831-107	SU	SU
2	*531-912	4	Paramedic Medical Principles	Coreq: 531-911	F	F
2	*531-913	3	Adv. Patient Asses. Principles	Coreq: 531-911	F	F
2	*531-914	3	Adv. Pre-Hospital Pharmacology	Coreq: 531-911	F	F
2	*531-915	2	Paramedic Respiratory Mgt.	Coreq: 531-914	F	F
2	*531-925	4	Paramedic HPS Lab	Coreq: 531-912	F	F
2	*531-926	1	Paramedic Hospital Field <sup>3,4</sup>	Coreq: 531-912	F	F
2	*531-955	2	Paramedic Cardiology 1	Coreq: 531-915	F	F
3	*531-956	2	Paramedic Cardiology 2	Prereq: 531-955	S	S
3	*531-918	1	Adv. Emergency Resuscitation	Coreq: 531-955	S	S
3	*531-919	4	Paramedic Medical Emergencies	Coreq: 531-955	S	S
3	*531-920	3	Paramedic Trauma	Coreq: 531-955	S	S
3	*531-921	3	Special Patient Populations	Coreq: 531-955	S	S
3	*531-922	1	EMS Operations	Coreq: 531-955	S	S
3	*531-923	1	Paramedic Capstone	Coreq: 531-955	S	S
3	*531-927	2	Paramedic Hospital Field II <sup>3,4</sup>	Coreq: 531-955	S	S
4	801-136	3	English Composition 1 <sup>1,7</sup>	Prereq: 831-103 OR 831-107	SU/F+	SU/F+
4	801-196 OR 801-198	3	Oral/Interpersonal Communication OR Speech		SU/F+	SU/F+
4	806-177	4	General Anatomy and Physiology <sup>7</sup>		SU/F+	SU/F+
4	809-198	3	Psychology, Introduction to <sup>1,7</sup>	Prereq: 838-105 OR 831-107	SU/F+	SU/F+
5	806-179	4	Anatomy & Physiology, Advanced <sup>7</sup>	Prereq: 806-177	F/S*	F/S*
5	809-166 OR 809-172	3	Ethics: Theory & Applications, Intro to <sup>1</sup> OR Diversity Studies, Introduction to <sup>1</sup>	Prereq: 838-105 OR 831-107	F/S*	F/S*
5	809-188 OR 809-159	3	Psychology, Developmental <sup>1</sup> OR Psychology, Abnormal <sup>1</sup>	Prereq: 838-105 OR 831-107 Prereq: 809-198	F/S*	F/S*

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Paramedic Technician (10-531-1)

*Paramedic Technician* requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. They can also perform surgical procedures to open airways and provide resuscitative drugs. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. This program is offered on a part time basis: either two evenings a week and Saturdays or an alternating day class 2-3 days a week to accommodate the typical 24 hour on/48 hour off schedule worked by many FF/EMS agencies. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Satisfactory completion of clinical/field time is competency based so actual number of hours may vary from student to student. Graduates of this program can expect to find employment with private ambulance companies, fire departments, or hospital emergency rooms. Students finishing the first two semesters of the program (the 531 courses) are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma program can be applied to the Paramedic Technician associate degree.

### Program Goal

To prepare competent entry-level Emergency Medical Technician-Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains, with or without exit points at the Emergency Medical Technician-Intermediate and/or Emergency Medical Technician-Basic, and/or First Responder levels.

### Program Learning Outcomes

Graduates will be able to:

1. Prepare for incident response and EMS operations.
2. Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
3. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
4. Communicate effectively with others.
5. Demonstrate professional behavior.
6. Meet state and national competencies listed for paramedic credentialing.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must have current CPR certification.
4. Students must have current Wisconsin EMS licensure.

## Graduation Requirements

1. Minimum 65 credits with an average of 2.0 or above.
  2. \*Minimum of 2.0 ("C") or above for these major courses.
  3. Complete 890-155 Gateway to Success (G2S) in the first semester.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior enrollment. See an advisor for details.
2. Prior to enrolling in paramedic level courses, a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with the program staff.
3. Drug testing and immunizations are required prior to admission to the first clinical course (531-926 or 531-927).
4. Applicants of this program are subject to a review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

## Accreditation Statement

The EMT Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 N., Suite 158  
Clearwater, FL 33763  
727-210-2350  
[www.caahep.org](http://www.caahep.org)



**Physical Therapist Assistant (10-524-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		F/S/SU
1	*806-177	4	🎓 General Anatomy & Physiology <sup>7,8</sup>		F/S/SU
1	801-136	3	English Composition <sup>12,7,9</sup>	Prereq: 831-103 OR 831-107	F/S/SU
1	801-196	3	Oral/Interpersonal Communication <sup>9</sup>		F/S/SU
1	809-198	3	Psychology, Introduction to <sup>2,5,7,9</sup>	Prereq: 838-105 OR 831-107	F/S/SU
2	*524-156	4	🎓 PTA Applied Kinesiology <sup>13,7</sup>	Prereq: Instructor Consent; 801-136	F
2	*524-139	4	PTA Patient Interventions <sup>3,7</sup>	Prereq: Instructor Consent	F
2	*524-140	2	PTA Professional Issues <sup>13,7</sup>	Prereq: Instructor Consent	F
2	*524-143	4	PTA Therapeutic Modalities <sup>3,7</sup>	Prereq: Instructor Consent	F
3	*524-157	3	PTA Applied Kinesiology <sup>27</sup>	Prereq: 524-156	S
3	*524-147	2	PTA Clinical Practice <sup>16,7</sup>	Coreq: 524-143; 524-157	S
3	*524-142	3	PTA Therapeutic Exerc.	Prereq: 806-177; Coreq: 524-156	S
3	*524-145	4	PTA Principles of Musculoskeletal Rehab. <sup>9</sup>	Prereq: 524-139; Coreq: 524-142; 524-157	S
4	*524-144	4	PTA Princ of Neuro Rehab.	Prereq: 524-139; 524-142; 524-157	F
4	*524-146	3	PTA Cardio & Integ Mgmt <sup>7</sup>	Prereq: 524-139; 524-142; 524-157	F
4	*524-148	3	PTA Clinical Practice <sup>26,7</sup>	Prereq: 524-147	F
4	809-188	3	Psychology, Developmental <sup>2</sup>	Prereq: 838-105 OR 831-107	F
5	*524-149	2	PTA Rehabilitation Across the Lifespan	Prereq: 524-144; 524-145; 524-148 Coreq: 524-146	S
5	*524-150	2	PTA Professional Issues 2	Prereq: 524-140; Coreq: 524-148	S
5	*524-151	5	PTA Clinical Practice <sup>36</sup>	Prereq: 524-144; 524-145; 524-146; 524-148	S
5	809-172	3	Diversity Studies, Introduction to <sup>2,5,9</sup>	Prereq: 838-105 OR 831-107	S

**Minimum Program Total Credits Required: 65**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Physical Therapist Assistant (10-524-1)

*Physical Therapist Assistant* is a health profession with the primary purpose of promoting optimal human health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction. The physical therapist assistant (PTA) is a technical health care worker who carries out many patient treatments under the supervision of a physical therapist. PTAs find employment in clinics, hospitals, nursing homes, rehabilitation centers, home care agencies, schools, private health and fitness centers, and other settings.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate clear and collaborative communication with patients, families, and health care team.
2. Exhibit behaviors and conduct that reflect respect and sensitivity according to PT practice standards.
3. Function under the supervision of a physical therapist in a safe, legal, ethical manner to ensure the safety of patient, self and others throughout the clinical interaction.
4. Produce documentation to support the delivery physical therapy services.
5. Demonstrate critical thinking skills to implement and modify treatment within a plan of care under the direction and supervision of a physical therapist.
6. Perform data collection essential for carrying out the plan of care under the direction and supervision of the physical therapist.
7. Perform technically competent, evidence based physical therapy interventions under the direction and supervision of the physical therapist.
8. Educate patients, families, and other health providers.
9. Integrate components of operational and fiscal practices of physical therapy service in a variety of settings.
10. Implement a self-directed plan for career development, credentialing, and lifelong learning.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 65 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. This program may require additional fee(s) for: Criminal background Check, Medical Document Manager, and/or Drug Testing.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. This program uses a petition process for clinical/practicum/program courses. Students are selected based on completion of academic eligibility requirements and district residency status. See [Petitioning](#) on the website for additional information.
4. CPR certification must be obtained and maintained. See advisor for specific requirements.
5. Transfer credits in Social Science may substitute for this course. See advisor for details.
6. The grading system for the following courses will be pass/fail: 524-147 PTA Clinical Practice 1, 524-148 PTA Clinical Practice 2, and 524-151 PTA Clinical Practice 3.
7. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
8. This course must be completed prior to petitioning. See "What is Petitioning?" on the website or an advisor for additional information.
9. Students may take this course while waiting to petition. See "What is Petitioning?" on the website or an advisor for additional information.







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## Professional Communications (10-699-1)

Associate of Applied Science  
**Effective 2020/2021**


*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*


**R-D = Racine/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq-before/coreq-with)	R-D	O
1	890-155	1	 Gateway to Success (G2S)		F	F
1	103-143	3	Computers for Professionals <sup>4</sup>		F	F
1	*699-110	3	 Communication Document Design	Coreq: 103-143	F	F
1	*699-117	3	 Research Fundamentals		F	F
1	*699-133	3	Writing for Social Media <sup>1</sup>	Prereq: 831-103	F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F
2	204-107	3	Digital Photography, Intro to		S	S
2	*699-112	3	 Editing <sup>1</sup>	Coreq: 801-136	S	S
2	*699-114	3	 Professional and Technical Writing <sup>1</sup>	Prereq: 831-103	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
2	699-XXX	3	Professional Communications Elective Course <sup>2</sup>	Take 3 credits at the associate degree level from the list in Note 2 on the back.	S	S
3	204-105	3	Computer Illustration & Drawing Tech		F	F
3	*699-111	3	 Communication Project Management	Prereq: 804-135	F	F
3	801-197	3	Technical Reporting	Prereq: 801-136	F	F
3	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	F	F
3	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
4	*699-115	3	Professional Communications Internship	Prereq: 699-111; 699-112	S	S
4	*699-116	1	Professional Communications Portfolio	Prereq: 699-111; 699-112	S	S
4	*699-130	3	Writing and Publishing		S	S
4	801-196	3	OR Oral/Interpersonal Communication		S	S
4	801-198	3	OR Speech		S	S
4	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S	S
4	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Professional Communications (10-699-1)

*Professional Communications* prepares students to research, plan, create, publish, and evaluate communication products. The curriculum develops the writing, design, and technology skills that students need to produce a variety of paper and electronic communication products, including articles, audiovisual scripts, grant proposals, promotional pieces, social media pages, user assistance, and websites. Professional communication skills are needed to meet the demands of the information age in business, government, and not-for-profit organizations.

### Program Learning Outcomes

Graduates will be able to:

1. Plan for a communication project.
2. Create a communication product.
3. Synthesize text, visual elements, and design in a communication product.
4. Manage all aspects of a communication project.
5. Produce a final communication product.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

## Graduation Requirements

1. Minimum 62 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

699-113 Information Design	699-135 Writing for the Web
699-131 Writing Copy for Sales	699-136 Writing Grant Proposals
699-132 Writing for Organizations	699-137 Writing Product Documentation
699-134 Writing for the Media	699-138 Writing Software User Assistance
806-112 Principles of Sustainability	809-172 Diversity Studies, Introduction to

### Notes

1. A satisfactory placement test score (or successful remediation is required prior to enrollment). See advisor for details.
2. Choose 3 credits from the following courses: 699-113; 699-131; 699-132; 699-134; 699-135; 699-136; 699-137; 699-138. If using a course to fulfill this requirement, students will not be allowed also to use the course to fulfill the elective requirement for the program. See an advisor for details.
3. Transfer credits in social science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Professional Communications program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





## Professional Communications (10-699-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq-before/coreq-with)	R-D	O
1	890-155	1	Gateway to Success (G2S)		F	F
1	*699-117	3	Research Fundamentals		F	F
1	103-143	3	Computers for Professionals <sup>4</sup>		F	F
1	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	F	F
2	*699-112	3	Editing <sup>1</sup>	Coreq: 801-136	S	S
2	*699-114	3	Professional and Technical Writing <sup>1</sup>	Prereq: 831-103	S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
3	204-107	3	Digital Photography, Intro to		SU	SU
3	699-XXX	3	Professional Communications Elective Course <sup>2</sup>	Take 3 credits at the associate degree level from the list in Note 2 on the back.	SU	SU
4	*699-110	3	Communication Document Design	Coreq: 103-143	F	F
4	*699-133	3	Writing for Social Media <sup>1</sup>	Prereq: 831-103	F	F
5	*699-130	3	Writing and Publishing		S	S
5	801-198	3	Speech		S	S
	<b>OR</b>	<b>3</b>	<b>OR</b>			
	801-196	3	Oral/Interpersonal Communication		S	S
5	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S
6	204-105	3	Computer Illustration & Drawing Tech		SU	SU
6	809-196	3	Sociology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	SU	SU
7	*699-111	3	Communication Project Management	Prereq: 804-135	F	F
7	801-197	3	Technical Reporting	Prereq: 801-136	F	F
7	XXX-XXX	3	Elective Course	Take 3 credits at the associate degree level. Suggested electives listed on back.	F	F
8	*699-115	3	Professional Communications Internship	Prereq: 699-111; 699-112	S	S
8	*699-116	1	Professional Communications Portfolio	Prereq: 699-111; 699-112	S	S
8	809-198	3	Psychology, Introduction to <sup>1,3,4</sup>	Prereq: 838-105 OR 831-107	S	S

**Minimum Program Total Credits Required: 62**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Professional Communications (10-699-1)

*Professional Communications* prepares students to research, plan, create, publish, and evaluate communication products. The curriculum develops the writing, design, and technology skills that students need to produce a variety of paper and electronic communication products, including articles, audiovisual scripts, grant proposals, promotional pieces, social media pages, user assistance, and websites. Professional communication skills are needed to meet the demands of the information age in business, government, and not-for-profit organizations.

### Program Learning Outcomes

Graduates will be able to:

1. Plan for a communication project.
2. Create a communication product.
3. Synthesize text, visual elements, and design in a communication product.
4. Manage all aspects of a communication project.
5. Produce a final communication product.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 62 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

699-113 Information Design	699-135 Writing for the Web
699-131 Writing Copy for Sales	699-136 Writing Grant Proposals
699-132 Writing for Organizations	699-137 Writing Product Documentation
699-134 Writing for the Media	699-138 Writing Software User Assist.
806-112 Principles of Sustainability	809-172 Diversity Studies, Introduction to

### Notes

1. A satisfactory placement test score (or successful remediation is required prior to enrollment). See advisor for details.
2. Choose 3 credits from the following courses: 699-113; 699-131; 699-132; 699-134; 699-135; 699-136; 699-137; 699-138. If using a course to fulfill this requirement, students will not be allowed also to use the course to fulfill the elective requirement for the program. See an advisor for details.
3. Transfer credits in social science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Professional Communications program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Supply Chain Management (10-182-1)

Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-E = Kenosha/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	F
1	*102-137	3	Intro to Business <sup>2</sup>		F	F
1	*182-101	3	🎓 Supply Chain Management		F	F
1	*182-102	3	Logistics		F	F
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
2	*182-115	3	Manufacturing & Robotics, Intro to		S	S
	<b>OR</b>	<b>3</b>	<b>OR</b>			
	628-115		Industrial Robotics and Programing		S	S
2	*196-136	3	Safety in the Workplace <sup>2</sup>		S	S
2	*182-103	3	Global Supply Chain Management	Prereq: 182-101	S	S
2	XXX-XXX	3	Elective Courses	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S
3	809-198	3	Psychology, Introduction to <sup>1,2</sup>	Prereq: 838-105 OR 831-107	F	F
3	*196-151	3	Operations Management		F	F
3	*182-106	3	Enterprise Resource Planning and Control	Prereq: 182-101; 804-135; 801-136	F	F
3	*196-133	3	Negotiations		F	F
3	801-196		Oral/Interpersonal Communications		F	F
	<b>OR</b>	<b>3</b>	<b>OR</b>			
	801-198		Speech		F	F
4	102-160	3	Business Law <sup>2</sup>		S	S
4	*182-107	3	Supply Chain Internship	Prereq: Instructor Consent	S	S
	<b>OR</b>	<b>3</b>	<b>OR</b>			
	*196-188		Project Management		S	S
4	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	S	S
4	XXX-XXX	3	Elective Courses	Take 3 credits at the associate degree level. Suggested electives listed on back.	S	S
4	*182-108	3	Purchasing		S	S
4	*196-190	3	Leadership Development <sup>1,2</sup>		S	S

**Minimum Program Total Credits Required: 61**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Supply Chain Management (10-182-1)

*Supply Chain Management* is the efficient movement of materials and products including all logistical activities involved in the flow of goods - from point of origin to point of consumption. This program focuses on operations, transportation, procurement and distribution of materials and products. Workers in this field are prepared to analyze and improve processes within their area. Skills in planning, decision making, continuous improvement, problem solving, and leadership will be learned. Possible careers in Supply Chain include manager, claims analyst, customer service representative, dispatcher, inventory analyst, inventory control specialist, logistics technician, materials planner, master production scheduler, purchasing assistant, shipping and receiving specialist, transportation planner/coordinator, warehouse specialist and international logistics technician.

### Program Learning Outcomes

Graduates will be able to:

1. Define (plan) operations, transportation, procurement and distribution.
2. Measure operations, transportation, procurement and distribution.
3. Analyze operations, transportation, procurement and distribution.
4. Improve operations, transportation, procurement and distribution.
5. Control operations, transportation, procurement and distribution.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

101-114 Principles of Accounting	196-137 Certified Service Specialist
196-192 Managing for Quality	443-101 Forklift Operation and Maintenance

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).



Foxconn preferred programs prepare students for potential career opportunities at Foxconn. Completion of a preferred program does not guarantee employment.

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**Part-Time Pathway to Success**  
School of Business and Transportation

**Supply Chain Management (10-182-1)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-E = Kenosha/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	F
1	*102-137	3	Intro to Business <sup>2</sup>		F	F
1	*182-101	3	🎓 Supply Chain Management		F	F
2	*182-102	3	Logistics		S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
2	*196-190	3	Leadership Development <sup>1,2</sup>		S	S
3	801-196 <b>OR</b> 801-198	3	Oral/Interpersonal Communications <b>OR</b> Speech		SU	SU
3	809-198	3	Psychology, Introduction to <sup>1,2</sup>	Prereq: 838-105 OR 831-107	SU	SU
4	*196-151	3	Operations Management		F	F
4	*182-106	3	Enterprise Resource Planning and Control	Prereq: 182-101; 804-135; 801-136	F	F
4	XXX-XXX	3	Elective Course	Take 3 associate degree level credits. Suggested electives listed on back.	F	F
5	*182-115 <b>OR</b> 628-115	3	Manufacturing & Robotics, Intro to <b>OR</b> Industrial Robotics and Programing		S	S
5	*196-136	3	Safety in the Workplace <sup>2</sup>		S	S
5	*182-103	3	Global Supply Chain Management	Prereq: 182-101	S	S
6	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU	SU
6	XXX-XXX	3	Elective Course	Take 3 associate degree level credits. Suggested electives listed on back.	SU	SU
7	*196-133	3	Negotiations		F	F
7	102-160	3	Business Law <sup>2</sup>		F	F
8	*182-107 <b>OR</b> *196-188	3	Supply Chain Internship <b>OR</b> Project Management	Prereq: Instructor Consent	S	S
8	*182-108	3	Purchasing		S	S

**Minimum Program Total Credits Required: 61**

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🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Supply Chain Management (10-182-1)

*Supply Chain Management* is the efficient movement of materials and products including all logistical activities involved in the flow of goods - from point of origin to point of consumption. This program focuses on operations, transportation, procurement and distribution of materials and products. Workers in this field are prepared to analyze and improve processes within their area. Skills in planning, decision making, continuous improvement, problem solving, and leadership will be learned. Possible careers in Supply Chain include manager, claims analyst, customer service representative, dispatcher, inventory analyst, inventory control specialist, logistics technician, materials planner, master production scheduler, purchasing assistant, shipping and receiving specialist, transportation planner/coordinator, warehouse specialist and international logistics technician.

### Program Learning Outcomes

Graduates will be able to:

1. Define (plan) operations, transportation, procurement and distribution.
2. Measure operations, transportation, procurement and distribution.
3. Analyze operations, transportation, procurement and distribution.
4. Improve operations, transportation, procurement and distribution.
5. Control operations, transportation, procurement and distribution.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 61 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Suggested Electives

101-114 Principles of Accounting	196-137 Certified Service Specialist
196-192 Managing for Quality	443-101 Forklift Operation and Maintenance

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).



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## Surgical Technology (10-512-1)

Associate of Applied Science  
Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		SU
1	*806-177	4	General Anatomy & Physiology <sup>12</sup>		SU
1	801-196	3	Oral/Interpersonal Communication		SU
1	*501-101	3	Medical Terminology <sup>1</sup>	Prereq: 838-105	SU
2	*512-125	4	🎓 Intro to Surgical Technology <sup>12</sup>	Prereq: Advisor Consent; 806-177; Coreq: 501-101	F
2	*512-126	4	🎓 Surgical Tech Fundamentals 1 <sup>12</sup>	Prereq: Advisor Consent; 806-177; Coreq: 501-101; 512-125	F
2	*512-127	2	Exploring Surgical Issues <sup>12</sup>	Prereq: Advisor Consent; Coreq: 512-125; 512-126	F
2	*806-179	4	Anatomy and Physiology, Advanced <sup>7,12</sup>	Prereq: 806-177	F
3	*512-128	4	🎓 Surgical Tech Fundamentals 2	Prereq: 512-126; 512-125; 512-127; 501-101; Coreq: 806-179; 806-197; 512-129	S
3	*512-129	2	Surgical Pharmacology <sup>12</sup>	Prereq: 512-125; 512-126	S
3	*512-130	2	🎓 Surgical Skills Applications 1 <sup>12</sup>	Prereq: Advisor Consent; 512-125; 512-126; 512-127; 512-128; Coreq: 512-129	S
3	801-136	3	English Composition 1 <sup>1,12</sup>	Prereq: 831-103 OR 831-107	S
4	*806-197	4	Microbiology <sup>7,11</sup>	Prereq: 806-177 OR 806-105	SU
4	809-198	3	Psychology, Introduction to <sup>1,10,12</sup>	Prereq: 838-105 OR 831-107	SU
4	809-196	3	Sociology, Introduction to <sup>1,10,12</sup>	Prereq: 838-105 OR 831-107	SU
5	*512-132	3	🎓 Surgical Technology Clinical 1 <sup>2,3,12</sup>	Prereq: Advisor Consent; 512-128, 512-129; 512-130; Coreq: 512-131	F
5	*512-131	4	Surgical Interventions 1 <sup>12</sup>	Prereq: 512-128; 512-130; 801-136	F
5	*512-133	3	Surgical Technology Clinical 2 <sup>2,3,12</sup>	Prereq: Advisor Consent; 512-129; 512-130; 512-132; Coreq: 512-131	F
6	*512-142	4	Surgical Interventions II <sup>12</sup>	Prereq: 512-131; 512-133 Coreq: 512-135; 512-136	S
6	*512-135	3	Surgical Technology Clinical 3 <sup>2,3,12</sup>	Prereq: Advisor Consent; 512-131; 512-133; Coreq: 512-142	S
6	*512-136	3	Surgical Technology Clinical 4 <sup>2,3,13</sup>	Prereq: Advisor Consent; 512-135 Coreq: 512-142	S

**Minimum Program Total Credits Required: 66**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Surgical Technology (10-512-1)

*Surgical Technology* graduates are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings. The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety. A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

### Program Learning Outcomes

Graduates will be able to:

1. Apply healthcare and technological science principles to the perioperative environment.
2. Maintain principles of sterile technique in the surgical environment.
3. Provide a safe, efficient, and supportive environment for the patient.
4. Prepare the patient, operating room, and surgical team for the perioperative phase.
5. Perform intraoperative case management in the scrub role.
6. Perform postoperative case management.
7. Function as an ethical, legal, and professional member of the healthcare team as determined by governing bodies.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 66 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A liability fee is assessed on all clinical courses.
3. Clinical sites may require proof of insurance.
4. There is a daily exposure to latex products in this program. Those with latex sensitivity may find exposure to latex impossible to avoid in this environment.
5. Students will be selected for their initial core 512 courses and clinical/practicum/program courses using a petitioning process. Students are selected based on completion of academic eligibility requirements and district residency status. See "What is Petitioning?" on the website for additional information.
6. Students will be required to provide annual tuberculosis test results, proof of influenza immunization, and a 10 panel drug screen before clinical placements can occur. Additionally, students will be required to remain CPR certified BLS for the HealthCare Provider with American Heart Association during the entire duration of the program.
7. The prereq for this course must have been completed with a minimum grade of "C".
8. Students must complete a total of 120 surgical procedures (80 that are first scrub and 40 second scrub) during the clinical rotation per ARC-STSA requirements.
9. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
10. Transfer credits in Social Science may substitute for this course. See an advisor for details.
11. It is preferred that students in this program complete 806-177 as the prereq for this course.
12. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
13. This course is graded on a Pass/Fail basis.
14. Students must complete the Certified Surgical Technologist exam upon completion of the program which includes an extra fee that the student is required to pay in addition to their normal tuition fees. This exam is an accreditation requirement per ARC-STSA and most employers located in this area require their surgical technology staff to have this certification within a year.

### Accreditation Statement

The Surgical Technology program is fully accredited by the Commission on Accreditation of Allied Health Education Programs:

25400 US Highway 19 North, Suite 158  
Clearwater, FL 33763  
Phone: (727) 210-2350 Fax: (727) 210-2354

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## Veterinary Technician (10-091-1)

Associate of Applied Science  
**Effective 2020/2021**

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**E-D = Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D
1	890-155	1	Gateway to Success (G2S)		SU
1	806-105	4	Principles of Animal Biology		SU
2	*091-101	3	Animal Care and Management	Prereq: Instructor Consent Coreq: 806-105	F
2	*091-102	3	Veterinary Business Practices	Coreq: 091-101	F
2	*091-123	2	Veterinary Medical Terminology		F
2	*091-120	1	Animal Behavior		F
2	801-136	3	English Composition I <sup>1,14</sup>	Prereq: 831-103 OR 831-107	F
3	*091-103	4	Clinical Pathology I for Vet Sciences <sup>12</sup>	Prereq: 091-101; 091-102; 806-105	S
3	*091-105	3	Surgical Procedures I for Vet Sciences	Coreq: 091-103	S
3	*091-107	3	Imaging for Veterinary Sciences	Coreq: 091-103	S
3	801-196 OR 801-198	3	Oral/Interpersonal Communication OR Speech		S
4	*091-108	3	Veterinary Pharmacology <sup>1</sup>	Prereq: 834-109; Coreq: 091-110	SU
4	*091-110	2	Clinical Skills I for Vet Sciences	Prereq: 801-136; 091-105 & Instructor Consent	SU
4	*091-111	2	Clinical Skills II for Vet Sciences	Prereq: 091-110 & Instructor Consent	SU
5	*091-104	4	Clinical Pathology II for Vet Sciences <sup>13</sup>	Coreq: 091-106; 806-197	F
5	*091-106	3	Surgical Procedures II for Vet Sciences	Prereq: 091-108; 091-111	F
5	*091-109	2	Lab Animals and Non-Traditional Pets	Coreq: 091-104	F
5	*091-113	3	Anesthesia for Veterinary Technicians	Prereq: 091-108; 091-111; Coreq: 091-106	F
5	806-197	4	Microbiology <sup>3</sup>	Prereq: 806-105 OR 806-177	F
6	*091-112	3	Clinical Skills III for Veterinary Science	Prereq: 091-106 & Instructor Consent	S
6	*091-114	4	Veterinary Tech. Clinical Internship	Prereq: 091-112 & Instructor Consent	S
6	809-166	3	Ethics: Theory and Apps, Intro to <sup>1</sup>	Prereq: 838-105 OR 831-107	S
6	809-198	3	Psychology, Introduction to <sup>1,2,14</sup>	Prereq: 838-105 OR 831-107	S

**Minimum Program Total Credits Required: 66**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Veterinary Technician (10-091-1)

In this program, students learn veterinary technical skills such as how to care for and handle animals, provide medical and surgical nursing including anesthesiology and dental prophylaxis, and perform radiography and clinical laboratory procedures. Applicable federal, state, and local law and ethical guidelines are presented to students throughout the program. Students complete clinical work under the direction of certified veterinary technicians and veterinarians.

Graduates will be eligible to take the Veterinary Technician National Exam (VTNE) administered by the Veterinary Examining Board of the Wisconsin Department of Agriculture, Trade, and Consumer Protection. Certified Veterinary Technicians provide professional support to veterinarians in veterinary clinics and hospitals, biological research settings, animal control and humane organizations, zoos, and educational facilities.

### Program Learning Outcomes

Graduates will be able to:

1. Manage veterinary business functions.
2. Integrate all aspects of patient management for anesthetic, surgical, and medical nursing procedures.
3. Produce diagnostic radiographic images.
4. Perform laboratory procedures.
5. Administer prescribed drugs.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

- Minimum 66 credits with an average of 2.0 or above.
- \*Minimum grade of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. It is preferred that students in this program complete 806-105 as the prereq for this course.
4. Students must maintain minimum course grades of "C" or better for all courses marked with an (\*) to remain in the program.
5. A laptop computer, stethoscope, uniform, and other supplies will be needed.
6. Nearly daily exposure to latex and/or animal fur and dander will occur in this program. Those with sensitivities may find exposure impossible to avoid.
7. Immunocompromised individuals should consult their physician before enrollment.
8. Clinical sites are located throughout and potentially outside the district. Students are responsible for their own transportation.
9. Some clinical sites require TB testing and immunizations against tetanus and hepatitis B. Rabies immunization is recommended.
10. This program is full-time. Students should expect to be in class Monday-Friday 8 am-5 pm.
11. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
12. Students must receive a "B" or better in 806-105 before they can enroll in this course.
13. The prerequisite for 806-197 (806-105 OR 806-177) must have been completed with a "C" or better.
14. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
15. Students are selected for core courses based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/admissions/additional-resources/petitioning/petitioning-eligibility>.
16. Students admitted to the program must complete a volunteer shadowing experience in an approved clinical setting prior to registering for a Veterinary Technician course. Documentation requirements will be included in the program admission packet. This is a high demand program with petitioning required. See the program adviser for details.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**  
School of Protective and Human Services


**Advanced EMT (30-531-6)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HE-D = HERO Center/days, HE-E = HERO Center/evenings, F=Fall, S=Spring, SU=Summer**

<b>Term</b>	<b>Course #</b>	<b>Cr.</b>	<b>Course Title</b>	<b>Requisites (prereq- before/ coreq-with)</b>	<b>HE-D</b>	<b>HE-E</b>
1	531-327	4	Advanced EMT <sup>1</sup>	Prereq: Program Admission; 531-313 or 531-326	F/S	F/S

**Minimum Program Total Credits Required: 4**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.  
 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.  
 (\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Advanced EMT (30-531-6)**

If you currently hold a State of Wisconsin licensure as an Emergency Medical Technician (EMT), you can pursue additional training in intravenous access, fluid and medication administration, clinical decision making skills, and patient assessment at this advanced level. Upon completion of the didactic, lab, and clinical components of this program, the participant will be eligible for testing and credentialing through the National Registry of Emergency Medical Technicians®.

### **Program Learning Outcomes**

Graduates will be able to:

1. Understand the legal liabilities and requirements of professional conduct to operate as an Advanced EMT as outlined in HSS 110 of the Wisconsin Administrative Code.
2. Perform a successful assessment, treatment plan, and packaging for both a trauma and medical patient.
3. Perform cardiac arrest management and airway management of the adult and pediatric patient.
4. Demonstrate the ability to interact with patients in a compassionate and professional manner.
5. Understand and demonstrate safe practice in the administration of approved medications via the enteral and parenteral routes
6. Integrate the appropriate use of intravenous fluids, and demonstrate safe administration of medication in the treatment of adult and pediatric patients.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must submit a current CPR certification.
4. Students must have current Wisconsin EMS licensure.

### **Graduation Requirements**

1. Minimum 4 credits with an average of 2.0 or above.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A valid Wisconsin EMT license will be accepted in place of 531-326.
2. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Accounting Assistant (31-101-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	K-D	O
1	890-155	1	Gateway to Success (G2S)		F	F	F/S/SU
1	*101-100	1	Accounting Program Orientation		F	F	F/S/SU
1	*101-114	4	Accounting Principles <sup>2</sup>		F	F	F/S/SU
1	*101-154	2	Accounting Software Applications <sup>2</sup>	Coreq: 101-114 OR 101-112	F	F	F/S/SU
1	103-143	3	Computers for Professionals <sup>2</sup>		F	F	F/S/SU
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F/S/SU
2	*101-119	3	Payroll Accounting <sup>2</sup>		S	S	F/S/SU
2	*101-106	3	Accounting Spreadsheet Apps. <sup>2</sup>	Prereq: 101-112 OR 101-114; 103-143 OR 103-102	S	S	F/S/SU
2	*101-104	4	Income Tax Accounting <sup>2</sup>		S	S	F/S/SU
2	*101-116	3	Corporate Accounting	Prereq: 101-114; Coreq: 804-135; 801-136; 101-100; 103-143 OR 103-102	S	S	F/S/SU
2	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	S	S	F/S/SU

**Minimum Program Total Credits Required: 30**

Students who are interested in continuing into the 10-101-1 Accounting Program can earn their associate degree by completing an additional 34 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Accounting Assistant (31-101-1)

Students who complete this one-year technical diploma will be able to compute, classify and record accounting information to keep financial records complete. They will proficiently be able to perform any routine calculating, posting and verifying duties primary to maintaining accurate financial records. Additionally, students will be able to perform general office duties including filing and handling routine correspondence to employees, customers and vendors. Students who complete this technical diploma will be able to obtain employment as an office manager, accounting clerk, bookkeeper, accounting assistant, or accounting associate.

### Program Learning Outcomes

Graduates will be able to:

1. Process financial transactions throughout the accounting cycle.
2. Analyze basic financial and business information to support planning and decision-making.
3. Perform payroll preparation, reporting, and analysis tasks.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 30 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Accounting is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the classroom. Please note MAC computers are not compatible with some of the required software.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**  
School of Business and Transportation

**Accounting Assistant (31-101-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, K-E = Kenosha/evenings, E-E = Elkhorn/evenings, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	K-E	E-E	O
1	890-155	1	Gateway to Success (G2S)		F	F	F	F/S/SU
1	*101-100	1	Accounting Program Orientation		F	F	F	F/S/SU
1	*101-114	4	Accounting Principles <sup>2</sup>		F	F	F	F/S/SU
1	103-143	3	Computers for Professionals <sup>2</sup>		F	F	F	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S	S	F/S/SU
2	*101-119	3	Payroll Accounting <sup>2</sup>		S	S	S	F/S/SU
2	*101-154	2	Accounting Software Applications <sup>2</sup>	Coreq: 101-112 OR 101-114	S	S	S	F/S/SU
3	801-136	3	English Composition 11, <sup>2</sup>	Prereq: 831-103 OR 831-107	SU	SU	SU	F/S/SU
3	*101-116	3	Corporate Accounting	Prereq: 101-114; Coreq: 804-135; 801-136; 101-100; 103-143 OR 103-102	SU	SU	SU	F/S/SU
4	*101-106	3	Accounting Spreadsheet Apps. <sup>2</sup>	Prereq: 101-112 OR 101-114; 103-143 OR 103-102	F	F	F	F/S/SU
4	*101-104	4	Income Tax Accounting <sup>2</sup>		F	F	F	F/S/SU

**Minimum Program Total Credits Required: 30**

Students who are interested in continuing into the 10-101-1 Accounting Program can earn their associate degree by completing an additional 34 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### Accounting Assistant (31-101-1)

Students who complete this one-year technical diploma will be able to compute, classify and record accounting information to keep financial records complete. They will proficiently be able to perform any routine calculating, posting and verifying duties primary to maintaining accurate financial records. Additionally, students will be able to perform general office duties including filing and handling routine correspondence to employees, customers and vendors. Students who complete this technical diploma will be able to obtain employment as an office manager, accounting clerk, bookkeeper, accounting assistant, or accounting associate.

### Program Learning Outcomes

Graduates will be able to:

1. Process financial transactions throughout the accounting cycle.
2. Analyze basic financial and business information to support planning and decision-making.
3. Perform payroll preparation, reporting, and analysis tasks.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 30 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
3. Accounting is a laptop program. Students will need a Windows-Based computer (with a hard drive) for use in the classroom. Please note MAC computers are not compatible with some of the required software.

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## Automotive Maintenance Technician (31-404-3)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	Gateway to Success (G2S)		F+
1	*602-130	3	Auto Shop Essentials		F
1	*602-107	2	Auto Service Fundamentals <sup>4</sup>	Prereq: 602-130	F
1	*602-104	3	Brake Systems <sup>4</sup>	Prereq: 602-107; 602-130	F
1	*602-124	3	Steering & Suspension Systems <sup>4</sup>	Prereq: 602-107; 602-130	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*602-125	2	Electrical & Electronic Systems 1 <sup>4</sup>	Prereq: 602-107; 602-130 Coreq: 804-135	S
2	*602-127	3	Electrical & Electronic Systems 2	Prereq: 602-125	S
2	*602-196	3	Climate Control Systems <sup>4</sup>	Prereq: 602-127	S
2	*602-204	3	Engine Repair 1 <sup>4</sup>	Prereq: 602-107; 602-130	S
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S+
2	801-196	3	Oral/Interpersonal Communication		S+

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-602-3 Automotive Technology program can earn their associate degree by completing an additional 33 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Automotive Maintenance Technician (31-404-3)**

*Automotive Maintenance Technician* gives an overview of essential servicing techniques, including the testing, repairing, and rebuilding of basic automotive systems. Graduates of this program have the skills necessary for entry-level employment at automotive repair facilities and retail service centers or to pursue an Associate of Applied Science degree in a two-year automotive program. The student will be prepared to take up to four ASE tests in the following areas: brakes, suspension and steering, heating and air conditioning, and electrical systems. Special emphasis will be placed on mechanical relationships and basic engine performance. Students will be able to apply the techniques learned in lectures in an automotive shop laboratory setting. This will be accomplished in a simulated work environment.

### **Program Learning Outcomes**

Graduates will be able to:

1. Diagnose, service, and repair Suspension and Steering systems of light duty vehicles.
2. Diagnose, service, and repair Brake systems of light duty vehicles.
3. Diagnose, service, and repair Heating, Ventilating and Air Conditioning systems of light duty vehicles.
4. Diagnose and service Gasoline Engines of light duty vehicles.
5. Service Engine Performance related systems of light duty vehicles.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are needed, allow at least 90 days before the program start to obtain prescription and glasses.
3. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Automotive Maintenance Technician (31-404-3)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

HZ-E = Horizon Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-E
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*602-130	3	🎓 Auto Shop Essentials		F
1	*602-107	2	Auto Service Fundamentals <sup>4</sup>	Prereq: 602-130	F
1	*602-124	3	Steering & Suspension Systems <sup>4</sup>	Prereq: 602-107; 602-130	F
1	*602-104	3	Brake Systems <sup>4</sup>	Prereq: 602-107; 602-130	F
2	*602-125	2	🎓 Electrical & Electronic Systems 1 <sup>4</sup>	Prereq: 602-107; 602-130; Coreq: 804-135	S
2	*602-127	3	Electrical & Electronic Systems 2	Prereq: 602-125	S
2	*602-196	3	Climate Control Systems <sup>4</sup>	Prereq: 602-127	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S+
3	*602-204	3	Engine Repair 1 <sup>4</sup>	Prereq: 602-107; 602-130	SU
3	801-136	3	English Composition 11 <sup>4</sup>	Prereq: 831-103 OR 831-107	SU+
3	801-196	3	Oral/Interpersonal Communication		SU+

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-602-3 Automotive Technology program can earn their associate degree by completing an additional 33 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Automotive Maintenance Technician (31-404-3)**

*Automotive Maintenance Technician* gives an overview of essential servicing techniques, including the testing, repairing, and rebuilding of basic automotive systems. Graduates of this program have the skills necessary for entry-level employment at automotive repair facilities and retail service centers or to pursue an Associate of Applied Science degree in a two-year automotive program. The student will be prepared to take up to four ASE tests in the following areas: brakes, suspension and steering, heating and air conditioning, and electrical systems. Special emphasis will be placed on mechanical relationships and basic engine performance. Students will be able to apply the techniques learned in lectures in an automotive shop laboratory setting. This will be accomplished in a simulated work environment.

### **Program Learning Outcomes**

Graduates will be able to:

1. Diagnose, service, and repair Suspension and Steering systems of light duty vehicles.
2. Diagnose, service, and repair Brake systems of light duty vehicles.
3. Diagnose, service, and repair Heating, Ventilating and Air Conditioning systems of light duty vehicles.
4. Diagnose and service Gasoline Engines of light duty vehicles.
5. Service Engine Performance related systems of light duty vehicles.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are needed, allow at least 90 days before the program start to obtain prescription and glasses.
3. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Barber Technologist (30-502-5)

### Technical Diploma

### Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, B-D = Burlington Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	B-D
1	*502-736	2	Barber Industry	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-742	1	Intro to Barbering	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-738	2	Basic Haircutting	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-735	2	Advanced Haircutting	Prereq: 502-738	F/S/SU	F/S/SU
1	*502-741	2	Hairstyling	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-740	2	Hair Color	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-743	2	Shaving	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
1	*502-739	2	Chemical Texturing	Prereq: Advisor/Instructor Consent	F/S/SU	F/S/SU
2	*502-730	2	Client Services 1 Haircutting	Prereq: Advisor/Instructor Consent; 502-736; 502-742; 502-738; 502-735; 502-741; 502-740; 502-743; 502-739	F/S/SU	F/S/SU
2	*502-731	2	Client Services 2 Chemical Services	Prereq: Advisor/Instructor Consent; 502-736; 502-742; 502-738; 502-735; 502-741; 502-740; 502-743; 502-739	F/S/SU	F/S/SU
2	*502-732	2	Client Services 3 Male Facial/Shaving	Prereq: Advisor/Instructor Consent; 502-736; 502-742; 502-738; 502-735; 502-741; 502-740; 502-743; 502-739	F/S/SU	F/S/SU
2	*502-733	2	Client Services 4 Mock Board Skills	Prereq: Advisor/Instructor Consent; 502-736; 502-742; 502-738; 502-735; 502-741; 502-740; 502-743; 502-739	F/S/SU	F/S/SU
2	*502-734	2	Client Services 5 State Board Prep	Prereq: Advisor/Instructor Consent; 502-736; 502-742; 502-738; 502-735; 502-741; 502-740; 502-743; 502-739	F/S/SU	F/S/SU

**Minimum Program Total Credits Required: 25**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.  
 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.  
 (\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Barber Technologist (30-502-5)

The *Barber Technologist* program offers a variety of courses such as Haircutting, Shaving, Styling, Color, Chemical Texture Services, and Male Facials. In addition to barber ownership or barber management, one can choose from positions in sales, advertising, research, and education. The possibilities are unlimited and so is the income potential. The Barber Technologist program is a two-semester program consisting of 1,080 hours of instruction.

### Program Learning Outcomes

Graduates will be able to:

1. Adhere to current state and federal administrative codes and statutes for barbers.
2. Perform shampoo, haircut, and style service.
3. Demonstrate facial hair removal techniques.
4. Perform male facial procedures.
5. Perform chemical services.
6. Develop business practices for industry success.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 25 credits with an average of 2.0 or above.
  2. \*A Minimum of 2.0 ("C") or above for these major courses.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. This is a high-demand program with limited openings.
2. This program requires two semesters to complete 1,080 hours on a full-time basis.
3. Students are required to purchase regulation uniforms books, workbooks, and MindTap Student Online Learning from the campus bookstore.
4. Supplies and materials are required for this program. All books, workbooks, MindTap Online Student Learning, and the required uniform smock must be purchased prior to beginning the first day of the program from the campus bookstore. Kits and supplies are included in the tuition cost of 502-738 Basic Haircutting.
5. Students must be 18 years of age or a high school graduate to take the state licensure exam.
6. Students must complete all classroom portions of instruction except 502-742 and 502-736 before beginning any of the client services courses.
7. Students are selected based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/student-services/admissions/what-petitioning> for additional information. Students must meet current petition requirements at the time they are eligible to enroll in 502 courses.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Building Trades - Carpentry (31-475-1)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	Gateway to Success (G2S)		F
1	*475-300	3	Building Construction, Intro		F
1	*475-302	2	Residential Print Reading	Coreq: 804-370	F
1	*475-303	3	Framing Techniques 1		F
1	804-370	2	Mathematics I / Applied <sup>2</sup>	Prereq: 854-760	F
2	*475-301	5	Building Construction, Fundamentals		S
2	442-314	2	Welding, Fundamentals of		S
2	*475-304	1	Commercial Print Reading	Prereq: 475-302; Coreq: 801-301	S
2	801-301	1	Writing Principles <sup>2</sup>	Prereq: 851-760	S
2	801-302	1	Speaking Principles		S
3	*475-305	3	Framing Techniques 2	Prereq: 475-303; 804-370	SU
3	*475-306	3	Exterior Trim	Prereq: 475-301; 475-302	SU
3	*475-307	5	Interior Trim	Prereq: 475-301; 475-302	SU

**Minimum Program Total Credits Required: 32**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Building Trades - Carpentry (31-475-1)**

The *Building Trades - Carpentry* program provides the student with the knowledge and skills necessary for job success in the industry. Fundamentals of industry materials, building design, and layout operation are taught in the classroom. The use of hand and power tools is developed in the shop. Construction techniques are developed in the shop. Related mathematics, blueprint reading and welding are included in the training.

### **Program Learning Outcomes**

Graduates will be able to:

1. Practice construction safety principles.
2. Operate construction related tools.
3. Evaluate construction prints and drawings.
4. Construct building systems.
5. Apply construction measurement principles to building applications.
6. Calculate materials needed to complete a specified job.
7. Evaluate a finished job for quality of product.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. Students will be required to purchase a variety of personal safety items that will be utilized throughout the program.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Building Trades - Carpentry (31-475-1)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		S
1	*475-300	3	Building Construction, Intro		S
1	*475-302	2	🎓 Residential Print Reading	Coreq: 804-370	S
1	804-370	2	Mathematics I / Applied <sup>2</sup>	Prereq: 854-760	S
1	801-301	1	Writing Principles <sup>2</sup>	Prereq: 851-760	S
2	*475-303	3	🎓 Framing Techniques 1		SU
2	*475-301	5	Building Construction, Fundamentals		SU
3	442-314	2	Welding, Fundamentals of		F
3	*475-304	1	Commercial Print Reading	Prereq: 475-302; Coreq: 801-301	F
3	*475-305	3	Framing Techniques 2	Prereq: 475-303; 804-370	F
4	801-302	1	Speaking Principles		S
4	*475-306	3	Exterior Trim	Prereq: 475-301; 475-302	S
4	*475-307	5	Interior Trim	Prereq: 475-301; 475-302	S

**Minimum Program Total Credits Required: 32**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Building Trades - Carpentry (31-475-1)**

The *Building Trades - Carpentry* program provides the student with the knowledge and skills necessary for job success in the industry. Fundamentals of industry materials, building design, and layout operation are taught in the classroom. The use of hand and power tools is developed in the shop. Construction techniques are developed in the shop. Related mathematics, blueprint reading and welding are included in the training.

### **Program Learning Outcomes**

Graduates will be able to:

1. Practice construction safety principles.
2. Operate construction related tools.
3. Evaluate construction prints and drawings.
4. Construct building systems.
5. Apply construction measurement principles to building applications.
6. Calculate materials needed to complete a specified job.
7. Evaluate a finished job for quality of product.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. Students will be required to purchase a variety of personal safety items that will be utilized throughout the program.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.

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## Business Services Manager (31-102-5)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	O
1	890-155	1	Gateway to Success (G2S)		F/S/SU
1	*101-114	4	Accounting Principles <sup>1</sup>		F/S/SU
1	*102-137	3	Business / Intro to <sup>1</sup>		F/S/SU
1	*102-160	3	Business Law <sup>1</sup>		F/S/SU
1	*103-143	3	Computers for Professionals <sup>1</sup>		F/S/SU
2	801-198	3	Speech		F/S/SU
2	*104-101	3	Marketing Principles <sup>1</sup>		F/S/SU
2	*104-104	3	Selling Principles		F/S/SU
2	*104-105	3	Promotion Principles		F/S/SU
2	*196-191	3	Supervision <sup>1</sup>		F/S/SU

<b>Minimum Program Total Credits Required: 29</b>
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Students interested in continuing into the 10-102-3 Business Management program can earn their associate degree by completing an additional 34 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Business Services Manager (31-102-5)**

The focus of the *Business Services Manager* diploma is to provide the learner with knowledge in the major functional areas of a business including law, accounting, information technology, and marketing. Students will develop competence in the business functions of planning organizing, directing and controlling. Graduates will be prepared to supervise the work of office administrative, or customer service employees to ensure adherence to quality standards, deadlines, and proper procedures, and will be equipped to implement corporate or departmental policies, procedures, and service standards in conjunction with management.

### **Program Learning Outcomes**

Graduates will be able to:

1. Plan the operations of a business across functional areas.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 29 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Business Services Manager (31-102-5)

Technical Diploma  
Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, R-D=Racine/days, K-D=Kenosha/days, K-E=Kenosha/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D	K-D	K-E
1	890-155	1	Gateway to Success (G2S)		F	F	F	F
1	*102-137	3	Business / Intro to <sup>2</sup>		F	F	F	F
1	*196-191	3	Supervision <sup>2</sup>		F	F	F	F
2	*102-160	3	Business Law <sup>2</sup>		S	S	S	S
2	*104-101	3	Marketing Principles <sup>2</sup>		S	S	S	S
2	*104-104	3	Selling Principles		S	S	S	S
2	*104-105	3	Promotion Principles		S	S	S	S
3	*101-114	4	Accounting Principles <sup>2</sup>		F	F	F	F
3	*103-143	3	Computers for Professionals <sup>2</sup>		F	F	F	F
3	801-198	3	Speech		F	F	F	F

**Minimum Program Total Credits Required: 29**

Students interested in continuing into the 10-102-3 Business Management program can earn their associate degree by completing an additional 34 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Business Services Manager (31-102-5)**

The focus of the *Business Services Manager* diploma is to provide the learner with knowledge in the major functional areas of a business including law, accounting, information technology, and marketing. Students will develop competence in the business functions of planning organizing, directing and controlling. Graduates will be prepared to supervise the work of office administrative, or customer service employees to ensure adherence to quality standards, deadlines, and proper procedures, and will be equipped to implement corporate or departmental policies, procedures, and service standards in conjunction with management.

### **Program Learning Outcomes**

Graduates will be able to:

1. Plan the operations of a business across functional areas.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 29 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**CNC Production Technician (31-444-2)**

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*444-331	3	🎓 CNC Machining Technology	Coreq: 444-337	F
1	*444-337	3	🎓 Fund. of Blueprint and Shop Safety		F
1	*444-338	4	Fund. of CNC Machine Application	Coreq: 444-337	F
1	804-370	2	Mathematics I, Applied <sup>1</sup>	Prereq: 854-760	F
2	*444-339	3	Gauging and Quality Control <sup>4</sup>		S
2	*421-316	2	Blueprint Reading, Advanced	Prereq: 444-337 Coreq: 801-301; 804-371	S
2	*444-335	3	CNC Lathe Set-Up		S
2	*444-336	3	CNC Mill Set-Up		S
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-756	S
2	804-371	1	Mathematics II, Applied	Prereq: 804-370	S
3	*444-333	3	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	SU
3	*444-334	3	Fund. Of CNC Milling Applications		SU
3	801-302	1	Speaking Principles		SU

**Minimum Program Total Credits Required: 33**

Students interested in continuing into the 31-444-3 CNC Programmer program can earn their technical diploma by completing an additional 12 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **CNC Production Technician (31-444-2)**

*CNC Production Technician* is a well-rounded approach to becoming a CNC Technician. We teach the skills necessary for students to become qualified set-up technicians. Students are taught the basics of G-Code programming, proper M-Code usage, and the required steps to efficiently set fixture and tool offsets. Students create their own CNC programs and DNC to the proper machine tool. An excellent overall knowledge of CNC Controls is achieved by working on several different brand name controls. Overall, students will be proficient at programming, set-up, operation, editing, and part inspection.

### **Program Learning Outcomes**

Graduates will be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operations of CNC machine tools.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 33 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately \$25.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**CNC Production Technician (31-444-2)**

Technical Diploma  
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

E-D = Elkhorn/days, E-E = Elkhorn/evenings, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	E-E	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F	S	F+
1	*444-331	3	🎓 CNC Machining Technology	Coreq: 444-337	F	S	F
1	*444-337	3	🎓 Fund. of Blueprint and Shop Safety		F	S	F
1	804-370	2	Mathematics I, Applied <sup>1</sup>	Prereq: 854-760	F	S	F+
2	*444-338	4	Fund. of CNC Machine Application	Coreq: 444-337	S	SU	S
2	*421-316	2	Blueprint Reading, Advanced	Prereq: 444-337; Coreq: 801-301; 804-371	S	SU	S
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-756	S	SU	S+
2	804-371	1	Mathematics II, Applied	Prereq: 804-370	S	SU	S+
3	*444-339	3	Gauging and Quality Control <sup>4</sup>		SU	F	SU
3	*444-333	3	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	SU	F	SU
3	*444-334	3	Fund. Of CNC Milling Applications		SU	F	SU
4	*444-335	3	CNC Lathe Set-Up		F	S	F
4	*444-336	3	CNC Mill Set-Up		F	S	F
4	801-302	1	Speaking Principles		F	S	F+

**Minimum Program Total Credits Required: 33**

Students interested in continuing into the 31-444-3 CNC Programmer program can earn their technical diploma by completing an additional 12 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## **CNC Production Technician (31-444-2)**

*CNC Production Technician* is a well-rounded approach to becoming a CNC Technician. We teach the skills necessary for students to become qualified set-up technicians. Students are taught the basics of G-Code programming, proper M-Code usage, and the required steps to efficiently set fixture and tool offsets. Students create their own CNC programs and DNC to the proper machine tool. An excellent overall knowledge of CNC Controls is achieved by working on several different brand name controls. Overall, students will be proficient at programming, set-up, operation, editing, and part inspection.

### **Program Learning Outcomes**

Graduates will be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operations of CNC machine tools.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 33 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately \$25.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**CNC Programmer (31-444-3)**

Technical Diploma

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

E-D = Elkhorn/days, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*444-331	3	🎓 CNC Machining Technology	Coreq: 444-337	F
1	*444-337	3	🎓 Fund. of Blueprint and Shop Safety		F
1	*444-338	4	🎓 Fund. of CNC Machine Application	Coreq: 444-337	F
1	804-370	2	Mathematics I, Applied <sup>1</sup>	Prereq: 854-760	F
2	*444-339	3	Gauging and Quality Control <sup>4</sup>		S
2	*421-316	2	Blueprint Reading, Advanced	Prereq: 444-337; Coreq: 801-301; 804-371	S
2	*444-335	3	CNC Lathe Set-Up		S
2	*444-336	3	CNC Mill Set-Up		S
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-756	S
2	804-371	1	Mathematics II, Applied	Prereq: 804-370	S
3	*444-333	3	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	SU
3	*444-334	3	Fund. of CNC Milling Applications		SU
3	*444-307	3	Fund. of Swiss CNC Turning		SU
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 444-335; 444-336	SU
	*444-308		Fund. of Live Tooling		
3	*444-306	3	Swiss CNC Setup and Operation		SU
	<b>OR</b>	<b>3</b>	<b>OR</b>	Prereq: 444-335; 444-336	SU
	*444-309		Live Tooling Setup and Operation		
4	*444-311	3	CNC Lathe Process	Prereq: 444-335; 444-336	F
4	801-302	1	Speaking Principles		F
4	*444-314	3	CNC Mill Process	Prereq: 444-335; 444-336	F

**Minimum Program Total Credits Required: 45**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **CNC Programmer (31-444-3)**

The *CNC Programmer* technical diploma program gives an overview of essential machine shop practices including machine safety, blueprint reading and part inspection methods. CNC Machine programming, set-up and operation will also be covered in-depth. Graduates of this program will have the skills necessary for entry-level employment in a machine shop setting. Machinists already employed will find the program a great way to improve their skill set. Special emphasis will be placed on learning the skills necessary to transform raw material into a finished part. Students will be able to apply the techniques learned in lectures within a machine shop setting. Overall this program is intended to introduce students to many different aspects within a machine shop setting.

### **Program Learning Outcomes**

Graduates will be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operation on CNC milling centers.
6. Perform programming, set-up, and operation on CNC turning centers.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 45 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately \$25.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**CNC Programmer (31-444-3)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, E-E = Elkhorn/evenings, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	E-E	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F	S	F+
1	*444-331	3	🎓 CNC Machining Technology	Coreq: 444-337	F	S	F
1	*444-337	3	🎓 Fund. of Blueprint and Shop Safety		F	S	F
1	804-370	2	Mathematics I, Applied <sup>1</sup>	Prereq: 854-760	F	S	F+
2	*444-338	4	🎓 Fund. of CNC Machine Application	Coreq: 444-337	S	SU	S
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-756	S	SU	S+
2	804-371	1	Mathematics II, Applied	Prereq: 804-370	S	SU	S+
2	*444-339	3	Gauging and Quality Control <sup>4</sup>		S	SU	S
2	*421-316	2	Blueprint Reading, Advanced	Prereq: 444-337; Coreq: 801-301; 804-371	S	SU	S
3	*444-307 OR *444-308	3 OR 3	Fund. of Swiss CNC Turning OR Fund. of Live Tooling	Prereq: 444-335; 444-336	SU	F	SU
3	*444-306 OR *444-309	3 OR 3	Swiss CNC Setup and Operation OR Live Tooling Setup and Operation	Prereq: 444-335; 444-336	SU	F	SU
3	*444-333	3	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	SU	F	SU
4	*444-335	3	CNC Lathe Set-Up		F	S	F
4	*444-336	3	CNC Mill Set-Up		F	S	F
4	*444-334	3	Fund. of CNC Milling Applications		F	S	F
4	801-302	1	Speaking Principles		F	S	F+
5	*444-311	3	CNC Lathe Process	Prereq: 444-335; 444-336	S	SU	S
5	*444-314	3	CNC Mill Process	Prereq: 444-335; 444-336	S	SU	S

**Minimum Program Total Credits Required: 45**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

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(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **CNC Programmer (31-444-3)**

The *CNC Programmer* technical diploma program gives an overview of essential machine shop practices including machine safety, blueprint reading and part inspection methods. CNC Machine programming, set-up and operation will also be covered in-depth. Graduates of this program will have the skills necessary for entry-level employment in a machine shop setting. Machinists already employed will find the program a great way to improve their skill set. Special emphasis will be placed on learning the skills necessary to transform raw material into a finished part. Students will be able to apply the techniques learned in lectures within a machine shop setting. Overall this program is intended to introduce students to many different aspects within a machine shop setting.

### **Program Learning Outcomes**

Graduates will be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operation on CNC milling centers.
6. Perform programming, set-up, and operation on CNC turning centers.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 45 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately \$25.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Construction Management Technician (31-455-1)**

Technical Diploma  
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-D = iMET Center/days, I-E = iMET Center/evenings, E-D = Elkhorn/days, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E	E-D	E-E
1	890-155	1	Gateway to Success (G2S)		F+	F+	F	F
1	*607-141	2	Construction Basics <sup>2,4</sup>		F	F	F	F
1	*607-104	3	Building Material & Construction Method <sup>2</sup>		F	F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+	F+	F	F
1	*607-169	2	Surveying Basics <sup>2</sup>		F	F	F	F
1	*607-102	2	Conflict Resolution in CET <sup>2</sup>		F	F	F	F
1	*607-136	2	Construction Project Management <sup>2,4</sup>		F	F	F	F
2	801-136	3	English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	S+	S+	S	S
2	*607-170	2	AutoCAD for Construction Sciences <sup>2,4</sup>		S	S	S	S
2	*614-102	2	Capstone: Construction Project Management <sup>2</sup>	Prereq: 607-136	S	S	S	S
2	*607-128	3	Construction Estimating <sup>2</sup>	Prereq: 804-135; Coreq: 801-136	S	S	S	S
2	*607-129	2	Future Trends Civil/Archi Tech <sup>2</sup>	Prereq: 607-104; 607-141; 607-169	S	S	S	S
3	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	SU+	SU+	SU	SU
3	*614-150	2	3D CAD: Building Information Modeling <sup>2</sup>		SU	SU	SU	SU
3	*607-187	2	3D CAD: Dig Terrain Model <sup>2</sup>		SU	SU	SU	SU

**Minimum Program Total Credits Required: 34**

Students interested in continuing into the 10-614-6 Architectural-Structural Engineering Technician program can earn their associate degree by completing an additional 31 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Construction Management Technician (31-455-1)**

The Construction Management Technician diploma prepares learners to assist construction project managers and senior staff with the scheduling, supervision and coordination of construction tasks or trade workers. Learners will gain skills in reading specifications and blueprints to determine construction requirements or to plan procedures, inspect work progress, equipment, or construction sites to ensure that specifications are met.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Develop construction schedules.
2. Evaluate building materials.
3. Analyze risk in a construction project.
4. Explore building modeling and construction related software.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 34 credits with an average of 2.0 or above in all courses.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Classes offered at Elkhorn Campus via NODAL delivery. See [www.gtc.edu](http://www.gtc.edu) for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2<sup>nd</sup> semester.

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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Construction Management Technician (31-455-1)**

Technical Diploma  
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

I-D = iMET Center/days, I-E = iMET Center/evenings, E-D = Elkhorn/days, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E	E-D	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+	F	F
1	*607-141	2	Construction Basics <sup>2,4</sup>		F	F	F	F
1	*607-104	3	🎓 Building Material & Construction Method <sup>2</sup>		F	F	F	F
2	*607-170	2	AutoCAD for Construction Sciences <sup>2,4</sup>		S	S	S	S
2	804-135	3	🎓 Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S+	S+	S	S
2	809-195	3	Economics <sup>1</sup>	Prereq: 838-105 OR 831-107	S+	S+	S	S
3	*614-150	2	🎓 3D CAD: Building Information Modeling <sup>2</sup>		SU	SU	SU	SU
3	*607-187	2	3D CAD: Dig Terrain Model <sup>2</sup>		SU	SU	SU	SU
3	801-136	3	🎓 English Composition 1 <sup>1,4</sup>	Prereq: 831-103 OR 831-107	SU+	SU+	SU	SU
4	*607-102	2	Conflict Resolution in CET <sup>2</sup>		F	F	F	F
4	*607-136	2	🎓 Construction Project Management <sup>2,4</sup>		F	F	F	F
4	*607-169	2	Surveying Basics <sup>2</sup>		F	F	F	F
5	*614-102	2	Capstone: Construction Project Management <sup>2</sup>	Prereq: 607-136	S	S	S	S
5	*607-128	3	Construction Estimating <sup>2</sup>	Prereq: 804-135; Coreq: 801-136	S	S	S	S
5	*607-129	2	Future Trends Civil/Archi Tech <sup>2</sup>	Prereq: 607-104; 607-141; 607-169	S	S	S	S

**Minimum Program Total Credits Required: 34**

Students interested in continuing into the 10-614-6 Architectural-Structural Engineering Technician program can earn their associate degree by completing an additional 31 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Construction Management Technician (31-455-1)**

The Construction Management Technician diploma prepares learners to assist construction project managers and senior staff with the scheduling, supervision and coordination of construction tasks or trade workers. Learners will gain skills in reading specifications and blueprints to determine construction requirements or to plan procedures, inspect work progress, equipment, or construction sites to ensure that specifications are met.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Develop construction schedules.
2. Evaluate building materials.
3. Analyze risk in a construction project.
4. Explore building modeling and construction related software.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 34 credits with an average of 2.0 or above in all courses.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Classes offered at Elkhorn Campus via NODAL delivery. See [www.gtc.edu](http://www.gtc.edu) for details.
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
5. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2<sup>nd</sup> semester.

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## Cosmetology (31-502-1)

### Technical Diploma

### Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**B-D = Burlington/days, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	B-D	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F/S	F/S
1	*502-312	1	🎓 Intro to Barber/Cosmetology <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-301	1	Shampoo Treatment <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-324	2	Barber/Cosmetology Industry <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-366	2	🎓 Women's Haircutting	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-352	2	Men's Haircutting <sup>9</sup>	Prereq: 502-366	F/S	F/S
1	*502-353	2	Perm Techniques <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-345	2	Basic Hair Color <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-349	2	Facials <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
1	*502-350	2	Hair Design 1 <sup>9</sup>	Prereq: Advisor/Instructor Consent	F/S	F/S
2	*502-320	1	Basic Manicuring <sup>9</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-348	2	Chemical Straightening <sup>9</sup>	Prereq: 502-353	S/SU	S/SU
2	*502-347	2	Bleaching <sup>9</sup>	Prereq: 502-345	S/SU	S/SU
2	*502-351	2	Hair Design 2 <sup>9</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-354	1	Salon Service 1 Facial Skin Care <sup>8,9</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-355	1	Salon Service 2 Nail Skills <sup>8,9</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-356	1	Salon Service 3 Long Hair Design <sup>8</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-367	1	Salon Service 4 Women's Haircutting <sup>8</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-308	1	Salon Service 5 Perming <sup>8</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
2	*502-309	1	Salon Service 6 Men's Haircutting <sup>8</sup>	Prereq: Advisor/Instructor Consent	S/SU	S/SU
3	*502-310	1	Salon Service 7 Hair Color <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-361	1	Salon Service 8 Hairstyling <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-362	1	Salon Service 9 Chemical Relaxing <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-311	1	Salon Service 10 Interpersonal Skills <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-364	1	Salon Service 11 Bleaching <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-365	1	Salon Service 12 Shampoo <sup>8</sup>	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-371	1	Mock Board Theory	Prereq: Advisor/Instructor Consent	SU/F	SU/F
3	*502-370	2	Mock Board Skills	Prereq: Advisor/Instructor Consent	SU/F	SU/F

**Minimum Program Total Credits Required: 39**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Cosmetology (31-502-1)

Exciting careers are open to the licensed, experienced Cosmetologists. In addition to salon ownership, salon management, and specialization of a service, one can choose from positions in sales, advertising, research, education, and makeup artistry. The possibilities are unlimited and so is the income potential. The Cosmetology program is a three-semester Diploma program consisting of 1,550 hours of instruction. Students attend classes Monday through Friday as scheduled. Students receive instruction in Cosmetology skills such as hair designing, haircutting, hair coloring, permanent waving, and manicuring. Classes in makeup artistry, sculptured nails, color analysis, and salon management are also included.

### Program Learning Outcomes

Graduates will be able to:

1. Perform shampoo, haircut, and style services.
2. Perform skin care services.
3. Perform chemical services.
4. Perform nail services.
5. Develop business practices for industry success.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 39 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. This is a high demand program with limited openings.
2. Program requires three semesters to complete 1,550 hours on a full-time basis. Part-time attendance will extend student's training time to a minimum 6 semesters. Please contact an advisor for details.
3. Students are required to purchase regulation uniforms, books, workbooks, and MindTap Student Online Learning from the campus bookstore.
4. Supplies and materials are required for this program. All books, workbooks, MindTap Online Student Learning, and the required uniform smock must be purchased prior to beginning the first day of the program from the campus bookstore. Kits and supplies are included in the tuition cost of 502-301 Shampoo Treatment.
5. Students must be 18 years of age or a high school graduate to take the state licensure exam.
6. Students must complete both 502-337 Manicure/Nail Technician I and 502-338 Manicure/Nail Technician II to be eligible to take the Wisconsin Manicurist/Nail Technician license exam. All required books, kits, and uniform smocks are available at the campus bookstore.
7. Students must complete all classroom portions of a course except 502-312 or 502-324 before beginning any of the Salon Services or Mock Board courses.
8. These courses require the following prerequisites: 502-301; 502-345; 502-320; 502-347; 502-348; 502-349; 502-350; 502-351; 502-352; 502-353; and 502-366.
9. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
10. Students are selected based on completion of academic eligibility requirements and district residency. See <https://www.gtc.edu/student-services/admissions/what-petitioning> for additional information. Students must meet current petition requirements at the time they are eligible to enroll in 502 courses.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**  
School of Protective and Human Services

## Criminal Justice – Law Enforcement 720 Academy (30-504-2)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	504-306	1	Overview of Criminal Justice		F/S/SU
1	504-307	2	Overview of Investigation		F/S/SU
1	504-308	2	Overview of Patrol Response		F/S/SU
1	504-309	1	Overview of Tactics		F/S/SU
1	504-310	2	Principles of Emergency Vehicle Response		F/S/SU
1	514-318	5	Principles of Tactics		F/S/SU
1	504-319	1	Principles of Investigations		F/S/SU
1	504-320	1	Application of Investigations		F/S/SU
1	504-321	3	Application of Traffic Response		F/S/SU
1	504-322	2	Sensitive Crimes		F/S/SU
1	504-323	1	Physical Fitness		F/S/SU
2	504-317	1	Law Enforcement Academy Scenario Week		F/S/SU

<b>Minimum Program Total Credits Required: 22</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Criminal Justice – Law Enforcement 720 Academy (30-504-2)**

The *720 Hour Law Enforcement Academy* is designed to prepare the candidate to perform the essential functions of a law enforcement officer in the State of Wisconsin. The competency-based instruction meets the criteria set forth by the Wisconsin Department of Justice, Training and Standards Bureau. Training is delivered in three phases through a combination of lecture, labs, interactive group discussion, hands-on instruction, and integration exercises. The Academy meets daily Monday through Friday for 18 weeks.

### **Program Learning Outcomes**

Graduates will be able to:

1. Think critically.
2. Manage emergencies.
3. Communicate effectively.
4. Demonstrate professionalism.
5. Conduct investigations.
6. Interact with others.
7. Demonstrate tactical skills.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

#### **Step 1:**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must submit an official college transcript verifying an associate degree or higher in Criminal Justice or at least 60 postsecondary credits earned. Students earning credits at Gateway Technical College do not need a Gateway transcript but should note the completion of credits on their application.
4. Students must request and pay for a background check. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete DJLE-327 Application for Enrollment form.
6. Students must submit a copy of a valid driver's license.
7. Students must submit Annotation of Birth Facts form.
8. Students must submit an abstract copy of their driving record from their state's Department of Motor Vehicles.

#### **Step 2:**

1. Students must pass the Physical Readiness Test to be considered for an interview.
2. Students will participate in an interview. Selected candidates will need to submit a DJLE-332 Medical Assessment form.

### **Graduation Requirements**

1. Minimum grade of 2.0 ("C") or above in all courses.
  2. Satisfactorily demonstrate proficiency in all hands-on unified tactical areas of training (DAAT, EVOC, Firearms, Vehicle Contacts).
  3. Pass the scenario-based final assessment exercise.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. For detailed information about this program please visit the Law Enforcement website: [www.gtc.edu/LEAcademy](http://www.gtc.edu/LEAcademy)
2. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
3. Background checks for the Law Enforcement Academy program are valid for 6 months. Students must request a current background check every 6 months they are enrolled or re-apply.
4. In order to be admitted to the academy candidates must pass a Physical Readiness Test administered by academy staff. This test must be completed before an interview can be scheduled.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**  
School of Protective and Human Services

## Criminal Justice – Law Enforcement 720 Academy (30-504-2)

Technical Diploma  
Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

K-E = Kenosha/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E
1	504-306	1	Overview of Criminal Justice		S
1	504-307	2	Overview of Investigation		S
1	504-308	2	Overview of Patrol Response		S
1	504-309	1	Overview of Tactics		S
1	504-323	1	Physical Fitness		S
1	504-318	5	Principles of Tactics		S
1	504-319	1	Principles of Investigations		S
2	504-320	1	Application of Investigations		SU
2	504-310	2	Principles of Emergency Vehicle Response		SU
2	504-321	3	Application of Traffic Response		SU
2	504-322	2	Sensitive Crimes		SU
3	504-317	1	Law Enforcement Academy Scenario Week		F

<b>Minimum Program Total Credits Required: 22</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Criminal Justice – Law Enforcement 720 Academy (30-504-2)**

The *720 Hour Law Enforcement Academy* is designed to prepare the candidate to perform the essential functions of a law enforcement officer in the State of Wisconsin. The competency-based instruction meets the criteria set forth by the Wisconsin Department of Justice, Training and Standards Bureau. Training is delivered in three phases through a combination of lecture, labs, interactive group discussion, hands-on instruction, and integration exercises. The Academy meets daily Monday through Friday for 18 weeks.

### **Program Learning Outcomes**

Graduates will be able to:

1. Think critically.
2. Manage emergencies.
3. Communicate effectively.
4. Demonstrate professionalism.
5. Conduct investigations.
6. Interact with others.
7. Demonstrate tactical skills.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

#### **Step 1:**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must submit an official college transcript verifying an associate degree or higher in Criminal Justice or at least 60 postsecondary credits earned. Students earning credits at Gateway Technical College do not need a Gateway transcript but should note the completion of credits on their application.
4. Students must request and pay for a background check. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete DJLE-327 Application for Enrollment form.
6. Students must submit a copy of a valid driver's license.
7. Students must submit Annotation of Birth Facts form.
8. Students must submit an abstract copy of their driving record from their state's Department of Motor Vehicles.

#### **Step 2:**

1. Students must pass the Physical Readiness Test to be considered for an interview.
2. Students will participate in an interview. Selected candidates will need to submit a DJLE-332 Medical Assessment form.

### **Graduation Requirements**

1. Minimum grade of 2.0 ("C") or above in all courses.
  2. Satisfactorily demonstrate proficiency in all hands-on unified tactical areas of training (DAAT, EVOC, Firearms, Vehicle Contacts).
  3. Pass the scenario-based final assessment exercise.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. For detailed information about this program please visit the Law Enforcement website: [www.gtc.edu/LEAcademy](http://www.gtc.edu/LEAcademy)
2. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
3. Background checks for the Law Enforcement Academy program are valid for 6 months. Students must request a current background check every 6 months they are enrolled or re-apply.
4. In order to be admitted to the academy candidates must pass a Physical Readiness Test administered by academy staff. This test must be completed before an interview can be scheduled.

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**Culinary Assistant (31-316-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*316-109	3	Short Order Deli	Coreq: 316-170; 316-131	F	F
1	*316-131	4	Culinary Skills I <sup>3</sup>	Coreq: 316-170; 804-135	F	F
1	*316-140	3	Basic Baking Techniques		F	F
1	*316-170	1	🎓 Sanitation and Hygiene <sup>3</sup>		F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F
2	*316-134	1	Garde Manger		S	S
2	*316-133	3	Menu Planning, Purchasing, Cost Control		S	S
2	*316-130	2	🎓 Nutrition <sup>3</sup>		S	S
2	*316-190	3	Food Service Supervision		S	S
3	*101-112	3	Accounting for Business		SU	SU
3	103-143	3	Computers for Professionals		SU	SU

**Minimum Program Total Credits Required: 30**

Students interested in continuing into the 10-316-1 Culinary Arts program can earn their associate degree by completing an additional 34 credits.  
Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Culinary Assistant (31-316-1)**

The *Culinary Assistant* diploma prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Coursework includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate principles of safety and sanitation in food service operations.
2. Practice principles of nutrition.
3. Practice culinary skills.
4. Plan food service operations.
5. Create menus.
6. Relate the use of financial resources to food service operation.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 30 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A uniform is required for this program.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**  
School of Protective and Human Services

**Culinary Assistant (31-316-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*316-131	4	Culinary Skills I <sup>3</sup>	Coreq: 316-170; 804-135	F	F
1	*316-170	1	🎓 Sanitation and Hygiene <sup>3</sup>		F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F
2	*316-134	1	Garde Manger		S	S
2	*316-133	3	Menu Planning, Purchasing, Cost Control		S	S
2	*316-190	3	Food Service Supervision		S	S
2	*316-130	2	🎓 Nutrition <sup>3</sup>		S	S
3	*101-112	3	Accounting for Business		SU	SU
3	103-143	3	Computers for Professionals		SU	SU
4	*316-109	3	Short Order Deli	Coreq: 316-170; 316-131	F	F
4	*316-140	3	Basic Baking Techniques		F	F

**Minimum Program Total Credits Required: 30**

Students interested in continuing into the 10-316-1 Culinary Arts program can earn their associate degree by completing an additional 34 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Culinary Assistant (31-316-1)**

The *Culinary Assistant* diploma prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Coursework includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate principles of safety and sanitation in food service operations.
2. Practice principles of nutrition.
3. Practice culinary skills.
4. Plan food service operations.
5. Create menus.
6. Relate the use of financial resources to food service operation.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 30 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A uniform is required for this program.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Dental Assistant (31-508-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	📍 Gateway to Success (G2S)		SU
1	*508-101	1	Dental Health Safety <sup>4,6</sup>	Prereq: Advisor Consent	SU
1	801-301	1	Writing Principles <sup>2</sup> <b>AND</b>	Prereq: 851-756	SU
	801-302	1	Speaking Principles		
	801-196	3	OR Oral/Interpersonal Communication		
2	*508-103	2	Dental Radiography <sup>4</sup>	Prereq: Advisor Consent	F
2	*508-113	2	Dental Materials <sup>4</sup>	Prereq: Advisor Consent	F
2	*508-302	5	🎓 Dental Chairside <sup>4</sup>	Prereq: Advisor Consent Coreq: 508-101; 508-113; 508-304	F
2	*508-304	2	🎓 Dental and General Anatomy <sup>4</sup>	Prereq: Advisor Consent	F
2	*508-306	3	🎓 Dental Assistant Clinicals <sup>4,6</sup>	Prereq: Advisor Consent	F
2	*508-307	1	Dental Assistant Professionalism <sup>1,4</sup>	Prereq: Advisor Consent	F
3	*508-120	2	Dental Office Management <sup>1</sup>	Prereq: 508-307	S
3	*508-308	5	Dental Chairside – Advanced	Prereq: 508-302	S
3	*508-309	4	Dental Laboratory Procedure	Prereq: 508-113	S
3	*508-310	1	Dental Radiography – Advanced	Prereq: 508-103	S
3	*508-311	2	Dental Assistant Clinical – Advanced <sup>6,8</sup>	Prereq: 508-306	S

**Minimum Program Total Credits Required: 33**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Dental Assistant (31-508-1)

*Dental Assistant* program prepares graduates to work with dentists as they examine and treat patients. Dental Assistants with documented skills also may carry out a variety of laboratory, clinical and office duties. Some dental assistants manage the office and are responsible for patient scheduling and bookkeeping functions. Graduates receive a technical diploma and are eligible to write the certification examination of the Dental Assisting National Board. Most dental assistants work in general or specialized dental offices, either for individual dentists or for groups of dentists. Some dental assistants may choose to work for insurance companies, dental laboratories, or dental supply companies. The dental assistant also may find employment with federal agencies such as the Veterans' Administration, United States Public Health Services, the Armed Forces, or a state, county or city health facility.

### Program Learning Outcomes

Graduates will be able to:

1. Perform a variety of advanced supportive dental procedures.
2. Manage infection and hazard control.
3. Produce diagnostic intraoral and extraoral radiographs on a variety of patients.
4. Perform advanced dental laboratory procedures.
5. Demonstrate professional behaviors, ethics, and appearance.
6. Perform dental office business procedures.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

1. Minimum 33 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. This course will be taught online. Basic computer literacy and Blackboard knowledge are highly recommended.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Any non-508 course may be taken prior to entry in the program, assuming requisites have been satisfied (or waived with departmental approval).
4. Students are selected based on completion of academic eligibility requirements and district residency. Students will be selected for their initial core 508 courses using a petition process. Students must meet petition requirements prior to enrolling in 508 courses. See <https://www.gtc.edu/student-services/admissions/what-petitioning> for additional information.
5. The Dental Assistant Program is only offered on a full-time basis, Monday through Friday. Travel is required to clinical sites. Students must provide their own transportation.
6. Students must provide CPR for the Healthcare Provider certification prior to enrollment.
7. Course 508-311 Dental Assistant Clinical - Advanced has changed to a Pass/Fail grading system.
8. Please note that your program may require one or all of the following additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



## Diesel Equipment Mechanic (31-412-1)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	Gateway to Success (G2S)		F+
1	*412-111	2	Diesel Maintenance Fundamentals	Coreq: 804-135	F
1	*412-107	4	Diesel Electricity 1 <sup>6</sup>	Prereq: 412-111	F
1	*412-114	3	Diesel Heating, Cooling & Air Cond. <sup>6</sup>	Prereq: 412-111; 412-107	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*412-117	3	Diesel Suspension & Steering Systems <sup>6</sup>	Prereq: 412-111	S
2	801-136	3	English Composition 11 <sup>6</sup>	Prereq: 831-103 OR 831-107	S+
2	801-196	3	Oral/Interpersonal Communication		S+
2	*412-106	4	Diesel Brake Systems	Prereq: 412-111; 412-117 OR 412-125; Coreq: 801-136	S
3	*412-112	4	Diesel Drive Trains <sup>6</sup>	Prereq: 412-111; 412-106 Coreq: 801-136	F
3	*412-116	3	Diesel Preventative Maintenance <sup>6</sup>	Prereq: 412-111; 412-106; 412-112 OR 412-126	F

**Minimum Program Total Credits Required: 33**

Students interested in continuing into the 10-412-1 Diesel Equipment Technology program can earn their associate degree by completing an additional 32 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Diesel Equipment Mechanic (31-412-1)**

*Diesel Equipment Mechanic* is a one-year repair and maintenance program designed to prepare an entry level diesel technician. This program is the first year of the associate degree Diesel Equipment Technology program. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on the fundamentals and repair of diesel engines, and basic diesel vehicle systems including brakes, heating, cooling, and electrical/electronic.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 33 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirement.
3. Work uniform is required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
5. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College will offer CDL training starting May 2019.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Diesel Equipment Mechanic (31-412-1)

Technical Diploma  
**Effective 2020/2021**

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**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	890-155	1	Gateway to Success (G2S)		F+
1	*412-111	2	Diesel Maintenance Fundamentals	Coreq: 804-135	F
1	*412-107	4	Diesel Electricity 1 <sup>6</sup>	Prereq: 412-111	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F+
2	*412-114	3	Diesel Heating, Cooling & Air Cond. <sup>6</sup>	Prereq: 412-111; 412-107	S
2	801-136	3	English Composition 1 <sup>1,6</sup>	Prereq: 831-103 OR 831-107	S+
3	*412-117	3	Diesel Suspension & Steering Systems <sup>6</sup>	Prereq: 412-111	F
3	*412-106	4	Diesel Brake Systems	Prereq: 412-111; 412-117 OR 412-125; Coreq: 801-136	F
3	*412-112	4	Diesel Drive Trains <sup>6</sup>	Prereq: 412-111; 412-106 Coreq: 801-136	F
4	*412-116	3	Diesel Preventative Maintenance <sup>6</sup>	Prereq: 412-111; 412-106; 412-112 OR 412-126	S
4	801-196	3	Oral/Interpersonal Communication		S+

**Minimum Program Total Credits Required: 33**

Students interested in continuing into the 10-412-1 Diesel Equipment Technology program can earn their associate degree by completing an additional 32 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## **Diesel Equipment Mechanic (31-412-1)**

*Diesel Equipment Mechanic* is a one-year repair and maintenance program designed to prepare an entry level diesel technician. This program is the first year of the associate degree Diesel Equipment Technology program. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on the fundamentals and repair of diesel engines, and basic diesel vehicle systems including brakes, heating, cooling, and electrical/electronic.

### **Program Learning Outcomes**

Graduates will be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

### **Essential Career Competencies**

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- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 33 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirement.
3. Work uniform is required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
5. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College will offer CDL training starting May 2019.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Emergency Medical Technician (30-531-3)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

HE-D = HERO Center/days, HE-E = HERO Center/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	*531-312	2	EMR to EMT I	Prereq: Program Admission	F/S/SU	F/S
1	*531-313	3	EMR to EMT II	Prereq: 531-312	F/S/SU	F/S

<b>Minimum Program Total Credits Required: 5</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Emergency Medical Technician (30-531-3)**

*Emergency Medical Technician* is a 180-hour entry-level training in emergency medicine. This program provides students the skills and knowledge needed to assess and manage all types of injuries and acute illnesses while providing safe and rapid patient transport to an appropriate medical facility. Components of the course include lecture, practical lab, and hospital clinical experience. Upon program completion, students are prepared to take the National Registry of Emergency Medical Technicians® examination to be licensed as an Emergency Medical Technician in Wisconsin. Students wishing to pursue other levels of EMS licensure, such as Advanced EMT or Paramedic, must first be licensed as an Emergency Medical Technician before being eligible to register in subsequent EMS licensure programs.

### **Program Learning Outcomes**

Graduates will be able to:

1. Understand the legal liabilities and requirements of professional conduct to operate as an Emergency Medical Technician as outlined in HSS 110 of the Wisconsin Administrative Code.
2. Demonstrate skills in patient extrication, packaging, and safe movement.
3. Perform cardiac arrest management and airway management of the adult and pediatric patient.
4. Perform a successful assessment, treatment plan, and packaging for trauma and medical patients in both the adult and pediatric population.
5. Demonstrate the ability to interact with patients in a compassionate and professional manner.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 5 credits with a minimum of 2.0 or above.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

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**EMT - Paramedic (31-531-1)**  
Technical Diploma  
**Effective 2020/2021**

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**HE-D = HERO Center/days, HE-E = HERO Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	890-155	1	📍 Gateway to Success (G2S)		SU	SU
1	*531-911	2	EMS Fundamental <sup>1,2,6</sup>	Prereq: 838-105 OR 831-107	SU	SU
2	*531-912	4	🎓 Paramedic Medical Principles	Coreq: 531-911	F	F
2	*531-913	3	🎓 Adv. Patient Asses. Principles <sup>6</sup>	Coreq: 531-911	F	F
2	*531-914	3	Adv. Pre-Hospital Pharmacology <sup>6</sup>	Coreq: 531-911	F	F
2	*531-915	2	Paramedic Respiratory Mgt. <sup>6</sup>	Coreq: 531-914	F	F
2	*531-925	4	Paramedic HPS Lab	Coreq: 531-912	F	F
2	*531-926	1	Paramedic Hospital Field <sup>3,4,6</sup>	Coreq: 531-912	F	F
2	*531-955	2	Paramedic Cardiology 1 <sup>6</sup>	Coreq: 531-915	F	F
3	*531-956	2	Paramedic Cardiology 2	Prereq: 531-955	S	S
3	*531-918	1	Adv. Emergency Resuscitation <sup>6</sup>	Coreq: 531-955	S	S
3	*531-919	4	Paramedic Medical Emergencies	Coreq: 531-955	S	S
3	*531-920	3	🎓 Paramedic Trauma	Coreq: 531-955	S	S
3	*531-921	3	Special Patient Populations	Coreq: 531-955	S	S
3	*531-922	1	EMS Operations <sup>6</sup>	Coreq: 531-955	S	S
3	*531-923	1	Paramedic Capstone	Coreq: 531-955	S	S
3	*531-927	2	Paramedic Hospital/Field II <sup>3,4,6</sup>	Coreq: 531-955	S	S

**Minimum Program Total Credits Required: 39**

Students interested in continuing into the 10-531-1 Paramedic Technician program can earn an associate degree by completing an additional 26 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## EMT - Paramedic (31-531-1)

*Paramedic* requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. They can also perform surgical procedures to open airways and provide resuscitative drugs. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. This program is offered on a part time basis: either two evenings a week and Saturdays or an alternating day class 2-3 days a week to accommodate the typical 24 hour on/48 hour off schedule worked by many FF/EMS agencies. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Satisfactory completion of clinical/field time is competency based so actual number of hours may vary from student to student. Graduates of this program can expect to find employment with private ambulance companies, fire departments, or hospital emergency rooms. Students finishing the first two semesters of the program (the 531 courses) are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma program can be applied to the Paramedic Technician associate degree.

**Program Goal:** To prepare competent entry-level Emergency Medical Technician-Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains, with or without exit points at the Emergency Medical Technician-Intermediate and/or Emergency Medical Technician-Basic, and/or First Responder levels.

### Program Learning Outcomes

Graduates will be able to:

1. Prepare for incident response and EMS operations.
2. Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
3. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
4. Communicate effectively with others.
5. Demonstrate professional behavior.
6. Meet state and national competencies listed for paramedic credentialing.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

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## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must have current CPR certification.
4. Students must have current Wisconsin EMS licensure.

## Graduation Requirements

1. Minimum 39 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Prior to enrolling in paramedic level courses, a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with the program staff.
3. Drug testing and immunizations are required prior to admission to the first clinical course (531-926 or 531-927).
4. Applicants of this program are subject to a review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
5. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
6. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

## Accreditation Statement

The EMT Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 N., Suite 158  
Clearwater, FL 33763  
727-210-2350  
[www.caahep.org](http://www.caahep.org)



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electromechanical Maintenance Technician (31-620-3)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*620-310	2	🎓 Industrial Controls for Maintenance		F
1	*612-102	3	Pneumatic/Hydraulics, Intro		F
1	*628-310	2	Mechanical Skills I		F
1	*628-300	2	Machining for Maintenance		F
1	664-100	2	Industrial Control Systems, Intro to		F
1	664-110	2	Mechatronics, Intro to		F
1	804-370	2	Mathematics I/Applied <sup>1</sup>	Prereq: 854-760	F
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-760 OR 851-756	S
2	*444-339	3	Gauging and Quality Control <sup>4</sup>		S
2	*620-303	3	Motors and Ind Electrical Systems	Prereq: 620-302 OR 620-310	S
2	*620-311	2	PLC's and HMI's I	Prereq: 620-302 OR 620-310	S
2	*620-305	3	Process and Systems Controls for Maint	Prereq: 620-302 OR 620-310; 804-370	S
2	*628-115	3	Industrial Robotics and Programming		S

**Minimum Program Total Credits Required: 31**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Electromechanical Maintenance Technician (31-620-3)**

Electromechanical Maintenance Technicians are multi-skilled individuals proficient in many tasks giving them the skills to assemble, install, troubleshoot, repair, and modify machinery. After completing this diploma, students will be able to perform repairs, maintenance and troubleshooting on hydraulic, pneumatic systems, motors and motor controls, mechanical drives, PLC's, HMI's and robotic systems. Students will also learn manual machining to fabricate parts, precision measurements, applicable math, communication skills, and industrial safety concepts.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Perform work safely.
2. Troubleshoot electrical and mechanical systems and devices.
3. Repair electrical and mechanical systems.
4. Communicate technical information.
5. Perform basic manual machining and gauging applications.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 31 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. A hand calculator capable of trigonometric functions is required: cost is approximately \$25.
3. Safety glasses are required in labs. If prescription safety glasses are necessary, allow a minimum of 90 days.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electromechanical Maintenance Technician (31-620-3)**

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, L-E = Lakeview/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	L-E
1	890-155	1	📍 Gateway to Success (G2S)		F	F+
1	*620-310	2	🎓 Industrial Controls for Maintenance		F	F
1	664-100	2	Industrial Control Systems, Intro to		F	F
1	664-110	2	Mechatronics, Intro to		F	F
1	804-370	2	Mathematics I/Applied <sup>1</sup>	Prereq: 854-760	F	F+
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-760 OR 851-756	S	S+
2	*444-339	3	Gauging and Quality Control <sup>4</sup>		S	S
2	*620-311	2	PLC's and HMI's I	Prereq: 620-302 OR 620-310	S	S
3	*620-303	3	Motors and Ind Electrical Systems	Prereq: 620-302 OR 620-310	SU	SU
3	*628-300	2	Machining for Maintenance		SU	SU
3	*620-305	3	Process and Systems Controls for Maint	Prereq: 620-302 OR 620-310; 804-370	SU	SU
4	*612-102	3	Pneumatic/Hydraulics, Intro		F	F
4	*628-310	2	Mechanical Skills I		F	F
4	*628-115	3	Industrial Robotics and Programming		F	F

**Minimum Program Total Credits Required: 31**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Electromechanical Maintenance Technician (31-620-3)**

Electromechanical Maintenance Technicians are multi-skilled individuals proficient in many tasks giving them the skills to assemble, install, troubleshoot, repair, and modify machinery. After completing this diploma, students will be able to perform repairs, maintenance and troubleshooting on hydraulic, pneumatic systems, motors and motor controls, mechanical drives, PLC's, HMI's and robotic systems. Students will also learn manual machining to fabricate parts, precision measurements, applicable math, communication skills, and industrial safety concepts.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Perform work safely.
2. Troubleshoot electrical and mechanical systems and devices.
3. Repair electrical and mechanical systems.
4. Communicate technical information.
5. Perform basic manual machining and gauging applications.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 31 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
2. A hand calculator capable of trigonometric functions is required: cost is approximately \$25.
3. Safety glasses are required in labs. If prescription safety glasses are necessary, allow a minimum of 90 days.
4. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electronics Technician Fundamentals (30-605-1)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	Gateway to Success (G2S)		F	F
1	*605-113	3	DC/AC I <sup>3</sup>		F	F
1	*605-130	4	Digital Electronics <sup>3</sup>		F	F
1	804-115	5	College Technical Math 11 <sup>3</sup>	Prereq: 834-110	F	F
2	*605-114	3	DC/AC II <sup>3</sup>	Prereq: 605-113; Coreq: 804-115	S	S
2	*605-120	4	Electronic Devices I <sup>3</sup>	Prereq: 605-113	S	S
2	*605-138	3	Circuit Construction and Repair		S	S

**Minimum Program Total Credits Required: 23**

Students interested in continuing into the 10-605-1 Electronics program can earn their associate degree by completing an additional 41 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Electronics Technician Fundamentals (30-605-1)**

*Electronics Technician Fundamentals* focuses on the installation and assembly of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, soldering, and fabrication techniques. The operation and use of various test and diagnostic equipment is included throughout the curriculum. The program prepares the students for a broad range of entry-level electronic assembly positions.

### **Program Learning Outcomes**

Graduates will be able to:

1. Relate electronic theory to practice.
2. Operate test equipment.
3. Repair electronic circuits and systems.
4. Install electronic circuits or systems.
5. Communicate basic technical information.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 23 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Electronics Technician Fundamentals (30-605-1)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**I-D = iMET Center/days, I-E = iMET Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-D	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+	F+
1	*605-113	3	🎓 DC/AC I <sup>3</sup>		F	F
1	804-115	5	College Technical Math 1 <sup>1,3</sup>	Prereq: 834-110	F+	F+
2	*605-114	3	DC/AC II <sup>3</sup>	Prereq: 605-113; Coreq: 804-115	S	S
2	*605-130	4	Digital Electronics <sup>3</sup>		S	S
2	*605-138	3	Circuit Construction and Repair		S	S
3	*605-120	4	Electronic Devices I <sup>3</sup>	Prereq: 605-113	SU	SU

**Minimum Program Total Credits Required: 23**

Students interested in continuing into the 10-605-1 Electronics program can earn their associate degree by completing an additional 41 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

### **Electronics Technician Fundamentals (30-605-1)**

*Electronics Technician Fundamentals* focuses on the installation and assembly of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, soldering, and fabrication techniques. The operation and use of various test and diagnostic equipment is included throughout the curriculum. The program prepares the students for a broad range of entry-level electronic assembly positions.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Relate electronic theory to practice.
2. Operate test equipment.
3. Repair electronic circuits and systems.
4. Install electronic circuits or systems.
5. Communicate basic technical information.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 23 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Facilities Maintenance (31-443-2)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-E = Kenosha/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E
1	890-155	1	📍 Gateway to Success (G2S)		F
1	*443-310	1	🎓 Fundamentals of Construction		F
1	*443-312	2	Basic Carpentry and Repair	Coreq: 443-310	F
1	*461-120	3	Small Power Equipment		F
1	801-301	1	Writing Principles	Prereq: 851-756	F
2	804-370	2	Mathematics I, Applied <sup>1</sup>	Prereq: 854-760	S
2	801-302	1	Speaking Principles		S
2	*443-315	2	Industrial Preventative Maintenance	Coreq: 443-310	S
2	*443-314	2	Mechanical Systems	Coreq: 443-310	S
3	*443-313	2	Interior Finishing	Coreq: 443-310 OR 804-370	SU
3	*601-112	2	Environmental Systems	Coreq: 801-301	SU
3	*601-304	3	HVAC Electricity/Electronics <sup>2,3</sup>		SU
4	*443-101	1	Forklift Operation & Maintenance <sup>3</sup>		F
4	*443-311	3	Electrical Applications	Prereq: 601-304; Coreq: 443-310	F
4	*601-305	3	Facility Operating Engineer LP		F

**Minimum Program Total Credits Required: 29**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## Facilities Maintenance (31-443-2)

*Facilities Maintenance* provides the training needed to service, maintain, and operate equipment found in public, commercial, and other buildings. Typical operations employing facilities (building) maintenance workers include hospitals, government buildings, schools, hotels, apartment buildings, light manufacturing facilities, and office buildings. The required skills and knowledge include basic carpentry, basic electricity, basic HVAC (heating, ventilating, and air conditioning), basic plumbing, electrical control devices, and safety.

### Program Learning Outcomes

Graduates will be able to:

1. Repair/replace basic electrical components.
2. Perform preventative maintenance procedures.
3. Perform basic drywall repairs.
4. Perform basic plumbing repairs.
5. Use portable tools safely.
6. Apply sustainable practices to facility operations.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

## Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

## Graduation Requirements

1. Minimum 29 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

## Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. 605-107 Course Cost includes Snap On Digital Multi Meter #EEDM525D.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
4. Students will be required to purchase a variety of personal safety items and hand tools that will be utilized throughout the program. Specifications for those hand tools will be provided by the instructor at the beginning of the program, and should not be purchased in advance of the start of the program.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Full-Time Pathway to Success**  
School of Protective and Human Services

## Firefighter Technician (31-503-1)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HE-D=HERO Center/Days, HE-E=HERO Center/Evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	890-155	1	Gateway to Success (G2S)		F/S+	F/S+
1	*503-142	4	Firefighting Principles <sup>2</sup>		F/S	F/S
1	*503-151	4	Fire Prevention <sup>2</sup>		F/S	F/S
1	*503-130	2	Firefighter Health & Wellness		F/S	F/S
2	*531-312	2	EMR to EMT I	Prereq: Program Admission	S/F	S/F
2	*531-313	3	EMR to EMT II	Prereq: 531-312	S/F	S/F
2	*503-155	4	Fire Protection Hydraulics <sup>2</sup>	Prereq: 503-142	S/F	S/F
2	*503-143	3	Building Construction		S/F	S/F
3	*503-106	3	Firefighting Principles II <sup>2</sup>	Prereq: 503-142	F/S	F/S
3	*503-120	2	Internship	Prereq: 503-142	F/S	F/S
3	*503-192	3	Principles of Em Serv Safety & Survival		F/S	F/S

**Minimum Program Total Credits Required: 31**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Firefighter Technician (31-503-1)

The *Firefighter Technician* diploma will provide applicants with foundational entry level knowledge and practice to pursue a career in the fire service. Students are able to apply health & wellness principles to their own professional lives, and prepare for the candidate physical ability test (CPAT) certificate. Requisite building construction, fire behavior, fire protection systems, fire department risk management and soft skills are stressed, along with life-long learning and living habits to become safe and effective fire service professionals. Students will be eligible for employment as a firefighter for volunteer or career service. Additionally, the diploma provides a pathway to the Fire Medic and Paramedic Associate Degree Programs.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate professional conduct by displaying personal code of ethics, positive work ethic, flexibility, teamwork skills, physical fitness, safe procedures, and sensitivity to diverse cultures and individuals.
2. Apply incident management skills to emergency incidents.
3. Meet professional fire and EMS credentialing standards.
4. Communicate clearly and effectively both verbally and through written documentation with clients, coworkers, other agencies, and supervisors.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 31 credits with an average of 2.0 or above.
- \*Minimum of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. Eye protection may be required in some courses. If prescription safety glasses are required, please allow a minimum of 90 days before the program start to obtain prescription and glasses.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**  
School of Protective and Human Services

## Firefighter Technician (31-503-1)

Technical Diploma  
Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HE-D=HERO Center/Days, HE-E=HERO Center/Evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HE-D	HE-E
1	890-155	1	Gateway to Success (G2S)		F/S+	F/S+
1	*503-142	4	Firefighting Principles <sup>2</sup>		F/S	F/S
1	*503-151	4	Fire Prevention <sup>2</sup>		F/S	F/S
2	*503-130	2	Firefighter Health & Wellness		S/F	S/F
2	*531-312	2	EMR to EMT I	Prereq: Program Admission	S/F	S/F
2	*531-313	3	EMR to EMT II	Prereq: 531-312	S/F	S/F
3	*503-106	3	Firefighting Principles II <sup>2</sup>	Prereq: 503-142	F/S	F/S
3	*503-120	2	Internship	Prereq: 503-142	F/S	F/S
3	*503-192	3	Principles of Em Serv Safety & Survival		F/S	F/S
4	*503-155	4	Fire Protection Hydraulics <sup>2</sup>	Prereq: 503-142	S/F	S/F
4	*503-143	3	Building Construction		S/F	S/F

<b>Minimum Program Total Credits Required: 31</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, or Elkhorn.

## Firefighter Technician (31-503-1)

The *Firefighter Technician* diploma will provide applicants with foundational entry level knowledge and practice to pursue a career in the fire service. Students are able to apply health & wellness principles to their own professional lives, and prepare for the candidate physical ability test (CPAT) certificate. Requisite building construction, fire behavior, fire protection systems, fire department risk management and soft skills are stressed, along with life-long learning and living habits to become safe and effective fire service professionals. Students will be eligible for employment as a firefighter for volunteer or career service. Additionally, the diploma provides a pathway to the Fire Medic and Paramedic Associate Degree Programs.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate professional conduct by displaying personal code of ethics, positive work ethic, flexibility, teamwork skills, physical fitness, safe procedures, and sensitivity to diverse cultures and individuals.
2. Apply incident management skills to emergency incidents.
3. Meet professional fire and EMS credentialing standards.
4. Communicate clearly and effectively both verbally and through written documentation with clients, coworkers, other agencies, and supervisors.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

- Minimum 30 credits with an average of 2.0 or above.
- \*Average of 2.0 ("C") or above for these major courses.
- Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Foundations of Lodging & Hospitality Management (30-109-3)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*109-101	3	🎓 Principles of Hospitality		F	F
1	*109-122	3	🎓 Intro to Service <sup>1</sup>		F	F
1	*109-171	3	Hospitality Sales and Marketing <sup>1</sup>		F	F
1	*109-125	3	Hospitality Managerial Accounting <sup>1</sup>		F	F
2	*109-114	3	Managing Serv. in the Hosp. Industry <sup>1</sup>		S	S
2	*109-126	3	Advanced Customer Service Mang	Prereq: 109-122	S	S
2	*196-190	3	Leadership Development <sup>1</sup>		S	S

**Minimum Program Total Credits Required: 22**

Students interested in continuing into the 10-109-2 Hospitality Management program can earn their associate degree by completing an additional 39 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Foundations of Lodging & Hospitality Management (30-109-3)**

*Foundations of Lodging and Hospitality Management* prepares students to enter the customer-focused hospitality field at a support level. The program focuses on customer service, operations, problem-solving, and cost control skills that are related to the hospitality industry. Students will explore the tourism, lodging, and foodservice industries within their coursework and internships. Graduates will be prepared for jobs such as events coordinator, dining room manager, guest services coordinator, or reservations manager.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Manage the operations within a hospitality establishment.
2. Choose hospitality resources to achieve the goals of the establishment.
3. Manage processes to meet the establishment goals.
4. Direct hospitality process and procedures.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 22 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

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## Foundations of Lodging & Hospitality Management (30-109-3)

Technical Diploma  
**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	Gateway to Success (G2S)		F	F
1	*109-101	3	Principles of Hospitality		F	F
1	*109-122	3	Intro to Service <sup>1</sup>		F	F
2	*109-114	3	Managing Serv. in the Hosp. Industry <sup>1</sup>		S	S
2	*109-126	3	Advanced Customer Service Mang	Prereq: 109-122	S	S
2	*196-190	3	Leadership Development <sup>1</sup>		S	S
3	*109-171	3	Hospitality Sales and Marketing <sup>1</sup>		F	F
3	*109-125	3	Hospitality Managerial Accounting <sup>1</sup>		F	F

<b>Minimum Program Total Credits Required: 22</b>
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Students interested in continuing into the 10-109-2 Hospitality Management program can earn their associate degree by completing an additional 39 credits. Please see your academic advisor for details.

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Graduates will be able to:

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### **Graduation Requirements**

1. Minimum 22 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Full-Time Pathway to Success**  
School of Protective and Human Services

## Horticulture Technician (31-001-1)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, E-D = Elkhorn/days, F=Fall, S=Spring**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*001-185	3	Horticulture, Introduction to <sup>2</sup>		F	F
1	*001-143	3	Herbaceous Plants <sup>2</sup>	Coreq: 001-185	F	F
1	*001-146	1	Sustainable Landscape		F	F
1	*001-147	1	Soils & Plant Nutrition <sup>2</sup>		F	F
1	*001-148	1	Plant Pests & Beneficial <sup>2</sup>		F	F
1	801-136	3	English Composition I	Prereq: 831-103 OR 831-107	F	F
2	*001-128	3	Horticulture Marketing		S	S
2	*001-129	1	Pesticide Applicator Cert		S	S
2	*001-142	3	Vegetable Science <sup>2</sup>		S	S
2	*001-151	3	Greenhouse Crops <sup>2</sup>	Coreq: 801-136; 804-135	S	S
2	804-135	3	Quantitative Reasoning	Prereq: 804-139	S	S

**Minimum Program Total Credits Required: 26**

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### **Horticulture Technician (31-001-1)**

*Horticulture Technician* is a one-year embedded technical diploma that builds upon the skills gained in the Horticulture Basics career pathway certificate and can lead directly into Greenhouse Operations. Learners gain a broad understanding of the horticulture field and basic technical skills to make them an asset to any company in the green industry. Work duties are typically very hands-on. Upon completion of this one-year program, you will also receive your Wisconsin Commercial Pesticide Applicator Certification.

### **Program Learning Outcomes**

Graduates will be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

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- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 26 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Horticulture Technician (31-001-1)

Technical Diploma  
**Effective 2020/2021**

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**K-D = Kenosha/days, E-D = Elkhorn/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	E-D
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*001-185	3	Horticulture, Introduction to <sup>2</sup>		F	F
1	801-136	3	English Composition I	Prereq: 831-103 OR 831-107	F	F
2	*001-142	3	Vegetable Science <sup>2</sup>		S	S
2	804-135	3	Quantitative Reasoning	Prereq: 834-109	S	S
3	*001-143	3	Herbaceous Plants <sup>2</sup>	Coreq: 001-185	F	F
3	*001-146	1	Sustainable Landscape		F	F
3	*001-147	1	Soils & Plant Nutrition <sup>2</sup>		F	F
3	*001-148	1	Plant Pests & Beneficial <sup>2</sup>		F	F
4	*001-128	3	Horticulture Marketing		S	S
4	*001-129	1	Pesticide Applicator Cert		S	S
4	*001-151	3	Greenhouse Crops <sup>2</sup>	Coreq: 801-136; 804-135	S	S

**Minimum Program Total Credits Required: 26**

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(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Horticulture Technician (31-001-1)**

*Horticulture Technician* is a one-year embedded technical diploma that builds upon the skills gained in the Horticulture Basics career pathway certificate and can lead directly into Greenhouse Operations. Learners gain a broad understanding of the horticulture field and basic technical skills to make them an asset to any company in the green industry. Work duties are typically very hands-on. Upon completion of this one-year program, you will also receive your Wisconsin Commercial Pesticide Applicator Certification.

### **Program Learning Outcomes**

Graduates will be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

### **Essential Career Competencies**

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- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 26 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Transfer credits in Social Science may substitute for this course. See an advisor for details.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Computer Support Technician (31-154-6)**

Technical Diploma

**Effective 2020/2021**

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**R-D = Racine/days, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	E-E
1	890-155	1	Gateway to Success (G2S)		F	F
1	*154-121	1	CSS Program Orientation		F	F
1	*154-119	3	System Software Support <sup>2</sup>	Coreq: 154-121; 801-136	F	F
1	*107-011	3	IT in Business <sup>2</sup>		F	F
1	*107-193	3	IT Essentials <sup>2</sup>		F	F
1	801-136	3	English Composition 1 <sup>2</sup>	Prereq: 831-103 OR 831-107	F	F
2	*154-114	3	Hardware & Software Support	Prereq: 154-119; 107-193	S	S
2	*154-122	3	Introduction to Help/Service Desk	Prereq: 107-193 Coreq: 804-135 OR 804-115	S	S
2	*150-145	3	IT Scripting		S	S
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	S
3	801-197	3	Technical Reporting	Prereq: 801-136	SU	SU
3	*150-182	3	IoT: Connecting Devices		SU	SU

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-154-3 IT – Computer Support Specialist program can earn their associate degree by completing an additional 30 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum grade of 2.0 (“C”) or above for these major courses to meet graduation requirements.

## IT – Computer Support Technician (31-154-6)

The *IT-Computer Support Technician* program will provide the first step toward a career in IT which focuses on the support of end users. This program is designed to serve as a pathway into the IT-Computer Support Specialist (10-154-3) associate degree program. Students completing this program will have the option to continue into the parent program or become employed directly in the field. Graduates will have opportunities for employment reaching across all industries.

The IT-Computer Support Technician program is comprised of the first two semesters of the IT-Computer Support Specialist associate degree program. Specific course work includes: System Software Support, IT in Business, IT Essentials, Help/Service Desk, Networking/Web Concepts and Technical Reporting.

### Program Learning Outcomes

Graduates will be able to:

1. Support information technology hardware.
2. Install and support software.
3. Provide Level 1 end user support.
4. Solve common technology problems.
5. Demonstrate customer service skills as an IT professional.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
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### Accreditation Statement

Gateway Technical College's IT-Computer Support Technician program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Computer Support Technician (31-154-6)**

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-D = Racine/days, E-E = Elkhorn/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	E-E
1	890-155	1	📍 Gateway to Success (G2S)		F	F
1	*107-011	3	IT in Business <sup>2</sup>		F	F
1	*150-182	3	IoT: Connecting Devices		F	F
2	*154-121	1	CSS Program Orientation		S	S
2	*154-119	3	System Software Support <sup>2</sup>	Coreq: 154-121; 801-136	S	S
2	*107-193	3	🎓 IT Essentials <sup>2</sup>		S	S
2	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	S	S
3	*154-114	3	🎓 Hardware & Software Support	Prereq: 154-119; 107-193	SU	SU
3	*154-122	3	🎓 Introduction to Help/Service Desk	Prereq: 107-193; Coreq: 804-135 OR 804-115	SU	SU
3	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	SU	SU
4	*150-145	3	IT Scripting		F	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F	F

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-154-3 IT – Computer Support Specialist program can earn their associate degree by completing an additional 30 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

## IT – Computer Support Technician (31-154-6)

The *IT-Computer Support Technician* program will provide the first step toward a career in IT which focuses on the support of end users. This program is designed to serve as a pathway into the IT-Computer Support Specialist (10-154-3) associate degree program. Students completing this program will have the option to continue into the parent program or become employed directly in the field. Graduates will have opportunities for employment reaching across all industries.

The IT-Computer Support Technician program is comprised of the first two semesters of the IT-Computer Support Specialist associate degree program. Specific course work includes: System Software Support, IT in Business, IT Essentials, Help/Service Desk, Networking/Web Concepts and Technical Reporting.

### Program Learning Outcomes

Graduates will be able to:

1. Support information technology hardware.
2. Install and support software.
3. Provide Level 1 end user support.
4. Solve common technology problems.
5. Demonstrate customer service skills as an IT professional.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's IT-Computer Support Technician program is fully accredited and in good standing with the Accreditation Council for Business Schools and Programs [www.acbsp.org].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
Overland Park, KS 66213  
Phone: (913) 339-9356  
[www.acbsp.org](http://www.acbsp.org)

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Web Programmer (31-152-6)**

Technical Diploma

**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	R-E	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F	F
1	*152-081	3	Programming in Python		F	F	F
1	*152-182	3	🎓 Web Programming 1	Coreq: 152-082	F	F	F
1	*152-184	3	🎓 Java Programming 1	Coreq: 804-135 OR 804-115	F	F	F
1	*152-082	1	Web Developer Orientation	Coreq: 152-182	F	F	F
1	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	F	F	F
2	*152-097	3	🎓 Javascript	Prereq: 152-182	S	S	S
2	*152-080	3	🎓 Databases	Prereq: 152-081 OR 152-184	S	S	S
2	*152-174	3	Java Programming 2	Prereq: 152-184	S	S	S
2	*152-188	3	🎓 PHP Web Programming	Prereq: 152-182; 152-184 OR 152-081	S	S	S
3	*152-150	3	Web Programming 2	Prereq: 152-182; 152-097	SU	SU	SU

**Minimum Program Total Credits Required: 29**

Students interested in continuing into the 10-152-4 IT – Web Software Developer program can earn their associate degree by completing an additional 33 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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## IT – Web Programmer (31-152-6)

The *IT – Web Programmer* diploma trains students in the development of business web sites using a variety of programming and scripting languages. Topics will include web site design and development and basic knowledge of SQL and back-end databases. Typical entry-level positions are junior web developer and junior web programmer.

### Program Learning Outcomes

Graduates will be able to:

1. Communicate effectively.
2. Utilize web design principles, standards, and best practices in designing effective and usable websites.
3. Identify and apply HTML/CSS tags and attributes for web page design.
4. Develop basic web applications using server-side scripting languages such as PHP.
5. Use SQL commands to query a database and display data on a webpage.
6. Conduct testing and troubleshooting of web pages.

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Critical Thinking and Problem Solving
- Professionalism and Career Management
- Teamwork and Collaboration
- Cultural Competence
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### Graduation Requirements

1. Minimum 29 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. IT-Web Programmer is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.

### Accreditation Statement

Gateway Technical College's IT-Web Programmer program is fully accredited and in good standing with the Accreditation Council for Business Schools and programs [[www.acbsp.org](http://www.acbsp.org)].

Accreditation Council for Business Schools and Programs (ACBSP)  
11520 West 119th Street  
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**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**IT – Web Programmer (31-152-6)**

Technical Diploma

**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-D	R-E	O
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1	*152-081	3	Programming in Python		F	F	F
1	*152-182	3	🎓 Web Programming 1	Coreq: 152-082	F	F	F
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3	*152-080	3	🎓 Databases	Prereq: 152-081 OR 152-184	SU	SU	SU
3	*152-188	3	🎓 PHP Web Programming	Prereq: 152-182; 152-184 OR 152-081	SU	SU	SU
4	*152-150	3	Web Programming 2	Prereq: 152-182; 152-097	F	F	F
4	*152-174	3	Java Programming 2	Prereq: 152-184	F	F	F

**Minimum Program Total Credits Required: 29**

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## IT – Web Programmer (31-152-6)

The *IT – Web Programmer* diploma trains students in the development of business web sites using a variety of programming and scripting languages. Topics will include web site design and development and basic knowledge of SQL and back-end databases. Typical entry-level positions are junior web developer and junior web programmer.

### Program Learning Outcomes

Graduates will be able to:

1. Communicate effectively.
2. Utilize web design principles, standards, and best practices in designing effective and usable websites.
3. Identify and apply HTML/CSS tags and attributes for web page design.
4. Develop basic web applications using server-side scripting languages such as PHP.
5. Use SQL commands to query a database and display data on a webpage.
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### Essential Career Competencies

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### Admission Requirements

1. Students must submit an application and pay \$30 fee.
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### Graduation Requirements

1. Minimum 29 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. IT-Web Programmer is a laptop program. Students will need a Windows-based computer (with a hard drive) for use in the program. Please note MAC computers are not compatible with some of the required software.

### Accreditation Statement

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Medical Assistant (31-509-1)**  
Technical Diploma  
**Effective 2020/2021**

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Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	E-D	R-D	R-E
1	890-155	1	📍 Gateway to Success (G2S)		S	F	SU	F
1	*509-301	2	Medical Assistant Admin Procedures	Prereq: Program Admission; Coreq: 501-107	S+	F+	SU+	F+
1	*509-303	2	Medical Assistant Lab Procedures 1	Prereq: Program Admission; Coreq: 509-304	S	F	SU	F
1	*509-304	4	Medical Assistant Clinical Procedures 1	Prereq: Program Admission; Coreq: 509-303	S	F	SU	F
1	*509-302	3	🎓 Human Body in Health and Disease	Prereq: Program Admission; Coreq: 501-101	S+	F+	SU+	F+
1	*501-107	2	Digital Literacy for Healthcare		S+	F+	SU+	F+
1	*501-101	3	🎓 Medical Terminology <sup>4,9</sup>	Prereq: 838-105	S+	F+	SU+	F+
2	*509-305	2	Medical Assistant Lab Procedures 2	Prereq: Program Admission; 509-303; Coreq: 509-306	SU	S	F	S
2	*509-306	3	Medical Assistant Clinical Procedures 2	Prereq: Program Admission; 509-303; 509-304 Coreq: 509-305	SU	S	F	S
2	*509-307	2	Medical Office Insurance & Finance	Prereq: Program Admission; 501-107; 509-302	SU+	S+	F+	S+
2	*509-308	2	Pharm for Allied Health	Prereq: Program Admission; 509-302	SU+	S+	F+	S+
2	*509-309	2	Medical Law, Ethics and Professionalism	Prereq: Program Admission; Coreq: 801-301 OR 801-136	SU+	S+	F+	S+
2	801-301 OR 801-136	1 OR 3	Writing Principles <sup>4</sup> OR English Composition 14 <sup>9</sup>	Prereq: 851-756 Prereq: 831-103 OR 831-107	SU	S	F	S
3	*509-310	3	Medical Assistant Practicum <sup>6,7</sup>	Prereq: Program Admission; Instructor Consent; Coreq: 509-305; 306; 307; 308; 309	F	SU	S	S

**Minimum Program Total Credits Required: 32**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

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(+) indicates this course must be taken online.

## Medical Assistant (31-509-1)

The *Medical Assistant* program's goal is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Medical assistants are multi-skilled health individuals who work in ambulatory settings such as clinics, group practices, and physicians' offices. The medical assistant is responsible for medical and surgical asepsis, taking vital signs, assisting the physician with examinations and surgery, administering ECGs and administering medications. The business/ administrative duties include patient reception, appointment making, record keeping, filing, bookkeeping, processing insurance claims, typing medical correspondence, transcription and microcomputer applications. Laboratory functions include specimen collection, performance of waived laboratory tests and work. Graduates find jobs as medical assistants, secretaries, medical laboratory assistants, phlebotomists, receptionists, medical insurance clerks and electrocardiogram technicians.

### Program Learning Outcomes

Graduates will be able to:

1. Perform medical office administrative functions
2. Provide patient care in accordance with regulations, policies, laws, and patient rights.
3. Perform medical laboratory procedures
4. Demonstrate professionalism in a healthcare setting
5. Demonstrate safety and emergency practices in a healthcare setting

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Minimum of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A liability fee is assessed for core courses.
2. There is a daily long-term exposure to latex products in this program. Those with latex sensitivity may find exp. to latex impossible to avoid in this environment.
3. When there has been a 1-year or more interruption between core (\*) courses and Medical Assistant Practicum (509-310), the student must enroll in and successfully complete, Update for Health Professionals (509-433) prior to the practicum.
4. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
5. Persons convicted of a felony are not eligible to sit for the certification exam unless the certifying board grants a waiver based on the mitigating circumstances listed in the Disciplinary Standards of the American Association of Medical Assistants.
6. Course 509-310 Medical Assistant Practicum is a 160-hour unpaid practicum experience that must be completed in order for students to successfully complete the MA program. In order to enroll in the practicum course, students must complete all other coursework, submit a completed health physical form and submit evidence of completion of courses 531-410B CPR-Healthcare Provider and 531-419A Medic First Aid.
7. Students should be advised that they will be assigned a clinical site affiliated with the campus where they have completed 509-305 and 509-306. Reassignment of clinical sites is subject to instructor approval.
8. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
9. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP) ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 North, Suite 158  
Clearwater, FL 33763  
(727) 210-2350  
<https://www.caahep.org>

Additional information on the Medical Assisting profession can be accessed at: [www.aama-ntl.org](http://www.aama-ntl.org)

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**Medical Assistant (31-509-1)**  
Technical Diploma  
**Effective 2020/2021**

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1	*509-301	2	Medical Assistant Admin Procedures	Prereq: Program Admission; Coreq: 501-107	SU+	S+	F+	S+
1	*509-302	3	Human Body in Health and Disease	Prereq: Program Admission; Coreq: 501-101	SU+	S+	F+	S+
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2	*509-307	2	Medical Office Insurance & Finance	Prereq: Program Admission; 501-107; 509-302	F+	SU+	S+	SU+
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2	*509-309	2	Medical Law, Ethics and Professionalism	Prereq: Program Admission; Coreq: 801-301 OR 801-136	F+	SU+	S+	SU+
2	801-301 OR 801-136	1 OR 3	Writing Principles <sup>4</sup> OR English Composition 1 <sup>4,9</sup>	Prereq: 851-756  Prereq: 831-103 OR 831-107	F	SU	S	SU
3	*509-303	2	Medical Assistant Lab Procedures 1	Prereq: Program Admission; Coreq: 509-304	S	F	SU	F
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4	*509-305	2	Medical Assistant Lab Procedures 2	Prereq: Program Admission; 509-303; Coreq: 509-306	SU	S	F	S
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5	*509-310	3	Medical Assistant Practicum <sup>6,7</sup>	Prereq: Program Admission; Instructor Consent; Coreq: 509-305; 306; 307; 308; 309	F	SU	S	SU

**Minimum Program Total Credits Required: 32**

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### Program Learning Outcomes

Graduates will be able to:

1. Perform medical office administrative functions
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### Graduation Requirements

1. Minimum 32 credits with an average of 2.0 or above.
  2. \*Minimum of 2.0 ("C") or above for each of these major courses.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A liability fee is assessed for core courses.
2. There is a daily long-term exposure to latex products in this program. Those with latex sensitivity may find exp. to latex impossible to avoid in this environment.
3. When there has been a 1-year or more interruption between core (\*) courses and Medical Assistant Practicum (509-310), the student must enroll in and successfully complete, Update for Health Professionals (509-433) prior to the practicum.
4. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
5. Persons convicted of a felony are not eligible to sit for the certification exam unless the certifying board grants a waiver based on the mitigating circumstances listed in the Disciplinary Standards of the American Association of Medical Assistants.
6. Course 509-310 Medical Assistant Practicum is a 160-hour unpaid practicum experience that must be completed in order for students to successfully complete the MA program. In order to enroll in the practicum course, students must complete all other coursework, submit a completed health physical form and submit evidence of completion of courses 531-410B CPR-Healthcare Provider and 531-419A Medic First Aid.
7. Students should be advised that they will be assigned a clinical site affiliated with the campus where they have completed 509-305 and 509-306. Reassignment of clinical sites is subject to instructor approval.
8. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
9. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

### Accreditation Statement

Gateway Technical College's Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP) ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 North, Suite 158  
Clearwater, FL 33763  
(727) 210-2350  
<https://www.caahep.org>

Additional information on the Medical Assisting profession can be accessed at: [www.aama-nfl.org](http://www.aama-nfl.org)

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





## Motorcycle, Marine and Outdoor Power Products (31-461-2)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E
1	890-155	1	Gateway to Success (G2S)		F
1	*461-307	2	Fundamental Shop Skills		F
1	*461-120	3	Small Power Equipment		F
1	*412-119	3	Mobile Electrical Systems		F
1	804-370	2	Mathematics I / Applied <sup>1</sup>	Prereq: 854-760	F
2	*442-102	2	Introduction to Welding		S
2	*461-306	2	Recreational Equipment Maintenance	Coreq: 461-307	S
2	*461-304	3	Outboard Engines	Prereq: 804-370; Coreq: 801-301; 801-302	S
2	*461-301	3	Hydraulic Systems	Prereq: 461-307	S
2	801-301	1	Writing Principles <sup>1</sup>	Prereq: 851-756	S
3	*461-302	2	Inboard Engines	Prereq: 461-120; 461-307	F
3	*461-303	3	Light Motorcycle Service	Prereq: 804-370	F
3	801-302	1	Speaking Principles		F

<b>Minimum Program Total Credits Required: 28</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Motorcycle, Marine and Outdoor Power Products (31-461-2)**

The Motorcycle, Marine and Outdoor Power Products program prepares students for a career in the motorcycle, outdoor powersports and marine engine service field. Learners will troubleshoot, service and repair related equipment including motorcycles, recreational power sport vehicles, snowmobiles, and marine engines. Extensive training in the specialty areas of two and four cycle engines, ignition and electrical systems, fuel and lubrication systems, induction and cooling systems, hydraulics, transmissions, and drivetrains will also be provided.

### **Program Learning Outcomes**

Graduates will be able to:

1. Repair brake systems.
2. Repair 2-stroke engine.
3. Repair 4-stroke engine.
4. Repair drive lines.
5. Repair electrical systems.
6. Repair suspension systems.
7. Repair fuel systems.
8. Repair hydraulic systems.
9. Develop a customer work order.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 27 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Nursing Assistant (30-543-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, K-E = Kenosha/evenings, R-D = Racine/days, R-E = Racine/evenings, E-D = Elkhorn/days, E-E = Elkhorn/evenings,  
F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	K-E	R-D	R-E	E-D	E-E
1	543-300	3	Nursing Assistant	Prereq: Program Admission; 838-105 OR 831-107	F/S/SU	F/S/SU	F/S/SU	F/S/SU	F/S/SU	F/S/SU

**Minimum Program Total Credits Required: 3**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.  
 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.  
 (\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Nursing Assistant (30-543-1)**

*Nursing Assistant*, offered numerous times throughout the district, prepares students to perform basic nursing skills in caring for clients in various health care settings. A certificate is awarded upon successful completion of this course and graduates are eligible to competency test for placement on the Wisconsin Nursing Assistant / Home Health Aide Registry.

### **Program Learning Outcomes**

Graduates will be able to:

1. Communicate and interact effectively with clients, family, and co-workers.
2. Maintain and protect client rights.
3. Report information and record observations.
4. Demonstrate the ethical and legal responsibilities of the NA/HHA.
5. Carry out the basic nursing skills required of the NA/HHA.
6. Provide for resident personal care and hygiene.
7. Assist with client rehabilitation and restorative care, promoting independence.
8. Assist clients with long-term, disabling conditions including dementia.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### **Graduation Requirements**

1. Minimum 3 credits with an average of 2.0 or above.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A liability fee is assessed on a per credit basis.
2. Clinical sites may require drug testing.
3. Successful completion of 543-300 will result in the student's eligibility to take the Wisconsin Competency Testing for certification as a Nursing Assistant.
4. Certificates will be issued upon successful completion of 543-300.
5. 543-300 is a 120-hour course – classroom / lab / clinical combined.
6. District-wide Nursing Assistant clinical uniform required: Navy Blue uniform top and blue uniform bottom.
7. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

The State of Wisconsin Regulatory Agency requires mandatory attendance of 120 hours for this course. There is an allowance of up to 8 hours absence/tardiness with mandatory documented homework assignments. If there is a college related cancellation of course time, mandatory make-up day(s) will be assigned to the course to ensure compliance with state regulations.

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Office Assistant (31-106-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	Gateway to Success (G2S)		F	F/S/SU
1	*106-021	3	Business Office Fundamentals		F	F/S/SU
1	*106-028	3	Office Technologies Essentials		F	F/S/SU
1	*106-137	3	Keyboarding Applications <sup>2</sup>		F	F/S/SU
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	F/S/SU
2	*106-019	1	Admin. Services Internship I	Prereq: Instructor Consent; 106-137 Coreq: 106-024; 804-135; 801-136	S	F/S/SU
2	*106-024	3	Professionalism in Business		S	F/S/SU
2	*106-025	3	Spreadsheets for Business	Prereq: 106-137	S	F/S/SU
2	*106-030	3	Word Processing for Business	Prereq: 106-137	S	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	F/S/SU
3	*106-026	3	Business Publications	Prereq: 106-137	SU	F/S/SU
3	801-196	3	Oral/Interpersonal Communication		SU	F/S/SU

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-106-6 Administrative Professional program can earn their associate degree by completing an additional 31 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Office Assistant (31-106-1)**

*Office Assistant* prepares individuals to fulfill the role of an office generalist. Participants will develop skills in keyboarding, filing, business mathematics, records control, and customer service. Office Assistant graduates will develop the computer skills necessary to succeed in the office environment. Participants will be given the opportunity to visit and observe area office assistants in action.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Maintain internal and external relationships.
5. Model professionalism in the workplace.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Minimum grade of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**Part-Time Pathway to Success**  
School of Business and Transportation

**Office Assistant (31-106-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D	O
1	890-155	1	📍 Gateway to Success (G2S)		F	F/S/SU
1	*106-021	3	Business Office Fundamentals		F	F/S/SU
1	*106-137	3	🎓 Keyboarding Applications <sup>2</sup>		F	F/S/SU
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	F/S/SU
2	*106-024	3	🎓 Professionalism in Business		S	F/S/SU
2	*106-028	3	Office Technologies Essentials		S	F/S/SU
2	804-135	3	Quantitative Reasoning <sup>1</sup>	Prereq: 834-109	S	F/S/SU
3	*106-025	3	Spreadsheets for Business	Prereq: 106-137	SU	F/S/SU
3	*106-030	3	Word Processing for Business	Prereq: 106-137	SU	F/S/SU
4	*106-019	1	Admin. Services Internship I	Prereq: Instructor Consent; 106-137; Coreq: 106-024; 804-135; 801-136	F	F/S/SU
4	*106-026	3	Business Publications	Prereq: 106-137	F	F/S/SU
4	801-196	3	Oral/Interpersonal Communication		F	F/S/SU

**Minimum Program Total Credits Required: 32**

Students interested in continuing into the 10-106-6 Administrative Professional program can earn their associate degree by completing an additional 31 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Office Assistant (31-106-1)**

*Office Assistant* prepares individuals to fulfill the role of an office generalist. Participants will develop skills in keyboarding, filing, business mathematics, records control, and customer service. Office Assistant graduates will develop the computer skills necessary to succeed in the office environment. Participants will be given the opportunity to visit and observe area office assistants in action.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Maintain internal and external relationships.
5. Model professionalism in the workplace.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 32 credits with an average of 2.0 or above.
2. \*Minimum grade of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





## Pharmacy Technician (31-536-1)

### Technical Diploma

### Effective 2020/2021

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**B-E = Burlington Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	B-E
1	890-155	1	Gateway to Success (G2S)		F/S
1	*536-110	3	Pharmacy Calculations <sup>2,3</sup>	Prereq: 834-109	F/S
1	*536-115	2	Pharmacy Law		F/S
1	*536-121	2	Fund. Reading Prescriptions		F/S+
1	*536-108	4	Pharmacy Services I <sup>3</sup>	Prereq: Instructor Consent; Coreq: 536-110; 536-115; 536-121	F/S
1	*536-105	2	Pharmacy Community Clinical <sup>4,5</sup>	Coreq: 536-108	F/S
2	*536-101	3	Sterile Tech for Pharm Tech	Prereq: 536-105; 536-108	S/F
2	*536-104	1	Pharmacy Benefit Management	Prereq: 536-105; 536-108	S/F+
2	*536-107	1	Pharmacy Distribution Systems	Prereq: 536-105; 536-108	S/F
2	*536-122	3	Pharmacology for Pharm Tech	Prereq: 536-105; 536-108	S/F+
2	*536-109	2	Pharmacy Services II	Prereq: 536-105; 536-108	S/F
2	*536-103	2	Pharmacy Hospital Clinical <sup>4,5</sup>	Prereq: 536-105; 536-108; Coreq: 536-101; 536-104; 536-107; 536-109; 536-122	S/F
3	801-196 OR 801-198	3	Oral/Interpersonal Communication OR Speech		SU/S+
3	*501-101	3	Medical Terminology <sup>1,3</sup>	Prereq: 838-105	SU/S+
3	196-191	3	Supervision		SU/S+

**Minimum Program Total Credits Required: 35**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates this course must be taken online.

## Pharmacy Technician (31-536-1)

The *Pharmacy Technician* diploma program is designed to prepare you to assist the pharmacist in preparation of drug products and prescriptions to be dispensed to the general public. The course of study covers one year of both academic and clerkship courses. This program is directed toward providing you with the skills and knowledge needed to obtain employment in either community or hospital pharmacies. Pharmacy technicians perform a variety of tasks including preparation of prescriptions, all types of record-keeping, inventory control, cash and credit transactions and third-party claims. Emphasis is placed on communication and customer relations in this health care occupation.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate personal /interpersonal knowledge and skills in the practice of pharmacy
2. Demonstrate foundational professional knowledge and skills for the practice of pharmacy
3. Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distributions, and disposal
4. Compound sterile and nonsterile medications
5. Follow established policies and procedures for procurement, billing, reimbursement and inventory management
6. Utilize pharmacy technology and informatics
7. Adhere to state and federal regulations governing the practice of pharmacy
8. Apply the principles of quality assurance to the practice of pharmacy

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

1. Minimum 35 credits with an average of 2.0 or above.
2. \*Minimum grade of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
2. Students must have received a "B-" or better in 834-109 Pre-Algebra.
3. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
4. Please note that your program requires additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing. These must be completed prior to the start date of clinical and valid through the end date of clinical.
5. Pharmacy Technician clinical courses are 130 hour unpaid clinical experiences. In order to enroll in the clinical course, students must complete other coursework, submit completed health physical form, and submit evidence of completion of course 531-410B CPR Healthcare Provider. Refer to program webpage under Admission Requirements section for full details.

### Certification

Two organizations, the Pharmacy Technician Certification Board and the Institute for the Certification of Pharmacy Technicians, administer national certification examinations. Certification is voluntary in most states, but is required by some states and employers. Some technicians are hired without formal training, but under the condition that they obtain certification within a specified period of time. To be eligible for either exam, candidates must have a high school diploma or GED, no felony convictions of any kind within 5 years of applying, and no drug or pharmacy related felony convictions at any point. For the PTCB exam, technicians must complete a PTCB-recognized education/training program or have equivalent work experience to be eligible to apply. The pharmacy technician program at Gateway Technical College is a PTCB- recognized education/training program. After certification, maintaining certification requires a fee and continuing education credits completed every 2 years.

### Accreditation Statement

This program is accredited by the Pharmacy Technician Accreditation Commission (PTAC), a collaboration of the American Society of Health-System Pharmacists (ASHP) and the Accreditation Council for Pharmacy Education (ACPE). This accredited program at Gateway Technical College offers both "entry level" and "advanced level" programs.

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**Pharmacy Technician (31-536-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**B-E = Burlington Center/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	B-E
1	890-155	1	Gateway to Success (G2S)		F/S+
1	*536-110	3	Pharmacy Calculations <sup>2,3</sup>	Prereq: 834-109	F/S
1	*536-115	2	Pharmacy Law		F/S
1	*536-121	2	Fund. Reading Prescriptions		F/S+
2	*536-108	4	Pharmacy Services I <sup>3</sup>	Prereq: Instructor Consent; Coreq: 536-110; 536-115; 536-121	S/F
2	*536-105	2	Pharmacy Community Clinical <sup>4,5</sup>	Coreq: 536-108	S/F
3	801-196 <b>OR</b> 801-198	3 <b>OR</b> 3	Oral/Interpersonal Communication <b>OR</b> Speech		SU/F/S+
3	*501-101	3	Medical Terminology <sup>1,3</sup>	Prereq: 838-105	SU/F/S+
3	196-191	3	Supervision		SU/F/S+
4	*536-107	1	Pharmacy Distribution Systems	Prereq: 536-105; 536-108	F/S
4	*536-122	3	Pharmacology for Pharm Tech	Prereq: 536-105; 536-108	F/S+
4	*536-109	2	Pharmacy Services II	Prereq: 536-105; 536-108	F/S
5	*536-101	3	Sterile Tech for Pharm Tech	Prereq: 536-105; 536-108	S/F
5	*536-104	1	Pharmacy Benefit Management	Prereq: 536-105; 536-108	S/F+
5	*536-103	2	Pharmacy Hospital Clinical <sup>4,5</sup>	Prereq: 536-105; 536-108; Coreq: 536-101; 536-104; 536-107; 536-109; 536-122	S/F

**Minimum Program Total Credits Required: 35**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

(\*) indicates this course must be taken online.

## Pharmacy Technician (31-536-1)

The *Pharmacy Technician* diploma program is designed to prepare you to assist the pharmacist in preparation of drug products and prescriptions to be dispensed to the general public. The course of study covers one year of both academic and clerkship courses. This program is directed toward providing you with the skills and knowledge needed to obtain employment in either community or hospital pharmacies. Pharmacy technicians perform a variety of tasks including preparation of prescriptions, all types of record-keeping, inventory control, cash and credit transactions and third-party claims. Emphasis is placed on communication and customer relations in this health care occupation.

### Program Learning Outcomes

Graduates will be able to:

1. Demonstrate personal /interpersonal knowledge and skills in the practice of pharmacy
2. Demonstrate foundational professional knowledge and skills for the practice of pharmacy
3. Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distributions, and disposal
4. Compound sterile and nonsterile medications
5. Follow established policies and procedures for procurement, billing, reimbursement and inventory management
6. Utilize pharmacy technology and informatics
7. Adhere to state and federal regulations governing the practice of pharmacy
8. Apply the principles of quality assurance to the practice of pharmacy

### Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

### Graduation Requirements

1. Minimum 35 credits with an average of 2.0 or above.
2. \*Minimum grade of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### Notes

1. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
2. Students must have received a "B-" or better in 834-109 Pre-Algebra.
3. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
4. Please note that your program requires additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing. These must be completed prior to the start date of clinical and valid through the end date of clinical.
5. Pharmacy Technician clinical courses are 130 hour unpaid clinical experiences. In order to enroll in the clinical course, students must complete other coursework, submit completed health physical form, and submit evidence of completion of course 531-410B CPR Healthcare Provider. Refer to program webpage under Admission Requirements section for full details.

### Certification

Two organizations, the Pharmacy Technician Certification Board and the Institute for the Certification of Pharmacy Technicians, administer national certification examinations. Certification is voluntary in most states, but is required by some states and employers. Some technicians are hired without formal training, but under the condition that they obtain certification within a specified period of time. To be eligible for either exam, candidates must have a high school diploma or GED, no felony convictions of any kind within 5 years of applying, and no drug or pharmacy related felony convictions at any point. For the PTCB exam, technicians must complete a PTCB-recognized education/training program or have equivalent work experience to be eligible to apply. The pharmacy technician program at Gateway Technical College is a PTCB- recognized education/training program. After certification, maintaining certification requires a fee and continuing education credits completed every 2 years.

### Accreditation Statement

This program is accredited by the Pharmacy Technician Accreditation Commission (PTAC), a collaboration of the American Society of Health-System Pharmacists (ASHP) and the Accreditation Council for Pharmacy Education (ACPE). This accredited program at Gateway Technical College offers both "entry level" and "advanced level" programs.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Refrigeration, Air Conditioning & Heating Service Technician (31-401-1)**

Technical Diploma  
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-D
1	890-155	1	Gateway to Success (G2S)		F
1	*601-110	3	Air Condition Fundamentals		F
1	*601-116	3	Mechanical Fundamentals		F
1	*601-304	3	HVAC Electricity/Electronics		F
1	804-370	2	Mathematics I/Applied	Prereq: 854-760	F
2	801-301	1	Writing Principles	Prereq: 851-760 OR 851-756	S
2	*601-121	3	Heating Systems	Prereq: 601-110	S
2	*601-128	3	Electrical Controls & Systems	Prereq: 601-304; Coreq: 804-370	S
2	*601-129	3	HVAC Systems	Prereq: 601-110; 601-116	S
2	801-302	1	Speaking Principles		S
2	*601-133	3	Refrigeration Fundamentals		S
3	*601-131	3	Heating Systems Applications <sup>4</sup>	Prereq: 601-121	SU
3	*601-147	3	Control Circuit Applications	Prereq: 601-128; 804-370	SU
3	*601-145	3	Electronic Energy Management	Coreq: 601-147	SU
3	*601-143	3	Refrigeration Applications <sup>4</sup>	Prereq: 601-110; 601-116; 601-133	SU

**Minimum Program Total Credits Required: 38**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Refrigeration, Air Conditioning and Heating Service Technician (31-401-1)**

*Refrigeration, Air Conditioning and Heating Technician* develops the skills and knowledge necessary for state and federal certification. Theory and practical hands-on experience in the troubleshooting, repair, and installation of residential and commercial HVAC/R systems are emphasized. Students will practice on modern and advanced equipment, incorporating microprocessor controls, and building automation technology. Topics covered during lecture and lab hours include complete heating, air conditioning and refrigeration systems, how components interact, and total system performance. Refrigerant handling certification is encouraged and is dependent upon successful completion by the individual student.

### **Program Learning Outcomes**

Graduates will be able to:

1. Install HVAC/R components
2. Service HVAC/R systems
3. Troubleshoot HVAC/R systems

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 38 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
4. Students who take 601-113 (Facility Operating Engineer LP) and 601-117 (Facility Operating Engineer HP) may omit these courses.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Refrigeration, Air Conditioning & Heating Service Technician (31-401-1)**

Technical Diploma  
Effective 2020/2021

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

K-E = Kenosha/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	K-E
1	890-155	1	Gateway to Success (G2S)		S
1	*601-110	3	Air Condition Fundamentals		S
1	*601-116	3	Mechanical Fundamentals		S
1	804-370	2	Mathematics I/Applied	Prereq: 854-760	S
2	601-304	3	HVAC Electricity/Electronics		SU
2	*601-133	3	Refrigeration Fundamentals		SU
2	*601-121	3	Heating Systems	Prereq: 601-110	SU
3	801-301	1	Writing Principles	Prereq: 851-760 OR 851-756	F
3	*601-128	3	Electrical Controls & Systems	Prereq: 601-304; Coreq: 804-370	F
3	*601-129	3	HVAC Systems	Prereq: 601-110; 601-116	F
4	801-302	1	Speaking Principles		S
4	*601-131	3	Heating Systems Applications <sup>4</sup>	Prereq: 601-121	S
4	*601-147	3	Control Circuit Applications	Prereq: 601-128; 804-370	S
5	*601-145	3	Electronic Energy Management	Coreq: 601-147	SU
5	*601-143	3	Refrigeration Applications <sup>4</sup>	Prereq: 601-110; 601-116; 601-133	SU

**Minimum Program Total Credits Required: 38**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Refrigeration, Air Conditioning and Heating Service Technician (31-401-1)**

*Refrigeration, Air Conditioning and Heating Technician* develops the skills and knowledge necessary for state and federal certification. Theory and practical hands-on experience in the troubleshooting, repair, and installation of residential and commercial HVAC/R systems are emphasized. Students will practice on modern and advanced equipment, incorporating microprocessor controls, and building automation technology. Topics covered during lecture and lab hours include complete heating, air conditioning and refrigeration systems, how components interact, and total system performance. Refrigerant handling certification is encouraged and is dependent upon successful completion by the individual student.

### **Program Learning Outcomes**

Graduates will be able to:

1. Install HVAC/R components
2. Service HVAC/R systems
3. Troubleshoot HVAC/R systems

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 38 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
3. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).
4. Students who take 601-113 (Facility Operating Engineer LP) and 601-117 (Facility Operating Engineer HP) may omit these courses.

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## Small Business Entrepreneurship (31-145-1)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, E-D = Elkhorn/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	E-D	O
1	890-155	1	Gateway to Success (G2S)		F	S	F
1	*104-101	3	Marketing Principles		F	S	F
1	*101-112	3	Accounting for Business		F	S	F
1	*103-143	3	Computers for Professionals <sup>2</sup>		F	S	F
1	*145-119	3	Entrepreneurship		F	S	F
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	S	F
1	*145-106	3	Entrepreneurship 3 – Operations MGMT	Coreq: 145-119	F	S	F
2	*145-120	3	Business Planning and Development	Prereq: 145-119	S	F	S
2	*104-105	3	Promotion Principles		S	F	S
2	*145-121	3	Small Business Ownership	Prereq: Instructor Consent; 801-136 Coreq: 145-120	S	F	S
2	*104-137	3	Digital Marketing		S	F	S
2	*104-104	3	Selling Principles		S	F	S

<b>Minimum Program Total Credits Required: 34</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Small Business Entrepreneurship (31-145-1)**

Creating your own path through entrepreneurship takes inspiration, dedication, and the knowledge of the technical skills necessary to operate a business. You can complete the technical diploma in Small Business Entrepreneurship in two semesters. The coursework combines business theory with applied application to your proposed business. Whether you are launching your own venture, working for a small business, or working as a project manager for a large firm, the skills you will develop in this program will be an asset to your career.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate an entrepreneurial mindset.
2. Develop a business canvas and/or plan.
3. Outline business operational plan.
4. Develop a small business marketing plan.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 34 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

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## Small Business Entrepreneurship (31-145-1)

Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**R-E = Racine/evenings, E-D = Elkhorn/days, O = Online, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	R-E	E-D	O
1	890-155	1	Gateway to Success (G2S)		F	S	F
1	*103-143	3	Computers for Professionals <sup>2</sup>		F	S	F
1	*145-119	3	Entrepreneurship		F	S	F
1	801-136	3	English Composition 1 <sup>1,2</sup>	Prereq: 831-103 OR 831-107	F	S	F
2	*101-112	3	Accounting for Business		S	F	S
2	*104-104	3	Selling Principles		S	F	S
2	*145-120	3	Business Planning and Development	Prereq: 145-119	S	F	S
3	*104-101	3	Marketing Principles		F	S	F
3	*145-106	3	Entrepreneurship 3 – Operations MGMT	Coreq: 145-119	F	S	F
4	*104-105	3	Promotion Principles		S	F	S
4	*104-137	3	Digital Marketing		S	F	S
4	*145-121	3	Small Business Ownership	Prereq: Instructor Consent; 801-136; Coreq: 145-120	S	F	S

<b>Minimum Program Total Credits Required: 34</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Small Business Entrepreneurship (31-145-1)**

Creating your own path through entrepreneurship takes inspiration, dedication, and the knowledge of the technical skills necessary to operate a business. You can complete the technical diploma in Small Business Entrepreneurship in two semesters. The coursework combines business theory with applied application to your proposed business. Whether you are launching your own venture, working for a small business, or working as a project manager for a large firm, the skills you will develop in this program will be an asset to your career.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate an entrepreneurial mindset.
2. Develop a business canvas and/or plan.
3. Outline business operational plan.
4. Develop a small business marketing plan.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 34 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A credit for prior learning assessment is available for this course. For more information, please contact [cfpl@gtc.edu](mailto:cfpl@gtc.edu).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Truck Driving (30-458-1)**  
Technical Diploma  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.  
All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**HZ-D = Horizon Center/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	HZ-D
1	*458-301	3	CDL & Inspection Law and Logistics	Prereq: Program Admission	F/S/SU
1	*458-302	4	CDL License, Driving Skills, Safety	Prereq: 458-301	F/S/SU
1	*458-303	3	Continuous Improvement & Hazard Safety	Prereq: 458-302	F/S/SU

**Minimum Program Total Credits Required: 10**

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.  
 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.  
 (\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Truck Driving (30-458-1)**

Professional truck drivers for local, regional, and over the road jobs are in high demand. Become part of this exciting industry. This 360-hour course covers all aspects from obtaining your Commercial Learner's Permit (CLP) to the opportunity to obtain your Commercial Driver's License (CDL). You will learn how to safely operate a tractor trailer, laws and regulations, maintenance, vehicle systems and safety.

#### **Program Learning Outcomes**

Graduates will be able to:

1. Perform basic truck driving operations.
2. Adhere to safe truck driving operating procedures.
3. Explain advanced operating practices.
4. Explain vehicle systems and reporting malfunctions.
5. Comply with non-driving activity activities.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.
3. Participants must have a valid Wisconsin Driver's License.
4. Participants must pass a Department of Transportation (DOT) physical and drug screen.

#### **Graduation Requirements**

1. Minimum 10 credits with an average of 2.0 or above.
  2. \*Average of 2.0 ("C") or above for these major courses.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. Participants must be 18 years of age or older.
2. Participants must be able to speak and read English.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Full-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Welding (31-442-1)**

Technical Diploma

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

**E-D = Elkhorn/days, R-D = Racine/days, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	R-D
1	890-155	1	📍 Gateway to Success (G2S)		F	S
1	*442-321	3	Welding / Gas Metal Arc Welding		F	S
1	*442-322	3	Welding / Shielded Metal Arc Welding		F	S
1	*442-323	3	Welding / Gas Tungsten Arc Welding		F	S
1	*442-334	3	Welding / Oxyacetylene		F	S
1	804-370	2	Mathematics I / Applied <sup>1</sup>	Prereq: 854-760	F	S
2	*442-324	2	Weld Printreading & Fab. Procedures		S	SU
2	*457-309	2	🎓 Metal Fabrication I		S	SU
2	*442-330	3	Welding / Adv. Shielded Metal Arc Welding	Prereq: 442-322	S	SU
2	*442-332	3	Welding / Adv. Gas Metal Arc Welding	Prereq: 442-321	S	SU
2	*442-333	3	Welding / Adv. Gas Tungsten Arc Welding	Prereq: 442-323	S	SU
3	*457-336	3	Metal Fabrication II	Prereq: 457-309; 442-324; 442-321; 442-322 or 442-323	SU	F
3	*457-337	3	Metal Fabrication III	Prereq: 804-370; Coreq: 457-336	SU	F
3	*442-308	3	Welding / Pipe Shield Metal Arc Welding	Prereq: 442-322	SU	F
3	*442-307	3	Welding / Pipe Gas Tungsten Arc Welding	Prereq: 442-322; 442-323	SU	F
3	*442-306	3	Welding / Pipe Gas Metal Arc Welding	Prereq: 442-321	SU	F

**Minimum Program Total Credits Required: 43**

**AVAILABLE CONCENTRATION: ROBOTICS – ONLY AVAILABLE AT THE ELKHORN CAMPUS**

Instead of these courses	Take these alternates	Cr.	E-D
*442-308 Welding / Pipe Shield Metal Arc	*442-303 Welding / Basics of Robotic Welding Prereq: 442-321	3	SU
*442-307 Welding / Pipe Gas Tungsten Arc	*442-305 Welding / Robotic Adv GTAW	3	SU
*442-306 Welding / Pipe Gas Metal Arc	*442-304 Welding / Robotic Adv GMAW	3	SU

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Welding (31-442-1)**

*Welding* provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short circuit); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc), including robotic welding and cutting.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate Industry recognized safety practices.
2. Interpret molding drawings.
3. Produce shielded metal arc welds (SMAW).
4. Produce gas metal arc welds (GMAW).
5. Produce Flux Cored welds (FCAW).
6. Produce gas tungsten arc welds (GTAW).
7. Perform cutting operations.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 43 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Students are required to have an arc welding helmet, oxy-acet goggles, welding gloves (leather), pliers, and tape measure. Students must be prepared to bring their own equipment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**





**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Welding (31-442-1)**

Technical Diploma

**Effective 2020/2021**

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

E-D = Elkhorn/days, E-E = Elkhorn/evenings, R-D = Racine/days, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	E-E	R-D	R-E
1	890-155	1	📍 Gateway to Success (G2S)		F	S	S	F
1	*442-334	3	Welding / Oxyacetylene		F	S	S	F
1	*442-322	3	Welding / Shielded Metal Arc Welding		F	S	S	F
1	804-370	2	Mathematics I / Applied <sup>1</sup>	Prereq: 854-760	F	S	S	F
2	*442-323	3	Welding / Gas Tungsten Arc Welding		S	SU	SU	S
2	*442-324	2	Weld Printreading & Fab. Procedures		S	SU	SU	S
2	*442-321	3	Welding / Gas Metal Arc Welding		S	SU	SU	S
2	*457-309	2	🎓 Metal Fabrication I		S	SU	SU	S
3	*442-330	3	Welding / Adv. Shielded Metal Arc Welding	Prereq: 442-322	SU	F	F	SU
3	*442-332	3	Welding / Adv. Gas Metal Arc Welding	Prereq: 442-321	SU	F	F	SU
3	*442-333	3	Welding / Adv. Gas Tungsten Arc Welding	Prereq: 442-323	SU	F	F	SU
4	*457-336	3	Metal Fabrication II	Prereq: 457-309; 442-324; 442-321; 442-322 or 442-323	F	S	S	F
4	*457-337	3	Metal Fabrication III	Prereq: 804-370; Coreq: 457-336	F	S	S	F
4	*442-308	3	Welding / Pipe Shield Metal Arc Welding	Prereq: 442-322	F	S	S	F
5	*442-307	3	Welding / Pipe Gas Tungsten Arc Welding	Prereq: 442-322; 442-323	S	SU	SU	S
5	*442-306	3	Welding / Pipe Gas Metal Arc Welding	Prereq: 442-321	S	SU	SU	S

**Minimum Program Total Credits Required: 43**

<b>AVAILABLE CONCENTRATION: ROBOTICS</b>							
<b>Instead of these courses</b>		<b>Take these alternates</b>		<b>Cr.</b>	<b>E-D</b>	<b>E-E</b>	
*442-308	Welding / Pipe Shield Metal Arc	*442-303	Welding / Basics of Robotic Welding	Prereq: 442-321	3	F	S
*442-307	Welding / Pipe Gas Tungsten Arc	*442-305	Welding / Robotic Adv GTAW		3	S	SU
*442-306	Welding / Pipe Gas Metal Arc	*442-304	Welding / Robotic Adv GMAW		3	S	SU

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

## **Welding (31-442-1)**

*Welding* provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short circuit); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc), including robotic welding and cutting.

### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate Industry recognized safety practices.
2. Interpret molding drawings.
3. Produce shielded metal arc welds (SMAW).
4. Produce gas metal arc welds (GMAW).
5. Produce Flux Cored welds (FCAW).
6. Produce gas tungsten arc welds (GTAW).
7. Perform cutting operations.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

### **Graduation Requirements**

1. Minimum 43 credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
3. Students are required to have an arc welding helmet, oxy-acet goggles, welding gloves (leather), pliers, and tape measure. Students must be prepared to bring their own equipment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR/EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**



**Part-Time Pathway to Success**

School of Manufacturing, Engineering, and Information Technology

**Welding/Maintenance & Fabrication (30-442-2)**

Technical Diploma

**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**E-D = Elkhorn/days, E-E = Elkhorn/evenings, R-D = Racine/days, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer**

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	E-D	E-E	R-D	R-E
1	*442-321	3	Welding / Gas Metal Arc Welding		F/S/SU	F/S/SU	F/S/SU	F/S/SU
1	*442-322	3	Welding / Shielded Metal Arc Welding		F/S/SU	F/S/SU	F/S/SU	F/S/SU
1	*442-323	3	Welding / Gas Tungsten Arc Welding		F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*442-324	2	Weld Printreading & Fab. Procedures		F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*442-334	3	Welding / Oxyacetylene		F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*457-309	2	Metal Fabrication I		F/S/SU	F/S/SU	F/S/SU	F/S/SU

**Minimum Program Total Credits Required: 16**

Students interested in continuing into the 31-442-1 Welding program can earn their technical diploma by completing an additional 27 credits. Please see your academic advisor for details.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

= Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(\*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Welding/Maintenance & Fabrication (30-442-2)**

*Welding/Maintenance & Fabrication* provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding and cutting; GMAW-gas metal arc welding (wire, MIG, short circuit); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc).

#### **Program Learning Outcomes**

Graduates will be able to:

1. Demonstrate industry-recognized safety practices.
2. Interpret welding drawings.
3. Produce shielded metal arc welds (SMAW).
4. Produce gas metal arc welds (GMAW).
5. Perform cutting operations.

#### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

#### **Admission Requirements**

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

#### **Graduation Requirements**

1. Minimum 16 credits with an average of 2.0 or above.
  2. \*Average of 2.0 ("C") or above for these major courses.
- For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

#### **Notes**

1. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
2. Students are required to have an arc welding helmet, oxy-acet goggles, welding gloves (leather), pliers, and tape measure. Students must be prepared to bring their own equipment.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.



**Urban Farming (10-810-20)**  
Associate of Applied Science  
**Effective 2020/2021**

*The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here. All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.*

**K-D = Kenosha/days, F=Fall, S=Spring, SU=Summer**

<b>Term</b>	<b>Course #</b>	<b>Cr.</b>	<b>Course Title</b>	<b>Requisites (prereq- before/ coreq-with)</b>	<b>K-D</b>
1	*001-142	3	Vegetable Science		SU
1	*001-108	3	Business of Urban Farming	Prereq: Instructor Consent	SU
2	*001-109	3	Urban Farming and Market Gardening		F
2	*145-119	3	Entrepreneurship		F

<b>Minimum Program Total Credits Required: 12</b>
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Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.  
(\* ) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.

### **Urban Farming (10-810-20)**

The *Urban Farming* ATC will enable completers to intensively farm small plots of land and bring their crops to market profitably. The certificate will combine intensive farming curriculum with entrepreneurship and business methods training.

### **Equivalency**

This program is designed for students who have completed one of the following Gateway Technical College Associate Degrees (or have the equivalent knowledge and skills):

Horticulture 10-001-1

Equivalency can be earned through a combination of prior class work and/or current work experience. For equivalency information, call the campus advisor.

### **Essential Career Competencies**

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication Competence
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

### **Admission Requirements**

1. Related associate degree (official transcript required) or equivalent work experience (documented by advisor) required.

### **Graduation Requirements**

1. \*Minimum of 2.0 ("C") or above for these major courses. For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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## Certificates of Completion

In addition to the state-approved Associate Degrees, Technical Diplomas, and Advanced Technical Certificates that are part of the degree-granting programs at Gateway, a variety of Gateway Certificates are also offered. The courses required to complete these certificates are selected from various degree programs to meet specific and unique occupational needs. Students must complete a certificate program with a minimum of a 2.0 Program GPA. The following list represents those programs which will be provided by Gateway during the 2020-2021 academic year. Additional information about the certificates can be found at [gtc.edu/certificates](http://gtc.edu/certificates).

### **Accounting – Elkhorn-Kenosha-Racine Campuses & Online**

Small Business Accounting (90-101-1)	19 Credits
Personal Financial Planning (90-101-2) ( <i>Online Only</i> )	10 Credits
Tax Preparer Assistant (61-101-2)	11 Credits
Payroll Assistant (61-101-3)	15 Credits

### **Administrative Professional– Kenosha Campus & Online**

Computer Applications (90-106-5)	9 Credits
Office Skills Intermediate (90-106-7)	12 Credits
Office Skills Advanced (90-106-8)	18 Credits
Customer Service (90-106-10)	7 Credits
Business Professional Essentials (61-106-1)	15 Credits
Receptionist (61-106-3)	12 Credits

### **Advanced Manufacturing Technology – iMET Center-Lakeview Center-Elkhorn Campus**

Introductory Industry 4.0 (90-664-1)	8 Credits
Advanced Manufacturing Specialist (90-664-2) ( <i>iMET Center Only</i> )	22 Credits

### **Automotive Technology – Horizon Center**

Automotive Under Car Technician (61-602-1)	11 Credits
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### **Civil Engineering Technology – Highway Technology – iMET Center-Elkhorn Campus**

Material Testing Inspector (61-607-1)	9 Credits
Drone Mapping (90-607-1)	8 Credits
Geographical Information Systems (90-607-2)	6 Credits

### **CNC Production Technician – Elkhorn Campus & iMET Center**

CNC Operator (61-444-3)	13 Credits
Quality Control Technician (90-444-2)	13 Credits

### **Cosmetology – Racine and Burlington Campuses**

Nail Technician (90-502-1)	9 Credits
Retail Beauty Advisor (61-502-1)	4 Credits
Wisconsin Cosmetology License Bridge (90-502-2)	3 Credits

### **Criminal Justice Studies – Kenosha & Racine**

Security Professional (61-504-6)	12 Credits
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### **Culinary Arts – Elkhorn & Racine Campuses**

Baking and Pastry Arts (61-316-3)	11 Credits
Basic Cooking Skills (61-316-4)	13 Credits

## Certificates of Completion

### Developmental Education – Kenosha Campus

Intensive English Program: Beginning (90-863-1)	20 Credits
Intensive English Program: Intermediate (90-863-2)	20 Credits
Intensive English Program: Advanced (90-863-3)	20 Credits

### Diesel Equipment Mechanic – Horizon Center

Industrial/Mobile Hydraulic Mechanic (90-412-1) <i>(Kenosha Only)</i>	14 Credits
Diesel Mechanic's Assistant (61-412-1)	13 Credits

### Early Childhood Education – Racine Campus & Online

Preschool Credential (90-307-6)	18 Credits
Inclusion Credential (90-307-5) <i>(Online Only)</i>	12 Credits
Infant/Toddler Credential (90-307-2) <i>(Online Only)</i>	12 Credits
Child Care Basics (61-307-6)	6 Credits
Child Care Teacher (61-307-5)	18 Credits
Administrator's Credential (90-307-7) <i>(Online Only)</i>	18 Credits

### Electrical Engineering Technology – Elkhorn-Kenosha-Racine-iMET Campuses

Technical Education Pre-Licensure (90-662-1)	18 Credits
Biomedical Instrumentation and Safety (90-662-2) <i>(iMET Only)</i>	7 Credits

### Electromechanical Maintenance Technician – Elkhorn Campus & Lakeview Center

Mechanical Maintenance Technician (61-620-3)	10 Credits
Integrated Manufacturing (90-620-1) <i>(Elkhorn Only)</i>	17 Credits
Fanuc Robot Certification (90-620-2)	3 Credits

### Foundations of Teacher Education – Online

Intro to Paraeducator Careers (61-522-1)	12 Credits
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### General Studies – World Languages – Kenosha and Racine Campuses

Spanish Proficiency (90-802-1)	16 Credits
Spanish Proficiency for Healthcare Providers (90-802-2)	15 Credits
Spanish Proficiency for Law Enforcement (90-802-3)	15 Credits

### Graphic Communications – Elkhorn-Racine Campuses & Online

Desktop Publishing (90-204-1) <i>(Not online)</i>	14 Credits
Digital Photography (90-204-6)	12 Credits

### Greenhouse Operations – Kenosha Campus

Professional Floral Design (90-001-4)	12 Credits
Permaculture Design (90-001-7)	3 Credits
Environmental Studies (90-001-8)	3 Credits
Horticulture Basics (61-001-4) <i>(also offered on the Elkhorn Campus)</i>	9 Credits

### Health and Human Services – Racine Campus

Aspects of Disabilities (90-520-1)	18 Credits
Gerontology (90-520-2)	18 Credits
Child Welfare (90-520-3)	18 Credits
Alcohol & Other Drug Abuse (AODA) (90-550-1)	24 Credits



## Certificates of Completion

<b>Hospitality Management – Kenosha/Online</b>	
Hospitality Essentials (61-109-1)	9 Credits
<b>Information Technology – Elkhorn &amp; Racine Campuses &amp; Online</b>	
Programmer/Analyst - AS/400 (90-107-2) ( <i>Racine only</i> )	23 Credits
Game Programming (90-152-5) ( <i>Racine Only</i> )	16 Credits
Google IT Support Professional (90-154-3) ( <i>Elkhorn &amp; Racine only</i> )	5 Credits
IT – Full Stack Web Developer Certificate (90-152-6) ( <i>Online only</i> )	12 Credits
<b>Interior Design – Kenosha Campus</b>	
Fundamentals of Interior Design (90-304-1)	9 Credits
History of Design and the Decorative Arts (90-304-2)	9 Credits
Introduction to the Visual Language of Design (90-304-3)	9 Credits
Sustainable Design (90-304-4)	13 Credits
Technology for Interior Design (90-304-5)	12 Credits
<b>Leadership Development – Online</b>	
Human Resources Management (90-196-10)	10 Credits
Leadership Essentials (61-196-4)	10 Credits
Technical Supervisor (90-196-13)	10 Credits
<b>Marketing – Elkhorn-Kenosha-Racine Campuses &amp; Online</b>	
Marketing/Sales (90-104-2) ( <i>Not online</i> )	12 Credits
Sports and Event Marketing (90-104-7)	15 Credits
<b>Nursing-Associate Degree – Kenosha Campus-Burlington Center</b>	
Medication Assistant (90-543-2) ( <i>Elkhorn/Kenosha</i> )	3 Credits
RN Refresher I – Theory/Lab (90-543-3)	3 Credits
RN Refresher II – Clinical (90-543-4)	3 Credits
<b>Pharmacy Technician – Burlington Campus</b>	
Pharmacy Technician Fundamentals (61-536-2)	16 Credits
<b>Professional Communications – Racine Campus &amp; Online</b>	
Professional Communications Specialization (90-699-1)	12 Credits
Advanced Professional Communications (90-699-2)	24 Credits
Copywriter (90-699-3)	15 Credits
Grant Writer (90-699-6)	12 Credits
Technical Journalist (90-699-7)	21 Credits
Technical Writer (90-699-8)	15 Credits
Web Content Writer (90-699-9)	15 Credits
<b>Small Business Entrepreneurship – Elkhorn-Racine Campuses &amp; Online</b>	
Entrepreneurship (90-145-1)	9 Credits
<b>Welding – Elkhorn-iMET Campuses</b>	
Advanced Gas Metal Arc Welding (90-442-1)	8 Credits

## Certificates of Completion

### **General Studies Transfer Agreement with UW Parkside – All Campuses**

General Studies Transfer Certificate (90-800-2z)

30 Credits

### **General Studies Transfer Agreement with Mount Mary College – All Campuses**

Mount Mary General Studies Transfer Certificate (90-800-3)

30 Credits

The apprenticeship program is part of the Wisconsin educational system which prepares people for skilled occupations. Gateway Technical College, in cooperation with employers, Joint Apprenticeship Committees, and the Wisconsin Department of Workforce Development—Bureau of Apprenticeship Standards, provides the related instruction for persons who are under contract as apprentices in Kenosha, Racine, and Walworth counties under the Wisconsin Apprenticeship Law.

The following list contains apprenticeship-related instruction currently being offered at Gateway.

### **Service Trades**

#### **Barber**

2 years – 2,000 hours training and instruction

Barbers cut, trim, shampoo, style hair, provide hair and scalp treatments, shave male customers, and give facial massages. Barbers keep their work area and tools clean and sanitized.

#### **Cosmetologist**

2 years – 4,000 hours training and instruction

Cosmetologists cut, trim, shampoo, style, straighten, permanent wave, and color hair, as well as give manicures and scalp and facial treatments. They advise patrons how to care for their hair. Cosmetologists keep their work area and implements clean and sanitized.

#### **Wastewater Treatment**

3 years – 6,000 hours training and instruction

Wastewater treatment plant operators (WWTPOs) monitor, operate, and adjust a wide variety of systems used in the treatment of wastewater. They control plant processes to ensure the plant operates effectively. They routinely monitor laboratory data, charts, and computer control systems, which indicate performance status of a wide variety of biological nutrient and chemical removal.

### **Construction Trades**

#### **Construction Electrical**

5 years – 8,680 hours training and instruction

An electrician reads blueprints and installs materials for transmission of electricity to equipment for lighting, heating, and cooling. They may repair existing wiring and fixtures or inspect installations for conformity of electrical, fire, and safety codes.

## **HVAC**

5 years – 8,400 hours training and instruction

HVAC technicians install, maintain, and repair heating, ventilation, and air-conditioning systems. HVAC technicians must be able to understand the operating principles of different systems such as oil-fired furnaces and commercial refrigerators and to interpret written specifications.

## **Plumbing**

5 years – 8,000 hours training and instruction

Plumbers install and repair pipes for water, gas, sewage, and drainage systems. They install sanitary facilities such as toilets, tubs, bathroom fixtures, showers, kitchen fixtures, drinking fountains, and laundry equipment to code using hand and power tools as well as welding equipment.

## **Industrial Trades**

### **Industrial Manufacturing Technician**

18 months – 3,264 hours training and instruction

Operates and sets up production equipment, interprets technical information and demonstrates continuous process improvement.

### **Machine Repair**

4 years – 8,896 hours training and instruction

Operates, repairs, and maintains machinery and equipment in an industrial environment.

### **Machinist**

4 years – 8,000 hours training and instruction

Use machine tools such as lathes and milling machines to produce precision-machined parts.

### **Maintenance Mechanic/Millwright**

4 years – 8,000 hours training and instruction

Uses blueprints to install or move machinery and equipment. Repairs equipment or facilities through methods such as pipefitting, pneumatics, welding, machining, and hydraulics.

### **Maintenance Technician**

5 years – 10,400 hours training and instruction

Works on mechanical and electrical equipment and machines in industrial settings. Mechanical includes installing equipment, repairing and replacing units, maintaining equipment and using machines. Electrical includes working with electrical drawings, troubleshooting electrical motors, AC and DC drives and PLCs (programmable logic controllers) along with solid state devices.

## **Mold Maker**

5 years – 10,000 hours training and instruction

Uses a wide variety of shop equipment, including CAD and CNC tools, to construct, repair and sometimes design the molds used to manufacture parts.

## **Tool and Die**

5 years – 10,100 hours training and instruction

Sets up and operates machine tools, analyzes specifications and assembles parts to make and repair toll as well as shaping metal in stamping and forging operations.

## **Applying for an Apprenticeship**

Apprenticeship selection is done by the individual employers or the Joint Apprenticeship Committee (JAC). Persons should apply with the employer or appropriate JAC (union).

## **Selection Standards**

Most employers prefer candidates for apprenticeships who are high school graduates or the equivalent and have the mechanical aptitude required to perform the job. Testing requirements vary depending on the trade area the applicant is interested in seeking.

## **Related Instruction**

Apprentices must attend related instruction for a minimum number of hours, which varies depending on the trade area. Gateway provides the required classroom instruction in subjects related to the trade.

## **Contact Information**

Apprenticeship Department  
Gateway Technical College - SC Johnson iMET Center  
2320 Renaissance Blvd., Room 211  
Sturtevant, WI 53177-1763  
262-564-2954  
apprenticeship@gtc.edu

[gtc.edu/apprenticeship](http://gtc.edu/apprenticeship)

**001-103**

### **Permaculture Design Certification**

**Credits: 3.00**

Permaculture draws from several disciplines including organic farming, agroforestry, integrated farming, sustainable community development, alternative/natural building and applied ecology. This course will teach participants techniques to reduce dependence on fossil fuels and increase the long term sustainability of their homes and communities. Integrating organic food production into urban landscapes is a major focus of the course. Students will receive a Permaculture Design Certificate upon successful completion of the course and a design project.

**001-104**

### **Greenhouse Systems**

**Credits: 3.00**

Identify greenhouse structural components and environmental controls such as heating, cooling and lighting systems. Plan production cycles, describe how new plants are selected from plant breeders and obtained from suppliers. Assemble a hydroponic system from start to finish. Learn to identify, propagate and care for foliage plants, bulbs and flowering greenhouse crops. Participate in field trips to greenhouse operations. **PREREQUISITES:** Complete course 001-151 - Greenhouse Crops minimum grade C

**001-105**

### **Dendrology and Silvics**

**Credits: 3.00**

Students explore how trees interact with their environment and with one another, at different spatial and temporal scales. Concepts developed in botany and ecology are further examined with an emphasis on woody plant classification and the life history and characteristics of forest trees. Skills acquired through this course are tree identification and the ability to identify where different tree species thrive. **PREREQUISITES:** Complete courses 001-118 - Landscape Plant Identification 801-136 - English Composition 1 804-135 - Quantitative Reasoning

**001-107**

### **Plant Biology for Horticulture**

**Credits: 3.00**

Study of structure and function of plants and how they are affected by light, water, temperature and nutrient availability. Labs include hands-on experience in potting, propagation, construction of dish gardens and terrariums.

**001-108**

### **Business of Urban Farming**

**Credits: 3.00**

This class will provide the skills to start and operate a fresh market vegetable business. Growing food is the first step, but we will teach you how to make smart decisions about marketing, pricing, capitalization and labor. You will become

aware of current opportunities in urban farming, explore objectives, assess personal and financial resources, conduct preliminary market research, and develop a business plan. We will discuss market gardening start-up, weekly sales targets, yield and pricing, organic certification, organic marketing and labeling, and analyze the value of CSA's, direct marketing and farmers' markets.

### **001-109**

#### **Urban Farming and Market Gardening**

**Credits: 3.00**

Sustainable, intensive urban farming forms the important basis for long-term profitability because it maintains quality soils that can provide long-term stable yields. Our hands-on training in biointensive organic growing methods will help you advance from gardening novice to professional urban farmer. Learn about fertility management, greenhouse use, season extension, pest management, equipment needs, planning and budgeting. The course will focus on building and managing healthy soil and understanding how soils, plants, animals, and people form a dynamic living organism. We will use this knowledge to explore the methods to grow organic, nutrient dense produce.

### **001-110**

#### **Tree Growth and Development**

**Credits: 2.00**

Students examine the biology of tree systems and explore tree growth and development. Compartmentalization of wounds and adaptation of trees to their surrounding and environment are emphasized. Through participation in this course, students will acquire a framework for arboriculture. **PREREQUISITES:** Complete course 001-118 - Landscape Plant Identification **COREQUISITES:** Complete courses 001-185 - Introduction to Horticulture 804-135 - Quantitative Reasoning 801-136 - English Composition 1

### **001-111**

#### **Horticulture Practicum**

**Credits: 3.00**

Work independently, or in small groups, with instructor and staff to gain in depth knowledge and experience in one of five program specialty areas; greenhouse growing , floral retailing and events, trial and display gardens, urban farm. Can also be used for internship with horticulture employer. **PREREQUISITES:** Course 001-147 - Soils and Plant Nutrition and 001-151 - Greenhouse Crops with a minimum grade of C

### **001-113**

#### **Ornamental Plant Health Care**

**Credits: 3.00**

This course focuses on classification and identification of ornamental plant insects, diseases, and injury caused by non-living agents. Students will examine the methods by which living organisms and non-living environmental factors cause plant damage. Skills in diagnostics, damage assessment, sample preparation, and control strategies are acquired. **PREREQUISITES:** Complete courses 001-105 - Dendrology and Silvics 001-188 - Integrated Pest Management 001-188 - Integrated Pest Management

**001-115****Tree Care Capstone****Credits: 1.00**

In this course, students integrate occupational skills with professional practice. Students examine tree care operations, communications, and planning by engaging in opportunities to report work performed, manage resources, and apply communication and interpersonal skills to a variety of occupational situations. Upon completion of the course, students will be able to provide clients with ethical and appropriate arboricultural scenarios. PREREQUISITES: Complete course 001-157 - Tree Care Practicum 2 with a minimum grade of C-, complete course 001-105 - Dendrology and Silvics with a minimum grade of C or TR

**001-117****Landscape Design/Advanced****Credits: 3.00**

Advanced study of landscaping designed to fine-tune landscape drawing techniques. Course focuses on landscape construction methods, Japanese-style design principles, designing for energy conservation and how to attract wildlife. Labs include drawing plans and blueprinting. PREREQUISITES: Course 001-140 - Landscape Design/Introduction

**001-118****Landscape Plant Identification****Credits: 2.00**

This course introduces students to woody shrub and tree identification of species commonly used in Wisconsin commercial and residential landscapes. Students develop techniques and basic skills necessary for plant identification and learn the cultural practices required to grow healthy woody plants.

**001-121****Tree Crew Practicum 1****Credits: 2.00**

Students acquire the basic skills and techniques employed by arborist who work on tree crews. Working aloft is limited in this course. Emphasis is placed on student development as a member of a working crew, acquiring skills in tree pruning, setting throwlines, ground work, and work site management. This course emphasizes the development of skills expected of Plant Health Care Technicians working in support of arboricultural tree care crews. PREREQUISITES: Complete course 001-124 - Fundamentals of Aerial Tree Work with a minimum grade of C

**001-122****Horticulture Business Operations****Credits: 3.00**

Simulated operation of horticulture industries utilizing principles of marketing, economics and office management. Includes hands-on practice on computers used in each branch of the horticulture industry. Field trips and practice work are involved.



**001-123****Tree Crew Practicum Capstone****Credits: 1.00**

Students integrate the skills learned through prior tree crew practicum courses with the fundamental framework developed in the arboricultural/urban forestry courses to explore methods to provide clientele with ethical and appropriate arboricultural recommendations. Students will also explore how to support a climber in an aerial rescue scenario and emergency protocol. Working aloft is limited in this course. PREREQUISITES: Complete course 001-187 - Tree Crew Practicum 2 with a minimum grade of C

**001-124****Fundamentals of Aerial Tree Work****Credits: 2.00**

Students examine the basic safety requirements, equipment, and techniques employed by arborist who work aloft. Using a rope-and-harness and an aerial lift, students develop the skills to conduct aerial arboriculture (tree care). An emphasis is placed on recognizing electrical hazards, tying knots, tree ascension, limb walking, and maneuvering through the tree canopy. Students who choose to remain on the ground learn the skills to assist a climber working aloft.

**001-125****Aerial Tree Work Practicum 1****Credits: 2.00**

Students use the skills attained in Fundamentals of Aerial Tree Work to develop the method and techniques utilized by arborist who work aloft. Students will identify tree pruning needs and create a work plan to ascend the tree and accomplish the goals set by their evaluation. This course will introduce students to ground and work site management, aerial rescue, and electrical hazard awareness. Learners will perform all tasks to industry standards. PREREQUISITES: Complete course 001-124 - Fundamentals of Aerial Tree Work with a minimum grade of C

**001-126****Aerial Tree Work Practicum 2****Credits: 2.00**

Students examine the theories behind technical rigging and acquire the skills for technical aerial tree removal in an urban setting. The course approaches the concept from a beginner level, building on the climbing and pruning abilities gained in prior aerial courses. Additional skills are acquired in tree cabling and bracing, single rope technique, and electrical hazard awareness. PREREQUISITES: Complete course 001-125 - Aerial Tree Work Practicum 1 with a minimum grade of C

**001-127****Aerial Tree Work Practicum Capstone****Credits: 1.00**

Students integrate the skills learned through prior aerial tree work practicum courses with the fundamental framework developed in the arboricultural/urban forestry courses to explore methods to provide clientele with ethical and appropriate

arboricultural recommendations. Students will also explore aerial rescue procedures and emergency protocol.

PREREQUISITES: Complete course 001-126 - Aerial Tree Work Practicum 2 with a minimum grade of C

### **001-128**

#### **Horticulture Marketing**

**Credits: 3.00**

Learn how plants and flowers are marketed locally and internationally. This class offers professional marketing techniques for garden centers, greenhouses and floral shops. Students visit garden centers, flower shops, wholesale suppliers and trade markets to identify trends and meet with managers. Students gain practical experience organizing a plant promotion including identifying the customer, purchasing and pricing plants, advertising.

### **001-129**

#### **Pesticide Applicator Certification**

**Credits: 1.00**

Learn how to apply pesticides safely and legally. This class prepares students to take the Wisconsin State pesticide applicator exam with the certification exam given during class. Anyone applying chemicals to someone else's property is required to obtain this certification.

### **001-130**

#### **Landscape Plants Trees/Shrubs Deciduous**

**Credits: 3.00**

Study of deciduous trees, shrubs, and vines grown for landscape use in residential and commercial settings. Examines environmental requirements, dormant characteristics, and landscape applications. Labs involve on-site identification of plant material. PREREQUISITES: Complete course 001-185 - Introduction to Horticulture with minimum grade C

### **001-132**

#### **Landscape Plants Evergreen**

**Credits: 3.00**

Continued emphasis on identification and evaluation of landscape plants with emphasis on evergreen landscape materials.

### **001-133**

#### **Chainsaw Safety and Operation**

**Credits: 2.00**

Students acquire the skills to safely operate a chainsaw in the arboricultural industry. Emphasis is placed on identifying the importance and adopting the methods of personal protective equipment, safe chainsaw operation, routine maintenance, and common chainsaw cutting techniques in accordance with best management practices and current industry standards. Students will develop chainsaw skills in a variety of field exercises that focus on techniques used in tree pruning and removal, including the by-pass cut, open face notching, bore cutting, and wedging.

**001-136**

**Landscape Management**

**Credits: 3.00**

Maintenance of industrial, public, institutional, and private grounds. Also covers operation and management of an ornamental nursery. Labs include pruning, balling and burlapping, procedures for preventing winter injury, and field trips.

**001-137**

**Greenhouse Business Planning**

**Credits: 3.00**

Evaluate annual and perennial flowers, cut flowers and vegetable plants in display gardens from international plant breeders. Determine production, scheduling and market for greenhouse crops. Discuss greenhouse and hoophouse construction, operation and mechanicals. Identify the role of hoophouses in providing local food through season extension. Identify greenhouse plants and foliage. Attend greenhouse conference and participate in field trips to growing operations and suppliers.

**001-138**

**Landscape and Turf Management Fall**

**Credits: 2.00**

Students acquire skills for the planning and installation of living and non-living landscape materials and turf through the exploration of landscape and turf management during the fall season. Both estimating and time management are emphasized in this course. PREREQUISITES: Complete courses 001-118 - Landscape Plant Identification and 001-173 - Urban Tree Maintenance with a minimum grade of C

**001-139**

**Landscape and Turf Management Spring**

**Credits: 2.00**

Students acquire skills for the planning and installation of living and non-living landscape materials and turf through the exploration of landscape and turf management during the spring season. Both estimating and time management are emphasized in this course. PREREQUISITES: Complete courses 001-118 - Landscape Plant Identification and 001-173 - Urban Tree Maintenance with a minimum grade of C

**001-140**

**Landscape Design/Introduction**

**Credits: 3.00**

Covers how to plan and draw a professional landscape design. Focuses on selecting correct plant material, proper placement, and uses of landscape construction elements. Practical design and drawing experience provided in lab.

**001-142**

**Vegetable Science**

**Credits: 3.00**

Students will study methods of vegetable gardening and become familiar with basic annual and perennial vegetables, herbs and edible flowers. Organic growing methods, composting, pest and disease control, and self-sustaining gardening methods will be discussed in detail. Field trips to local market gardens will be included in the course.

### **001-143**

#### **Herbaceous Plants**

**Credits: 3.00**

Learn to identify and care for annual and perennial flowering plants. Visit local gardens and professional sites to study plants and view design styles. Graphic skills used to create professional flower bed designs is also taught. Hands on experience propagating annuals and perennials and working with tropical foliage in the Gateway greenhouse is also included. COREQUISITES: Complete 001-185 - Introduction to Horticulture

### **001-144**

#### **Floral Design I/Commercial**

**Credits: 3.00**

The basic principles, elements, and mechanics of floral design are practiced. Identification, care and handling of flowers and foliage will be involved. Includes hands-on designing of corsages, primary arrangements and holiday arrangements.

### **001-146**

#### **Sustainable Landscape**

**Credits: 1.00**

Following guidelines set forth by the national Sustainable Site's Initiative students will learn how to improve the sustainability of urban landscapes. Identifying soil conditions, capturing storm water, using native plants, composting, waste and energy management are concepts learned in this class. Students have the opportunity to analyze their own property to find ways to improve sustainability while reducing chemical inputs and maintenance needs.

### **001-147**

#### **Soils and Plant Nutrition**

**Credits: 1.00**

Students will study physical, chemical and biological properties of soils. Soil conservation practices, plant nutrition and composting will be discussed in detail. Labs involve soil testing and soil improvement.

### **001-148**

#### **Plant Pests and Beneficials**

**Credits: 1.00**

Learn to identify the different lifecycle stages of plant pests in the greenhouse and landscape and how to control them using cultural, physical and biological control methods. Learn about beneficial insects and how to use predators, parasites and pathogens to control insects and diseases of plants.

**001-149**  
**Horticulture Events**  
**Credits: 3.00**

Educational seminars and workshops, celebrations, tours and travel are increasingly important to garden centers, botanic gardens and resorts. Learn to plan and organize horticulture and floral events from the initial planning stages through set up to break down and billing.

**001-150**  
**Floristry**  
**Credits: 3.00**

Practice skills learned in Floral Design 1 and expand knowledge to include: flower care and handling, visual merchandising and display, pricing floral products and services, customer service and sales, employee relations, specialty cut flowers and using local flowers, the wholesale and international floral trade. PREREQUISITES: Course 001-144 - Floral Design I/Commercial with a minimum grade of C or TR

**001-151**  
**Greenhouse Crops**  
**Credits: 3.00**

Focuses on growing cut flowers, potted plants and foliage plants in a greenhouse. Provides practical experience in growing/maintaining crops using equipment, and solving problems. Includes field trips to commercial greenhouse operations. COREQUISITES: Complete courses 801-136 - English Composition 1 and 804-135 - Quantitative Reasoning

**001-152**  
**Perennials**  
**Credits: 3.00**

This course covers the identification, growing and use of common herbaceous perennial plants in the landscape. Propagation, scheduling, and problem identification/solutions will also be taught.

**001-153**  
**Fruit Science**  
**Credits: 3.00**

Students will study methods of fruit growing and become familiar with basic cultivated tree fruits, small fruits, and native fruits and nuts. Organic growing methods, composting, pest and disease control, and self sustaining growing methods will be discussed in detail. Field trips to orchards and market fruit gardens will be included in the course.

**001-154**  
**Alternative Growing Methods**  
**Credits: 3.00**

Students will study emerging growing methods that are 'outside the box'. These include vertical wall gardening, green roofs, hydroponics, aquaponics, and other innovative growing techniques. PREREQUISITES: Complete course 001-104 -

Greenhouse Systems or 001-140 - Landscape Design/Introduction with minimum grade C and complete course 001-151 - Greenhouse Crops with minimum grade C

### **001-156**

#### **Tree Care Practicum 1**

**Credits: 2.00**

In this course, students examine ground and work site management, aerial rescue, and electrical hazard awareness. Building on acquired tree work skills, students develop occupational skills required by professional arborists. Students identify tree pruning needs, create a work plan to ascend the tree, and achieve the established goals. Students may complete the requirements of the course from aloft or from the ground. Upon completion of the course, students will be prepared to apply [basic] tree care methods, techniques, and behaviors of professional arborists. **PREREQUISITES:** Complete the following courses 001-124 - Fundamentals of Aerial Tree Work, 001-133 - Chainsaw Safety and Operation, 001-173 - Urban Tree Maintenance

### **001-157**

#### **Tree Care Practicum 2**

**Credits: 2.00**

In this course, students build on tree work skills acquired in Tree Care Practicum 1. In an urban setting, students practice supporting and conducting technical aerial tree removal. Students identify: methods of safe tree removal, aerial felling of branches, placement and use of rigging equipment, and chainsaw use in a tree. Safe and effective rigging operation techniques are emphasized. Methods to increase crew efficiency and support aerial crew members are presented and practiced. Upon completion of the course, students will be prepared to support and conduct aerial tree removal. **PREREQUISITES:** Complete course 001-156 - Tree Care Practicum 1 with a minimum grade C

### **001-158**

#### **Arboriculture/Urban Forestry Internship**

**Credits: 3.00**

In this course, students develop arboricultural occupational skills by working with an arboriculture-related employer. Students apply knowledge acquired in the classroom environment to a variety of tree care operations. They develop skills and experience and cultivate networking opportunities. Upon completion of this course, students will be able to assess their interests and abilities for jobs in the professional arboriculture industry. **PREREQUISITES:** Complete courses 001-156 - Tree Care Practicum 1 and 001-188 - Integrated Pest Management with minimum grades of C and complete course 001-110 - Tree Growth and Development with a minimum grade of C-

### **001-173**

#### **Urban Tree Maintenance**

**Credits: 2.00**

Students explore and develop skills in the art and science of tree pruning. Young tree training and mature tree maintenance are emphasized. Learners use tree pruning techniques and follow safety requirements set by current industry standards.

**001-178****Fruit and Vegetable Science****Credits: 3.00**

Students will study methods of vegetable and fruit gardening and become familiar with basic vegetables, tree fruits, and small fruits. Organic growing methods, composting, pest and disease control, and self-sustaining gardening methods will be discussed in detail. Field trips to market gardens and orchards will be central to the course.

**001-180****Horticulture Portfolio****Credits: 1.00**

This capstone course will provide horticulture students the opportunity to pull together portfolio elements created in several classes into a cohesive professional portfolio for use when starting the career search. The portfolio will include samples of work, letters of reference, resume, horticultural resources and other pertinent career search and employment information, which can be used during employment interviews. Students will develop a high-quality professional portfolio as the final project. PREREQUISITES: Courses 001-111 - Horticulture Practicum 001-128 - Horticulture Marketing 001-130 - Landscape Plants Trees/Shrubs Deciduous 001-143 - Herbaceous Plants 001-147 - Soils and Plant Nutrition 001-151 - Greenhouse Crops 801-136 - English Composition 1 804-135 - Quantitative Reasoning minimum grade C

**001-181****Advanced Studies - Plant Biology****Credits: 1.00**

Students examine plant biology with emphasis on growth, reproduction, and cellular morphological and physiological processes. PREREQUISITES: Complete course 806-184 - Plant Biology with a minimum grade of C

**001-182****Applied Landscape Architecture****Credits: 2.00**

Students examine the process of landscape design and acquire a structured approach to shaping outdoor settings for human use and enjoyment. Skills in graphic techniques are developed to communicate ideas in landscape plans through drawings and sketches. Students will develop experience in presenting landscape designs to large and small groups. PREREQUISITES: Complete course 001-118 - Landscape Plant Identification with minimum grade of C

**001-183****Applied Urban Forestry****Credits: 2.00**

Students acquire skills in techniques, tools, and pieces of equipment used to manage trees and tree populations that make up the urban forest. Students will explore tree inventory practices and pruning cycles used to maintain a city tree population. Students will also identify and examine the necessity of tree species diversity within urban environments. This course further explores arboricultural career options available from commercial, municipal, and utility employers. PREREQUISITES: Complete courses 001-105 - Dendrology and Silvics 001-110 - Tree Growth and Development 001-173 - Urban Tree Maintenance

**001-184****Ecological Basis for Natural Res Mgmt****Credits: 3.00**

Students explore the basic principles of ecology and examine their application in the management of natural resources. Exploration of the scientific method and interactions between and amongst species are emphasized. Students will acquire hands-on skills with measurements and data collection, research, preparation of technical reports, and use of computer models.

**001-185****Introduction to Horticulture****Credits: 3.00**

Students examine the science and profession of horticulture, including its role and importance of throughout history, current trends, and careers. Learners will identify horticulture crops, crop use and interrelationships among the environment, plant growth, and plant development.

**001-186****People, Resources, and Sustainability****Credits: 3.00**

Students examine the relationship between the human population and natural resources over time, and the effect of that relationship on sustainability. Global resources, environmental concerns, and the human dimensions of resource management are explored from biological, socioeconomic, and sustainability perspectives.

**001-187****Tree Crew Practicum 2****Credits: 2.00**

Students develop skills behind technical rigging and acquire the skills to operate as ground support for technical aerial tree removal in an urban setting. Working aloft is limited in this course. Students identify methods to increase crew efficiency and support aerial crew members by setting lines, rigging, and assisting in developing technical tree removal plans. Identifying and operating various friction devices and running ropes during the process of lowering rigged limbs is emphasized. Additional skills are acquired in equipment organization for tree cabling and the installation of tree bracing. Electrical hazard awareness is examined. **PREREQUISITES:** Complete course 001-121 - Tree Crew Practicum 1 with a minimum grade of C

**001-188****Integrated Pest Management****Credits: 2.00**

Students examine insect and pest identification, and are introduced to the diagnosis of tree health issues. The course explores how to manage tree health through invasive and non-invasive practices. Students will develop skills in chemical handling, mixing, calibration, and application via field exercises. Using the tools learned in the course, students will be



prepared to take the Wisconsin Department of Agriculture and Consumer Protection's pesticide applicator exam which is proctored in the class.

### **001-198**

#### **Introduction to Soil & Water Resources**

**Credits: 3.00**

Students explore integrated concepts of soil and water resources at the landscape level. The course examines how physical, chemical, and biological interactions relate to watershed processes, and how these interactions respond to land use and management. **PREREQUISITES:** Complete courses 001-184 - Ecological Basis for Natural Res Mgmt 001-185 - Introduction to Horticulture 001-186 - People, Resources, and Sustainability

### **001-199**

#### **Intro to Fish, Forestry, & Wildlife Res**

**Credits: 3.00**

Students investigate the framework for fundamental natural resource disciplines by examining the principles and practices of fisheries, forest management, and wildlife management. This course also examines how goods can be produced and services provided while maintaining ecosystem integrity and functions.

### **091-101**

#### **Animal Care and Management**

**Credits: 3.00**

In this course, students explore basic nutrition, housing needs, and behavior of common domestic animals to develop skills that enable them to assess animal condition. Upon completion of this course, students will be able to obtain a thorough history, perform a physical exam, administer medications, collect samples, and use proper restraint techniques **COREQUISITES:** Course 806-105 - Principles of Animal Biology

### **091-102**

#### **Veterinary Business Practices**

**Credits: 3.00**

In this course, students develop practical workplace techniques for veterinary office procedures to develop customer service and veterinary team support skills. Upon completion of this course, students will be able to use veterinary software to manage records and financial applications, maximize client interactions, and participate in day-to-day operations of a veterinary facility. **COREQUISITES:** Course 091-101 - Animal Care and Management

### **091-103**

#### **Clinical Pathology I for Vet Sciences**

**Credits: 4.00**

In this course, students examine basic laboratory equipment and procedures, as well as features of common veterinary diseases, to acquire skills needed to perform various diagnostic tests. Upon completion of this course, students will be able to collect and process appropriate samples for hematology, blood chemistry, urinalysis, and parasitology, and

correlate veterinary clinical pathology findings to clinical signs. PREREQUISITES: Courses 091-101 - Animal Care and Management and 091-102 - Veterinary Business Practices with a minimum grade of C or TR Course 806-105 - Principles of Animal Biology with a minimum grade of B

#### **091-104**

##### **Clinical Pathology II for Vet Sciences**

**Credits: 4.00**

In this course, students examine additional laboratory procedures and other veterinary disease processes to establish understanding of appropriate methodology and recognition of accurate results. Upon completion of this course, students will be able to collect and process appropriate samples for mycology, cytology, serology, endocrinology, and coagulation and reproductive evaluations, and correlate veterinary clinical pathology findings to clinical signs. COREQUISITES: Complete courses 091-106 - Surgical Procedures II for Vet Sciences and 806-197 - Microbiology

#### **091-105**

##### **Surgical Procedures I for Vet Sciences**

**Credits: 3.00**

In this course, students investigate surgical equipment and procedures to develop skills needed to assist with surgical care of animals. Upon completion of this course, students will be able to identify surgical instruments, develop sterile technique, maintain and operate surgical equipment, and assist with patient preparation, monitoring, and recovery. COREQUISITES: Course 091-103 - Clinical Pathology I for Vet Sciences

#### **091-106**

##### **Surgical Procedures II for Vet Sciences**

**Credits: 3.00**

In this course, students explore the veterinary technician's role in surgery to develop skills needed to manage veterinary patients in the pre-, intra-, and post-operative phases. Upon completion of this course, students will be able to anticipate needs of the surgeon, provide veterinary surgical assistance, manage wounds and incisions, and perform dental prophylaxis in dogs and cats. PREREQUISITES: Complete courses 091-111 - Clinical Skills II for Vet Sciences and 091-108 - Veterinary Pharmacology

#### **091-107**

##### **Imaging for Veterinary Sciences**

**Credits: 3.00**

In this course, students explore veterinary imaging concepts and apply veterinary imaging techniques to use radiographic equipment and support diagnostic studies. Upon completion of this course, students will be able to properly position veterinary patients, produce diagnostic images, process exposed films, and maintain equipment. COREQUISITES: Course 091-103 - Clinical Pathology I for Vet Sciences

#### **091-108**

##### **Veterinary Pharmacology**

**Credits: 3.00**

In this course, students examine drugs, vaccines, and other substances used in veterinary medicine to establish a knowledge base of their therapeutic use, administration, and side effects. Upon completion of this course, students will be able to accurately calculate dosages, prepare dispensed medications, safely administer drugs, and recognize normal and abnormal responses to medications. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score COREQUISITES: Course 091-110 - Clinical Skills I for Vet Sciences

### **091-109**

#### **Lab Animals and Non-Traditional Pets**

**Credits: 2.00**

In this course, students explore characteristics, basic care, illness, and treatment of animals that may be encountered in research settings and/or kept as pets, to develop skills needed to participate in caring for these animals. Upon completion of this course, students will be able to properly restrain and examine mice, rats, rabbits, and birds, collect blood samples from rats and rabbits, and perform a necropsy on a laboratory animal. COREQUISITES: Course 091-104 - Clinical Pathology II for Vet Sciences

### **091-110**

#### **Clinical Skills I for Vet Sciences**

**Credits: 2.00**

In this course, students assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform routine veterinary clinic procedures such as venipuncture, urine collection, and subcutaneous injection. PREREQUISITES: Complete courses 801-136 - English Composition 1 and 091-105 - Surgical Procedures I for Vet Sciences

### **091-111**

#### **Clinical Skills II for Vet Sciences**

**Credits: 2.00**

In this course, students further assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform more complex clinical procedures such as monitor patients in the anesthetic and recovery periods, properly restrain small animals, and prepare patients for surgery. PREREQUISITES: Course 091-110 - Clinical Skills I for Vet Sciences with a minimum grade of C or TR

### **091-112**

#### **Clinical Skills III for Veterinary Sci**

**Credits: 3.00**

In this course, students assimilate higher level skills in a clinical setting to develop proficiency in animal nursing techniques for veterinary technicians. Upon completion of this course, students will be able to place and care for intravenous catheters, administer intravenous and intramuscular injections, administer enemas, and apply and remove bandages and splints. PREREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences with a minimum grade of C or TR

**091-113****Anesthesia for Veterinary Technicians****Credits: 3.00**

In this course, students investigate anesthetic delivery and monitoring equipment, pain management strategies, and appropriate responses to patient compromise to acquire skills needed to coordinate anesthetic events in veterinary patients. Upon completion of this course, students will be able to choose and administer appropriate veterinary anesthetic protocols, monitor and maintain patient status throughout anesthetic events, and maintain equipment and accurate anesthetic records. PREREQUISITES: Complete courses 091-108 - Veterinary Pharmacology and 091-111 - Clinical Skills II for Vet Sciences COREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences

**091-114****Veterinary Tech Clinical Internship****Credits: 4.00**

In this course, students hone animal nursing skills in a clinical setting to achieve proficiency needed to function in the role of veterinary technician according to the standards set by CVTEA. Upon completion of this course, students will have the skills and knowledge required of an entry level veterinary technician. PREREQUISITES: Course 091-112 - Clinical Skills III for Veterinary Sci with a minimum grade of C or TR

**091-120****Animal Behavior****Credits: 1.00**

In this course, students consider normal and abnormal animal behavior, training methods, and the relationship between behavior and physical health to identify problem behaviors and potential solutions. Upon completion of this course, students will be able to recognize some behavior issues in domestic animals and choose appropriate resources for their modification.

**091-121****Emergency Medicine for Vet Technicians****Credits: 1.00**

In this course, students explore topics in advanced veterinary critical care to develop awareness of procedures and equipment available in specialty facilities. Upon completion of this course, students will be able to identify the appropriate application of central venous and intraosseous catheterization, active drainage/suction devices, dialysis, and intracranial pressure monitoring in veterinary medicine. PREREQUISITES: Course 091-113 - Anesthesia for Veterinary Technicians with a minimum grade of C or TR

**091-122****Integrative Modalities for Vet Sciences****Credits: 1.00**

In this course, students explore therapeutic options which may supplement traditional Western veterinary medicine to provide awareness of additional resources for patient care. Upon completion of this course, students will identify the appropriate application of spinal manipulation, acupuncture, massage, therapeutic ultrasound, homeopathy, and other

treatment modalities in veterinary medicine. PREREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences with a minimum grade of C or TR

### **091-123**

#### **Veterinary Medical Terminology**

**Credits: 2.00**

In this course, students explore the construction, meaning, and pronunciation of veterinary medical terms to establish understanding and facilitate communication among veterinary team members. Upon completion of this course, students will be able to correctly formulate veterinary medical terms to describe specific concepts.

### **101-100**

#### **Accounting Program Orientation**

**Credits: 1.00**

Students develop skills to enhance their success in the Gateway Technical College accounting program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the accounting field through the Internet, periodicals, and surveys. Students design an accounting academic and career development plan and initiate their ongoing program portfolio.

### **101-103**

#### **Internship for Accounting**

**Credits: 2.00**

This course is an on-the-job accounting related work experience. The student will perform 72 hours of accounting-related duties in a business, governmental or not-for-profit setting. Students are responsible for seeking and obtaining the internship workstation position (paid or unpaid). The student will make a summary of work activities. Job supervisor approval and instructor pre-approval are required. COREQUISITES: Complete course 101-121 - Intermediate Accounting

### **101-104**

#### **Income Tax Accounting**

**Credits: 4.00**

In this course, learners explore basic federal and state income tax laws for personal income tax returns. Students will prepare manual and electronic Federal and Wisconsin individual tax returns, including supporting schedules. Students will also examine gross income, deductions, credits, capital gains/losses and other important current tax topics. Upon completion of the course, learner will be able to accurately complete personal income tax returns.

### **101-105**

#### **Accounting Career Readiness**

**Credits: 2.00**

Accounting Career Readiness will prepare student for entry into the workforce. The student will develop a strategy for seeking, obtaining and retaining employment. The student will identify professional goals and develop a job search or job

advancement career plan, resume, application letter, and prepare for interviews. The student will explore local employment resources and career opportunities. COREQUISITES: Complete course 101-121 - Intermediate Accounting

### **101-106**

#### **Accounting Spreadsheet Applications**

**Credits: 3.00**

This course covers all levels of spreadsheet usage. The student will develop and edit business-related worksheets and charts, including linking worksheets and workbooks. The student will work with advanced topics such as data tables, Goal Seek, Scenarios and Solver to perform what if calculations on various data. The student will also work with financial functions, macros, and create reports. This course will prepare the student to become a Microsoft Office Specialist (MOS) certified in Excel at the Core or Expert level. PREREQUISITES: Course 101-114 - Accounting Principles or 101-112 - Accounting for Business and course 103-102 - Microsoft Excel or 103-143 - Computers for Professionals

### **101-107**

#### **Accounting Capstone**

**Credits: 3.00**

The accounting capstone course will guide the student in dealing with ethics, internal control and financial statement analysis in the accounting environment. Students will resolve accounting problems by applying skills and techniques acquired in previous courses. Students will apply business law and ethics to the accounting environment.

PREREQUISITES: Complete courses 101-104 - Income Tax Accounting 101-121 - Intermediate Accounting 101-131 - Management Accounting and 101-154. Complete course 101-119 - Payroll Accounting or 101-143. COREQUISITES: Course 101-155 - Financial Analysis/Management

### **101-112**

#### **Accounting for Business**

**Credits: 3.00**

A practical approach to the study of accounting. Basic accounting practices and procedures are explained with particular emphasis on the transactional effect on the income statement and balance sheet. Other areas covered include adjusting and closing entries; accounting for cash, including bank reconciliations and payroll accounting.

### **101-114**

#### **Accounting Principles**

**Credits: 4.00**

Accounting Principles is an introduction to the field of accounting. Fundamental concepts of the accounting process including financial statement preparation, journal entries, posting, adjusting and closing entries. Cash, inventory, receivables, payables, and plant assets including depreciation methods are also covered.

### **101-116**

#### **Corporate Accounting**

**Credits: 3.00**

In this course, learners will focus on accounting for corporations. Students will complete the accounting cycle for a corporation including financial statement preparation. Other topics covered will include accounting for stockholders' equity, correcting entries and error analysis. Students will also investigate appropriate internal controls and identify ethical considerations for processing financial transactions. PREREQUISITES: Complete course 101-114 - Accounting Principles COREQUISITES: Complete courses 801-136 - English Composition 1 804-135 - Quantitative Reasoning 101-100 - Accounting Program Orientation and complete course 103-143 - Computers for Professionals or 103-102 - Microsoft Excel

### **101-119**

#### **Payroll Accounting**

**Credits: 3.00**

In this course, learners focus on preparing the payroll for a business. Students examine current payroll tax laws and regulations to calculate gross and net pay of employees, determine the employer's liability for payroll taxes, and prepare related journal entries. Students complete a Wisconsin Sales and Use Tax form. Upon completion of the course, students will be able to use computerized accounting software to enter and prepare a company's payroll and related reports.

### **101-120**

#### **Payroll Accounting II**

**Credits: 1.00**

In this course students acquire computerized accounting software skills. Topics such as preparing weekly payroll, preparing weekly and quarterly reports, and year-end payroll processing. Upon completion of this course students will be prepared to successfully complete computerized accounting payroll functions.

### **101-121**

#### **Intermediate Accounting**

**Credits: 4.00**

This course will apply FASB principles and GAAP to corporations and will emphasize an in-depth understanding of the balance sheet. Students will learn to prepare classified balance sheets, account for receivables, inventory valuation and estimation, acquisition and disposition of fixed and intangible assets, current and long-term liabilities, including time value of money concepts. PREREQUISITES: Complete courses 801-136 - English Composition 1 and 804-135 - Quantitative Reasoning COREQUISITES: Complete course 101-100 - Accounting Program Orientation and course 103-143 - Computers for Professionals or 103-102 - Microsoft Excel

### **101-122**

#### **Intermediate Accounting II**

**Credits: 4.00**

Intermediate Accounting II will cover advanced topics of corporate accounting with an emphasis on stockholders' equity and presentation of income statement items. Students will learn to prepare multi-step income statements and statements of cash flows, calculate EPS, account for investments in debt and equity securities, income taxes, and leases. They will utilize the revenue recognition principle, perform error analysis, and become familiar with the FASB's full disclosure requirements. Students will be expected to use Excel for preparation of designated projects. PREREQUISITES: Course 101-121 - Intermediate Accounting

### **101-131**

#### **Management Accounting**

**Credits: 4.00**

In this course, learners will focus on the fundamentals of management accounting for a manufacturing company. Students will learn the flow of costs through the accounting system including material, labor and factory overhead. The student will also prepare job order and process costing, cost accumulation, as well as computing and recording variances in a standard cost system. Cost behavior analysis and total quality management will also be covered. Upon completion of the course, students will be able to use quantitative models and costs analysis to make managerial decisions as well as prepare a master budget. PREREQUISITES: Complete course 101-114 - Accounting Principles

### **101-143**

#### **Payroll Accounting**

**Credits: 2.00**

Payroll accounting exposes students to the various tax rules and laws, tax rates, and reports that form the core of a payroll accountant's responsibility. Students will be working with tax tables and forms and will learn how to determine gross and net earnings of an employee. Deductions for social security, Medicare, and federal and state income taxes will be computed. Students will also be able to determine the employer's liability for payroll taxes, including unemployment and workman's compensation premiums. Other requirements include the completion of a Wisconsin Sales and Use Tax form. Electronic software will be utilized to input and run a company's payroll for one quarter along with manual preparation of federal tax forms.

### **101-154**

#### **Accounting Software Applications**

**Credits: 2.00**

In this course, learners will be introduced to commercially available accounting software. The students will perform accounting functions related to customers, vendors, inventory, payroll, cash, and other information needed for service and retail businesses. Upon completion of this course, students will generate accurate financial statements and other reports needed for accounting purposes. COREQUISITES: Complete courses 101-112 - Accounting for Business or 101-114 - Accounting Principles

### **101-155**

#### **Financial Analysis/Management**

**Credits: 3.00**

The student will think critically and apply accounting knowledge, principles, and procedures by utilizing financial analysis and financial management techniques in managing the financial aspects of a 'for profit' business. The student will learn to measure risk/reward/return; analyze corporate financial statements, and use time value of money analysis to make long-term financing decisions. The student will analyze corporate solvency and profitability utilizing ratio and trend analysis, apply financial valuation and working capital management techniques, develop cash budgets, and develop pro forma financial statements. A corporate annual report project is required using spreadsheet and word processing software. PREREQUISITES: Complete course 101-106 - Accounting Spreadsheet Applications COREQUISITES: Course 101-121 - Intermediate Accounting



**101-159****Income Tax Accounting II****Credits: 3.00**

Students enhance their Income Tax Accounting skills in this course which expands on the knowledge of individual income tax accounting and introduces the basics of partnership and corporate tax accounting. Students will prepare individual and basic partnership and corporate tax returns. Current taxation topics will be discussed. The course also enables students to obtain certification as a Volunteer Income Tax Assistance (VITA) program volunteer. PREREQUISITES: Course 101-104 - Income Tax Accounting with a minimum grade of C or TR

**101-162****Accounting - Serving the Public Interest****Credits: 3.00**

Students will learn how accountants can give to the community by providing their services without a fee. This course consists of class time plus approximately 36 hours of community service time doing something that reinforces and supplements their academic knowledge of accounting. Students will be able to choose from a variety of service learning placements, such as working with an agency who serves adults and helping with a banking, budgeting and other money management skills workshop, developing and implementing a cost system for a non-profit organization, developing and implementing an inventory tracking system for a food bank, provide basic accounting functions, bank reconciliations, general ledger, or computerize an accounting system for a non-profit organization. PREREQUISITES: Course 101-114 - Accounting Principles with a minimum grade of B

**101-163****Triple Bottom Line Accounting****Credits: 3.00**

Students will look at financial and managerial accounting concepts with a focus on being responsible to all stakeholders, anyone who is influenced by the actions of the company, directly or indirectly. The triple bottom line is made up of economic, environmental and social factors. The ultimate goal is strong profits, a healthy environment and strong communities. Sustainability and the idea of global stewardship and responsible management of resources are emphasized. PREREQUISITES: Course 101-114 - Accounting Principles with a minimum grade of B

**102-121****Credit Management****Credits: 3.00**

The learner will examine the world of personal and business credit and explore the implementation and consequences of various credit management policies. The learner will also examine applicable regulations as it pertains to consumer and business credit, as well as relationships with regulatory agencies, stakeholders and the management of the business as it relates to fiduciary responsibilities of the modern manager. PREREQUISITES: Complete courses 801-136 - English Composition 1 804-135 - Quantitative Reasoning

**102-122****Investments****Credits: 3.00**

This course considers investments from the perspective of the individual or family. A broad range of topics are discussed pertaining to financial markets and the risk and timing of investments. Analysis factors such as the investment environment, the industry and individual companies are discussed in terms of stock and fixed income investments including bonds and treasury notes. Investment strategies are utilized to develop a diversified portfolio utilizing mutual funds and money market funds.

**102-137****Business/Introduction to****Credits: 3.00**

General orientation to the business world. Studies include organization and administration, production, labor and personnel, accounting and statistics, distribution, finance, and the relationship of business to society.

**102-138****BIZ Internship****Credits: 3.00**

Establishes an opportunity for students to apply training and skills learned while participating on a multidisciplinary consulting team. The team will develop a strategic plan for a specified business. Students contract with the business and course instructors(s) to complete a project to the parameters mutually identified by the business and the instructors(s). Evaluation of the student's performance will be a cooperative effort between the members of the BIZ Squad, instructor(s) and the business clients. Participating students can be from many different Career Clusters.

**102-160****Business Law****Credits: 3.00**

Business Law is a survey course which introduces the student to relevant legal issues that affect business today. Students will learn the fundamentals of law from the U.S. Constitution to the Uniform Commercial Code, from Contract Law to Property Law, and will be able to identify the legal basis of various business activities.

**102-186****Business Management Internship****Credits: 3.00**

Establishes an opportunity for the student to apply training and skills in a business work environment. The student will spend 144 hours at the worksite(s). the worksite activities will allow the student to interact with a variety of management functions found in small to medium sized businesses. Classroom hours will include preparation of job portfolio materials and interview techniques.

**102-196****Business Decision Management****Credits: 4.00**

This capstone course within the Business Management Program will take the student through the decision process of a business enterprise. This class will pull together the breadth of the learner's business and general educational exposure, experience and education leading into this course and put practical use and application to this knowledge. Application concepts such as capital budgeting techniques, time value of money consideration, conventional and alternative sources of capital, mitigating risk and liability through utilizing various forms of business organizations as well as analysis of financial statements will be covered in detail. The learner will then assemble their own business plan for a new venture, business line expansion, business acquisition or business divestiture. PREREQUISITES: Complete course 104-101 - Marketing Principles and course 101-114 - Accounting Principles with minimum grade C OR complete courses 101-112- Accounting for Business and 103-103 - Microsoft Excel II and 104-101 - Marketing Principles minimum grade C

**103-102****Microsoft Excel****Credits: 1.00**

Introduction to Excel spreadsheet software. Students will learn how to create, store, retrieve and edit a variety of spreadsheets and charts, format worksheets and use formulas. Basic functions will be stressed.

**103-103****Microsoft Excel II****Credits: 1.00**

This course will take students to the next level of competency in Excel. Topics covered include creating workbooks using templates, multiple sheets, 3-D references in formulas and linked workbooks, using database features of Excel, use copy, paste, paste special, and paste link features, and create charts using the Chart Wizard.

**103-105****Microsoft Access****Credits: 1.00**

For beginning-level users of Microsoft Access. Students will discuss basic database terminology and design concepts; create and modify table structures; add, change, and delete records; and create simple selection queries to find, display, and print records.

**103-106****Microsoft Access II****Credits: 1.00**

For intermediate-level users of Microsoft Access. Students will create queries to sort records, compute record and group totals and statistics; and use different methods to create and print data entry forms and reports.

**103-109**

**Windows Operating Systems and Concepts**

**Credits: 1.00**

This is the beginning course for students wishing to learn the Windows Operating System. Creating, organizing, and manipulating files and folders in this operating environment will be emphasized. Setting and managing security and privacy settings, and customizing windows, will also be addressed.

**103-110**

**Microsoft PowerPoint**

**Credits: 1.00**

This course will take the user of PowerPoint through the basic procedures necessary to create a presentation and related handout materials. The student will learn to use the wizards, toolbars, dialog boxes, menus, and various PowerPoint views to create a presentation.

**103-111**

**Microsoft PowerPoint II**

**Credits: 1.00**

This course will take the user of PowerPoint presentation graphics to an advanced level of competency. Inserting graphics, clip art, and organizational charts are emphasized. Adding sound to the presentation is also covered.

**103-112**

**Microsoft Word**

**Credits: 1.00**

This course is designed to teach the participant the fundamentals of word processing with Microsoft Word. A variety of business documents will be created to familiarize the learner with various commands and features.

**103-113**

**Microsoft Word II**

**Credits: 1.00**

This course will cover multi-page documents, tables, columns, graphics and other desktop publishing features.

**103-142**

**Basic Computing**

**Credits: 1.00**

This course will give the learner the skills to use electronic mail, Bb, Web Advisor, common beginning features of Microsoft Office, USB usage, printing at Gateway, and saving/opening files.

**103-143****Computers for Professionals****Credits: 3.00**

This course introduces students to the use of a PC. Through hands-on practice, students will manage files, communicate using e-mail, and use the Internet, word processing, spreadsheet, and presentation software. Students must use the version of Microsoft Office software in use at Gateway Technical College. Basic keyboarding skills are recommended.

**104-101****Marketing Principles****Credits: 3.00**

This is a foundational course that introduces students to the principles of marketing. The course explores the entire marketing mix including: segmentation, targeting, positioning, marketing research, consumer behavior, Product development, pricing policies, distribution and overview of promotion. This course provides a comprehensive overview of the exciting world of marketing.

**104-104****Selling Principles****Credits: 3.00**

Principles of Selling provide the student with a basic understanding of the consultative selling process. This course will build a solid understanding of the steps in the professional sales process, examining the characteristics of a successful salesperson, buyer behavior, communication styles, and ethics. Class discussions of actual selling problems will be encouraged in addition to solving case problems, scenario role plays, and student's sales presentations.

**104-105****Promotion Principles I****Credits: 3.00**

Students are introduced to the theory and practice of integrated marketing communications. This course is designed to provide an understanding of the promotional elements; advertising, direct marketing, public relations, sales promotion, and digital marketing with emphasis placed on implementation of integrated marketing communications (IMC) in planning marketing and promotional programs.

**104-109****Marketing/Sports and Event Introduction****Credits: 3.00**

This course will provide students with an awareness of the careers available within sport/ event marketing industry and enable them to learn the introductory skills necessary to pursue employment in the field. A basic understanding of sports and event marketing followed with exposure to the major components of the industry will be covered. Students will also maintain an awareness of current trends and happenings in the industry.

**104-110****Corporate Sponsorship Development****Credits: 2.00**

This course will provide students with the necessary information and skills to develop marketable sponsorship proposals. In addition, they will explore both perspectives of sponsorship: the seller (representing an event, team, property or venue) and the buyer (representing a company with a desire to market and promote through a sport or event sponsorship). Students will develop skills necessary to sell their proposals.

**104-111****Ticket Sales****Credits: 1.00**

This course is intended to teach the importance of the sell out mentality for events. The class will cover developing a data base, discounting, creating a variety of ticket packages, targeting groups, developing a sales staff, and retaining season ticket holders through renewals.

**104-115****Marketing Capstone/Internship****Credits: 3.00**

This course will allow you to prepare for entering the career of marketing. You will create and update career credentials (resume and portfolio) that will be necessary to compete in an employment market. To further enhance your employability you will be able to demonstrate your marketing skills in an applied internship. PREREQUISITES: Complete courses 104-173 - Marketing Research 801-136 - English Composition 1 804-135 - Quantitative Reasoning

**104-116****E-Marketing/Social Media****Credits: 3.00**

In this course the student will explore the concepts, trends and planning involved in developing a comprehensive electronic marketing strategy for a business, with an emphasis on social media. This will include looking at the proper design concepts for a web site, using successful social media techniques, identifying emerging trends in the marketplace and developing a comprehensive electronic marketing/social media campaign. PREREQUISITES: Course 104-101 - Marketing Principles

**104-118****Advanced Promotion****Credits: 3.00**

Advanced Promotion immerses students in the application of offline and online Integrated Marketing Communications. Creative emphasis will be placed on positioning and branding along with the incorporation of Digital Space innovation that encourages customer engagement with promotions through technology. This hands-on course challenges the students to perform the role of ad agency with creative development of promotions, writing a creative brief, and incorporating presentation skills. PREREQUISITES: Course 104-105 - Promotion Principles I

**104-119**

**Visual Merchandising**

**Credits: 3.00**

Merchandising display and point of purchase advertising. The principles of display, harmony, rhythm, proportion, balance, emphasis and color. Creative efforts through the production of several displays. Showcard and sign production.

**104-126**

**Business Marketing I**

**Credits: 3.00**

Process and systems analysis, inventory planning and control, quality control, marketing cost analysis, marketing plans all related to industrial goods. PREREQUISITES: Course 104-101 - Marketing Principles

**104-127**

**Retailing**

**Credits: 3.00**

Retailing provides the student with a basic understanding of the retail environment. The course includes: the retail structure, basic factors involved with store location, product line, fixtures and equipment. The course will also focus on major trends in retailing, along with strategies used in staffing, maintaining personnel, merchandise planning and control, and strategies in merchandise buying and receiving.

**104-133**

**Social Media Strategies**

**Credits: 3.00**

In this course, learners explore social media marketing and determine how these media are revolutionizing the marketing landscape today. Learners integrate social media to increase brand awareness, identify key audiences, and generate leads. Upon successful completion of the course, learners will be able to use social media strategies to build meaningful relationships with customers.

**104-137**

**Digital Marketing**

**Credits: 3.00**

In this course, learners investigate marketing through digital channels. Using electronic devices, learners investigate mobile applications, email, and web applications. They examine how web design, Search Engine Optimization (SEO), and reputation management are applied to digital promotion. Upon completion of the course, learners will be able to initiate, manage, and evaluate digital marketing strategies for a business.

**104-161**

**Selling Principles/Advanced**

**Credits: 3.00**

This course further applies Selling techniques in real world applications. Student will be made aware of various sales careers and necessary qualifications. Time management, territory planning, motivation, networking, direct marketing and negotiating for the salesperson will be studied. Sales meetings and practical sales demonstrations will be presented by the students. PREREQUISITES: Course 104-104 - Selling Principles

### **104-170**

#### **Business Purchasing**

**Credits: 3.00**

An understanding of industrial purchasing is developed through the study of the basic principles of buying; regulations and laws controlling purchasing; duties and qualifications of the buyer or purchasing agent.

### **104-172**

#### **Marketing Management**

**Credits: 3.00**

This course is an expanded look at issues and trends in the field of marketing. This course provides the student with decision-making activities that are involved with marketing management. Emphasis is placed marketing opportunities and strategies used in the marketing mix. Students will develop a comprehensive marketing plan. PREREQUISITES: Complete courses 104-173 - Marketing Research 801-136 - English Composition 1 804-135 - Quantitative Reasoning

### **104-173**

#### **Marketing Research**

**Credits: 3.00**

Businesses today need current, accurate information upon which to base their decisions. We will study the types and sources of data as well as the methods of organizing that data into usable readable information for marketing decisions. We will apply our learning by developing a marketing research project. PREREQUISITES: Complete courses 104-194 - International Marketing 801-136 - English Composition 1 804-135 - Quantitative Reasoning

### **104-194**

#### **International Marketing**

**Credits: 3.00**

The course is a study in the marketing of goods and services at the Global level. The international uncontrollable variables of marketing are analyzed along with emphasis on market development, marketing research, product planning, international distribution, promotion, and pricing. Students explore how marketing strategies and tactics must be managed and adapted for success in different cultural, economic, geographic and political environments around the world. COREQUISITES: Complete courses 801-136 - English Composition 1 804-135 - Quantitative Reasoning

### **105-106**

#### **Business Communications**

**Credits: 3.00**



In this course, students apply the skills and tools necessary to effectively compose business communication in a written format. Each student demonstrates the application of analyzing the communication situation, including: planning and preparing the message; developing persuasive, informational, and negative messages, sales letters, media releases, proposals and promotional materials; demonstrating skills in basic writing mechanics and English grammar; and effective electronic communication. PREREQUISITES: Course 801-136 - English Composition 1

### **106-005**

#### **Administrative Professional Internship**

**Credits: 2.00**

Students perform word processing, spreadsheet, and database application work in an on-the-job training situation in an office. The student employee, employer, and internship instructor interact during the training experience. The Internship includes 72 hours of employment credential preparation and software review before job placement.

### **106-006**

#### **Business Communication Skills**

**Credits: 3.00**

Effective written business communication principles are discussed and applied to the composition of routine business correspondence and reports. Oral communication presentations will be used to enhance the student's understanding of effective communication principles. Proper communication techniques for telephone use will be demonstrated.

PREREQUISITES: Courses 106-030 - Word Processing for Business, 106-137 - Keyboarding Applications, and 801-136 - English Composition 1 with a minimum grade of C or TR

### **106-007**

#### **Business Software Solutions**

**Credits: 2.00**

Business Software Solutions is a capstone course integrating the aspects of word processing, database, spreadsheet, graphics, and communications using a Windows environment. PREREQUISITES: Course 106-013 - Spreadsheet/Database for Business II or 106-142 with a minimum grade of C or TR

### **106-008**

#### **Emerging Business Trends and Tech.**

**Credits: 2.00**

A capstone course integrating the aspects of word processing, database, spreadsheet, graphics, electronic mail, and calendaring applications.

### **106-009**

#### **Meetings/Planning**

**Credits: 1.00**

This course introduces students to the scheduling and planning of business meetings.

**106-010****Publication Design for Business****Credits: 2.00**

Create print-ready newsletters, brochures, flyers, forms, business cards, and other business publications.

PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

**106-011****Records Management****Credits: 1.00**

This course presents guidelines and procedures for controlling business information from its creation through its distribution, retention and retrieval, storage, preservation, protection, and final disposition. The main systems include alphabetic, numeric, and subject filing.

**106-012****Spreadsheet/DB for Business I****Credits: 3.00**

This course covers spreadsheet and database software for the business world. PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

**106-013****Spreadsheet/Database for Business II****Credits: 3.00**

This course covers spreadsheet and database software for the business world. Emphasis will be on more advanced features of spreadsheets and databases. PREREQUISITES: Course 106-012 - Spreadsheet/DB for Business I or 106-138 with a minimum grade of C or TR

**106-014****Word Processing for Business I****Credits: 2.00**

This class covers features of word processing software from the beginning level. Students develop expertise in the creation of business documents through the use of operational and text-editing features. Proofreading and language skills will be developed through the production of business documents. PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

**106-015****Word Processing for Business II****Credits: 2.00**

This class covers the features from an intermediate level. Proofreading and language skills will be developed through the production of business documents. PREREQUISITES: Course 106-014 - Word Processing for Business I or 106-003 with a minimum grade of C or TR

**106-016****Principles of Customer Service****Credits: 3.00**

Provides a solid foundation in the areas of customer service and service excellence and provides techniques to retain customers and maintain loyalty in both a face-to-face environment and in remote settings via telephone and the Internet.

**106-017****Customer Service Capstone****Credits: 1.00**

Students will job shadow at a customer service call center.

**106-018****Customer Service Management****Credits: 3.00**

Includes instruction in customer behavior; using customer service databases; Internet searching and retrieval; and telephone, e-mailing, and communications skills. PREREQUISITES: Course 106-016 - Principles of Customer Service

**106-019****Administrative Service Internship 1****Credits: 1.00**

Students will be required to complete 36 hours of an on the job work experience. Students will also spend time in the classroom enhancing their employability skills. PREREQUISITES: Complete Course 106-137 - Keyboarding Applications  
COREQUISITES: Complete courses 106-024 - Professionalism in Business 801-136 - English Composition 1 804-135 - Quantitative Reasoning

**106-020****Administrative Service Internship 2****Credits: 1.00**

Students will be required to complete 36 hours of an on the job work experience. Students will also spend time in the classroom enhancing their employability skills. PREREQUISITES: Complete courses 106-137 - Keyboarding Applications and 106-024 - Professionalism in Business

**106-021****Business Office Fundamentals****Credits: 3.00**

This course presents a general orientation to the business world geared toward the office worker. Studies include exploring global and domestic business offices, investigating business functions and learning how departments fit together for one common mission of the organization.

**106-022****Information Management for Business****Credits: 3.00**

This course will prepare students to manage records in business in paper and electronic form. Topics covered will include basic database terminology and design concepts, creating and modifying table structures; adding, changing, and deleting records; and creating queries to find, display, and print records. The ARMA rules for records management will also be covered. PREREQUISITES: Complete course 106-137 - Keyboarding Applications with a minimum grade of C

**106-023****Office Management****Credits: 3.00**

This course will orient the learner to the function of management in an office. Topics related to managing office operations and procedures, budgeting, interviewing others, assigning and monitoring clerical functions, training and business ethics will be included.

**106-024****Professionalism in Business****Credits: 3.00**

This course prepares the learner for job search as they near graduation. Topics covered will include; resume and portfolio preparation, interviewing skills, and dressing for success. An emphasis will also be placed on the soft skills necessary in today's business world.

**106-025****Spreadsheets in Business****Credits: 3.00**

This course prepares the learner to utilize a variety of spreadsheet software in business. While an emphasis will be placed on Microsoft Excel, other current spreadsheet software will be covered. PREREQUISITES: Complete course 106-137 - Keyboarding Applications with a minimum grade C

**106-026****Business Publication****Credits: 3.00**

In the course, students will create print-ready newsletters, brochures, flyers, forms business cards, and other business publications using current publishing software including MS Publisher, MS Word, and Adobe. PREREQUISITES: Complete course 106-137 - Keyboarding Applications with a minimum grade C

**106-027****Integrated Business Projects****Credits: 3.00**

In this course students complete scenario-based activities using business productivity software skills. Students will apply software and document processing skills to create solutions to common business information needs. Using a case study approach, students will develop communication, Internet research, teamwork, critical-thinking and problem-solving skills. Upon completion of this course, students will use MS Office Suite to integrate and present data with skill.

PREREQUISITES: Complete course 106-025 - Spreadsheets in Business with a minimum grade C; Complete course 804-135 - Quantitative Reasoning

### **106-028**

#### **Office Technologies Essentials**

**Credits: 3.00**

This course is an introduction to the computer system unit, the Internet and social Web, hardware and software, system software, Google applications and emerging office technology.

### **106-029**

#### **Presentations for Business**

**Credits: 3.00**

This course prepares the learner to utilize a variety of presentation software in business. While an emphasis will be placed on MS PowerPoint, other current presentation software will be addressed. PREREQUISITES: Complete course 106-137 - Keyboarding Applications with a minimum grade C

### **106-030**

#### **Word Processing for Business**

**Credits: 3.00**

This course covers an intermediate level of word processing skills. Proofreading and language skills will be developed through the production of business documents including business letters and reports. Advanced formatting features will be used in MS Word. PREREQUISITES: Complete course 106-137 - Keyboarding Applications with a minimum grade C

### **106-119**

#### **Professional Development**

**Credits: 2.00**

Professional Development places emphasis on the development of a total professional image. Social and business intelligence, personal and professional goals, positive work attitude, time management, productive work habits, customer service knowledge, and job seeking skills, including the development of a job portfolio, are covered.

### **106-126**

#### **Keyboarding**

**Credits: 1.00**

Learner will develop touch method typing skills using a computer keyboard.

**106-127**  
**Skill Building I**  
**Credits: 1.00**

A beginning course designed to help students who already have basic keyboarding skills improve their speed and accuracy. PREREQUISITES: Course 106-126 - Keyboarding

**106-137**  
**Keyboarding Applications**  
**Credits: 3.00**

Learner will develop keyboarding skills and basic document formatting skills using word processing software.

**106-178**  
**Business Proofreading and Editing**  
**Credits: 2.00**

This course is designed to improve total effectiveness in written communication by providing a comprehensive review of the rules governing business communications. The current edition of the Gregg Reference Manual will be used in this course. In addition, the course provides tips for developing and strengthening good proofreading skills.

**106-190**  
**Administrative Office Procedures**  
**Credits: 3.00**

This course will develop professional skills and attitudes needed in today's global business environment. Topics include making ethical decisions, working independently and as a team member, and managing time. Telecommunications, mail processing, travel arrangements and conferences, public relations, and ergonomics will be included. PREREQUISITES: Complete course 106-025 - Spreadsheets in Business

**106-392**  
**Office Field Study**  
**Credits: 1.00**

This course provides the student with the opportunity to observe basic office procedures and personnel on a job site. The student will be responsible for making arrangements for two four- hour observations and one eight-hour job shadowing experience. Students will be expected to report orally and in writing on their observations and shadowing experience. PREREQUISITES: Course 106-137 - Keyboarding Applications COREQUISITES: Course 106-119 - Professional Development

**107-003**  
**Network+ Exam Prep**  
**Credits: 1.00**

This course will prepare an individual for the Network+ certification exam. It is intended for individuals who have completed the CCNA classes (107-135 Data Communications, 107-162 Routing Principles, 107-167 Switching Basics, and 107-168 WAN Technologies) or have a background in network installation, troubleshooting, and maintenance.

### **107-011**

#### **IT in Business**

**Credits: 3.00**

This course is a basic introduction to Information Technology (IT) and how it impacts our lives. It will focus on how IT professionals implement industry tools and applications throughout businesses. Students will learn proper terminology as well as industry trends and concepts.

### **107-013**

#### **IT Job Search Skills**

**Credits: 1.00**

Learn how to start your IT job search! Students will develop a job search plan and prepare a professional job search portfolio. Different job search tools will be utilized in order to assist the student in finding the best job for them. Current job searching trends and interviewing techniques will be discussed and applied. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1

### **107-014**

#### **A+ 801 Certification Review**

**Credits: 1.00**

This course will prepare an individual for the A+ 801 Exam. This is the first of two exams that must be passed for an individual to achieve the A+ certification. This class is intended for individuals who have completed coursework in basic computer support or have a background in PC troubleshooting. The focus of this class is installation and support of personal computer hardware, laptops, printers, networks, security, safety and environmental issues, and communication and professionalism. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and certification test bank.

### **107-015**

#### **A+ 802 Certification Review**

**Credits: 1.00**

This course will prepare an individual for the A+ 802 Certification Exam. This is the second of two exams for an individual to achieve A+ Certification. This class is intended for individuals who have passed the A+ 801 Exam and have completed coursework in computer support or have a background in PC troubleshooting. The focus of this class is installation and support of operating systems, mobile devices, security/forensics, and properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and certification test bank.

**107-016****A+ Certification Review Part 1****Credits: 1.00**

This course will review the material covered in the first of two certification exams that must be passed in order for an individual to achieve their CompTIA A+ certification. The course will follow the current exam series (for exam specifics please visit the CompTIA.org website). This class is intended for individuals who have completed coursework in basic computer support (such as the IT Essentials course) or have a background in PC troubleshooting. The focus of this course is to review the installation and support of personal computer hardware and peripherals, mobile device hardware, and networking devices. It also covers troubleshooting hardware and network connectivity issues. This class will consist of lectures on the essential material covered in this exam and is meant as a review so it does not include hands-on labs. All students will be required to purchase a book and certification study test bank tool.

**107-017****A+ Certification Review Part 2****Credits: 1.00**

This course will review the material covered in the second of two certification exams that must be passed in order for an individual to achieve their CompTIA A+ certification. The course will follow the current exam series (for exam specifics please visit the CompTIA.org website). This class is intended for individuals who have completed coursework in basic computer support (such as the IT Essentials course) or have a background in PC troubleshooting. The focus of this course is to review the installation and configuration of desktop and mobile device operating systems. It also covers cloud computing fundamentals, computer and network security and operational procedures. This class will consist of lectures on the essential material covered in this exam and is meant as a review so it does not include hands-on labs. All students will be required to purchase a book and certification study test bank tool.

**107-018****Fundamentals of IT****Credits: 3.00**

In this course, students will explore the fundamental aspects of information technology. Students investigate basic hardware systems, various operating systems, important software packages, networking fundamentals, basic internet technologies, and essential problem solving techniques. Upon completion of the class, students are prepared to utilize their IT skills to work effectively in IT-related tasks.

**107-019****Introduction to MIS****Credits: 3.00**

In this course, students explore information systems and their role in organizations. They examine management decision support systems, system analysis and design methodologies, information processing technologies, and their role in decision making. Students will explore tools and techniques for supporting and executing organizational processes. Upon completion of the course, students will work as a team to design an information systems solution to meet a specific business need. COREQUISITES: Complete course 801-136 - English Composition 1



**107-177**

**IT Project Management**

**Credits: 4.00**

Focus will be on project management from the information systems professional perspective while keeping a customer-based orientation and business focus. Cooperative team-based business strategies will be stressed. Students will develop written and oral communications, as necessary, to complete the steps within the project management process. Project management software will be utilized, within all phases of the systems development as the students progress through a team-based project simulation. PREREQUISITES: Courses 154-113 - IT Apps Server & Support minimum grade C and 801-197 - Technical Reporting

**107-193**

**IT Essentials**

**Credits: 3.00**

IT Essentials focuses on the relationship between hardware and system software. The course topics include PCs, peripherals, networking, security, troubleshooting, and communication skills. IT Essentials is an introductory course that presents a foundation toward the pursuit of CompTIA A+ certification.

**109-101**

**Hospitality/Principles of**

**Credits: 3.00**

This introductory course tours the related hospitality fields of hotels, tourism, foodservice, and attractions with an emphasis on customer service. The course will cover the typical types of establishments found in the US and Wisconsin. Students will be introduced to common job titles, organizational structures, career opportunities, and trends in this field.

**109-106**

**Advanced Tourism Management**

**Credits: 3.00**

This course covers practical marketing and management for temporary events such as fairs, pop-ups, and tourism events. The goal is to create vital internet marketing strategies using emerging technologies to entice customers. Students will identify the key customer service needs for this type of tourism event. PREREQUISITES: Complete Courses 109-112 - Tourism, Introduction To 109-171 - Hospitality Sales and Marketing

**109-108**

**Event Management**

**Credits: 3.00**

This course explores the details of event management including identifying stakeholders, planning event, development of event needs, management of participants, and execution of events.

**109-110****Rooms Division Management****Credits: 3.00**

This class will highlight the operations of the Rooms Division of a hotel including Reservations, Front Desk, Night Audit, Bell Staff, Housekeeping, and Laundry. The goal is understand the relationship between the departments and how they support the Guest Cycle.

**109-112****Tourism, Introduction To****Credits: 3.00**

This course covers the tourism industry including why people travel, the social and cultural aspects to tourism, and governmental development of tourism. Students will explore the interrelations between tourism, hotels, food, and attractions in the Wisconsin region. Emphasis will be on customer service needs within this field.

**109-113****Tourism Attraction and Management****Credits: 3.00**

This course is an overview of the Tourism Attractions in the local area. Students will identify the establishments, look at the specific unique customer service and management aspects of this type of establishment.

**109-114****Managing Services/Hospitality Industry****Credits: 3.00**

Students will master the key supervision skills needed in the hospitality fields. Topics will include planning, organizing, staffing, controlling, leadership, team management, staffing, and training.

**109-121****Hotel Operations, Intro to****Credits: 3.00**

This course covers the historical development of hotels with a discussion of the modern day types of properties. Students will learn the guest cycle with a focus on customer service and will explore the interrelations of the different departments in a hotel or resort.

**109-122****Service in the Hospitality Ind, Intro to****Credits: 3.00**

Discusses customer service in the hospitality field, how it is the backbone of this industry. Students will learn how to identify good and not so good service as well as how correct service evolved and the reasons for its existence. Students will learn how to deal with upset customers and gain basic dispute management skills.

**109-123****Bar and Beverage Management****Credits: 3.00**

This course deals with the practical operational issues of beverage operations. With a customer service focus, this class will focus on marketing, menu development, cost control, pricing, mixology, customer service, legal issues, training, as it relates to bars and beverage service. Students will have an overview of products available for sale as well as a discussion of food and alcohol pairing principles.

**109-124****Hotel Facilities Management****Credits: 3.00**

This course focuses on the management of the property including design and renovation considerations. The class will also identify security and risk management issues especially as related to customer service standards. This class will also discuss the facility operations of alternative hotels including historic, B&B, spas, resorts, etc. PREREQUISITES: Course 109-121 - Hotel Operations, Intro to

**109-125****Hospitality Managerial Accounting****Credits: 3.00**

This course explains financial statements as they apply to the hospitality industry. Students will learn how to interpret, analyze, and use these statements. Ratios and comparison techniques will be explored. Students will create budgets using generally accepted principles.

**109-126****Advanced Customer Service Mgmt.****Credits: 3.00**

This class focuses on the systematic structures needed to provide exceptional customer service including hiring, training, work organization, quality management and quality assurances. Students will explore how change affects customer perceptions and expectations. PREREQUISITES: Complete course 109-122 - Service in the Hospitality Ind, Intro to with a minimum grade of C

**109-127****Hotel Strategic Management****Credits: 3.00**

This capstone course focuses on the strategic management of a hotel property. Student will master cost controls, yield management, and revenue strategies as it relates to lodging properties. Students will be able to articulate how their decisions affect the marketing, financial, and customer service standards of a hotel.

**109-128****Hospitality Front Line Internship****Credits: 2.00**

This hands on course focuses on work experience at the entry level in the Hospitality Industry. PREREQUISITES: Complete courses 801-136 - English Composition 1 804-135 - Quantitative Reasoning 109-101 - Hospitality/Principles of

**109-129****Hospitality Supervisory Internship****Credits: 2.00**

This hands on course focuses on work experience at the supervisory level in the Hospitality Industry. PREREQUISITES: Complete course 109-101 - Hospitality/Principles of COREQUISITES: Complete course 109-128 - Hospitality Front Line Internship

**109-131****Hospitality Capstone****Credits: 2.00**

This course readies the student for employment in the hospitality field. PREREQUISITES: Complete courses 109-122 - Service in the Hospitality Ind, Intro to and 109-128 - Hospitality Front Line Internship COREQUISITES: Complete course 109-129 - Hospitality Supervisory Internship

**109-171****Hospitality Sales and Marketing****Credits: 3.00**

Study marketing as it applies to hospitality industries. Develop theoretical and practical experience to create marketing plans for a variety of customers and establishments. Topics include the fundamentals of marketing principles, development of the marketing plan, sales promotion, marketing tactics and promotions, and special problems relating to this industry.

**114-101****Personal Financial Planning****Credits: 3.00**

This course considers finance from the perspective of the individual or family unit. A broad range of topics in personal finance are discussed including: planning and managing your personal finances, making purchasing and credit decisions, insuring assets, investing and controlling your financial future.

**138-118****International Bizsquad****Credits: 3.00**

In this course International Bizsquad students prepare to engage in multidisciplinary global projects. They examine best practices to communicate for positive outcomes. Students apply effective project management skills and manage scope

to support successful project implementation. Upon successful completion of the course, students will have acquired hands-on, international experience in project management and implementation.

### **140-107**

#### **Cultural Elements of Study Abroad**

**Credits: 1.00**

In this course, students engage in global learning opportunities by working and studying abroad. Students develop cross-cultural skills through their observation of, communication with, and participation in the local culture visited. Upon completion of the course, students relate their global perspective to their program of study, and they present their experience abroad.

### **140-109**

#### **International Field Study**

**Credits: 3.00**

Provides students with first-hand knowledge of working and studying in their program related area in the international environment. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace. Upon completion of the course, students will be able to incorporate a global perspective into a comparison of professional and social practices in the US and the country visited. They will share their experiences and findings in a formal presentation.

### **141-102**

#### **French for International Travel**

**Credits: 1.00**

Students will learn the fundamentals of the French language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

### **141-103**

#### **German for International Travel**

**Credits: 1.00**

Students will learn the fundamentals of the German language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

### **141-106**

#### **Culture and Language of Italy**

**Credits: 3.00**

This course is designed as an introduction to the Italian language in which a formal presentation of the proper language and correct grammatical structures will be presented through listening, reading, writing, and speaking in Italian. The course includes cultural studies of Italy including business, art, government, education, geography, music and travel. In addition, learners will examine cultural behaviors essential to engage successfully in Italian business and social settings.

**141-107****Cultural Elements of Study Abroad****Credits: 1.00**

Students will become familiar with geography, climate, demographics, conventions, customs, beliefs and safe travel practices of the country they are visiting in preparation for their study abroad experience. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace.

**141-109****International Field Study****Credits: 3.00**

Provides students with first-hand knowledge of working and studying in their program related area in the international environment. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace. Upon completion of the course, students will be able to incorporate a global perspective into a comparison of professional and social practices in the US and the country visited. They will share their experiences and findings in a formal presentation.

**141-110****Culture and Language of Peru****Credits: 3.00**

This course is designed as an introduction to the culture of Peru and the Spanish language in which the proper language and correct grammatical structures will be presented through listening, reading, writing, and speaking in Spanish. The course includes cultural studies of Peru including history, government, economy, education, geography, art, music and demographics. In addition, learning will examine cultural behaviors essential to engage successfully in community service work in Peru and communicate in social settings.

**141-111****Culture and Language of Iceland****Credits: 3.00**

This course is designed as an introduction to the culture of Iceland, the Icelandic language and Icelandic and Norse literature. Icelandic literature will be presented through a series of readings and instruction provided by the University of Iceland. The course includes cultural studies of Iceland including history, government, economy, education, geography, geology, sustainable energy, art, music and demographics.

**141-165****Spanish for Business****Credits: 3.00**

This course is designed to enable students with minimal or no Spanish language skills to communicate effectively with Spanish speaking individuals. Designed for business students and professionals, the course presents basic conversational Spanish to apply in the many facets of this field. This course includes functional language and cultural awareness that could be applied in office clerical, marketing, accounting, supervisory, and other business functions. In this course students will be exposed to cultural differences, the benefits of cultural awareness, and function specific

vocabulary. Student should expect to be able to understand and communicate basic vocabulary in a variety of business functions and fields.

### **145-106**

#### **Entrepreneurship 3 - Operations MGMT**

**Credits: 3.00**

This course covers the aspect of effectively managing the resources of a small business. Covering the topics of managing finances, staff, marketing and technology. The student will work on projects that will be focused on their specific business needs and will assist the student in planning how to handle their day to day operations. COREQUISITES: Course 145-119 - Entrepreneurship

### **145-119**

#### **Entrepreneurship**

**Credits: 3.00**

Can your idea be turned into a profitable business? Will power and hard work are not enough to guarantee success. You must first determine the feasibility of your idea. Before you quit your job, invest your life savings or dedicate time to complete a business plan, wouldn't it be nice to know whether business ownership is right for you? In this class, you'll examine your business idea from every angle. Not only will it help you make a decision about starting your business, you will discover whether the life of an entrepreneur is right for you.

### **145-120**

#### **Business Planning and Development**

**Credits: 3.00**

Regardless if you need financing or not, a business plan is essential for the entrepreneur to be successful. This course will take a comprehensive look at your prospective business. Looking at key components that will include evaluating and developing your product/service offering, marketing plan, financial plan and growth plan. At the end of class you will develop a business plan for your proposed business. PREREQUISITES: Course 145-119 - Entrepreneurship

### **145-121**

#### **Small Business Ownership**

**Credits: 3.00**

This course goes beyond the business plan and students will have the opportunity to start their own business. Students will combine classroom experience with the management of their business. To make this happen students will be assigned a mentor that will help them through the process. The goal of the course is to assist students in implementing their businesses in an ethical and socially responsible manner that ultimately enhances the local business community. PREREQUISITES: Complete course 801-136 - English Composition 1 COREQUISITES: Course 145-120 - Business Planning and Development

### **150-106**

#### **Intrusion Detection Systems**

**Credits: 3.00**

Learn the basic concepts and techniques of Intrusion Detection Systems (IDS) and other network related defense strategies. Students will setup, configure, and monitor an Intrusion Detection System utilizing different leading edge products. Current network defense strategies will be discussed and popular tools will be used. Students will be able to apply the correct IDS and defense strategies for different business? goals. PREREQUISITES: Course 150-194 - Network Security

### **150-108**

#### **Virtual Technologies**

**Credits: 3.00**

Learn the basic concepts and techniques of virtual technologies. Students will setup, configure, and monitor virtual systems utilizing different leading edge products. Current virtual technologies configurations will be discussed and popular tools will be used. Students will be able to apply the correct virtual solution to different business goals.

### **150-109**

#### **Network Admin Microsoft Server 1 2016**

**Credits: 3.00**

Microsoft Official Academic Course (MOAC) covering the installation, configuration, and storage options in Windows Server 2016 environment. Additional topics including maintaining, securing and monitoring server performance. The class prepares the student to study for the Microsoft 70-740 exam. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1 COREQUISITES: Course 801-136 - English Composition 1

### **150-110**

#### **Network Admin Microsoft Server 2 2016**

**Credits: 3.00**

Microsoft Official Academic Course (MOAC) covering Networking topics in a Windows Server 2016 environment. Additional topics include: DNS, DHCP, IP address management, connectivity solutions and advanced network infrastructure. The class prepares the student to study for the Microsoft 70-741 exam. PREREQUISITES: Courses 150-109 - Network Admin Microsoft Server 1 2016 and 804-135 - Quantitative Reasoning

### **150-113**

#### **Network Administration - Linux/Unix**

**Credits: 4.00**

Advanced administration concepts and applications will be discussed and implemented. Topics include: implementing an enterprise network that incorporates a host system, multimedia, multiple platforms, UNIX, and other advanced network administration tasks. PREREQUISITES: Course 150-109 - Network Admin Microsoft Server 1 2016

### **150-114**

#### **Network Concepts - CCNA1**

**Credits: 3.00**



This course will provide you with more in depth networking concepts. Topics will include the Internet, OSI model, wireless, security, logical and physical topologies, instant messaging, basic router setup and switch configuration, network connectivity, and hardware and software configurations. You will also learn how to create local area networks and wide area networks. Individuals will learn real-world skills related to employment. COREQUISITES: Course 804-135 - Quantitative Reasoning

### **150-115**

#### **IoT: Securing Devices**

**Credits: 3.00**

In this course, students continue working with IoT devices. Students connect devices and analyze firmware and software for weaknesses. Students research and perform upgrades to IoT devices. After upgrading the IoT devices, the students secure these devices by applying industry best practices. This may include changing firewall settings or remote access settings. Upon completion of this course, students can recognize, update and secure IoT devices. PREREQUISITES: Course 150-182 - IoT: Connecting Devices and 804-135 - Quantitative Reasoning

### **150-119**

#### **Network Admin Microsoft Server 2019**

**Credits: 3.00**

In this Microsoft Official Academic Course (MOAC) students examine installation, configuration, and storage options in the Windows Server 2019 environment. Students explore processes to maintain, secure, and monitor server performance. Upon completion of the course, students will be prepared to take the Microsoft Certified Solutions Associate (MCSA) Windows Server 2019 exam.

### **150-124**

#### **Routing CCNA 2**

**Credits: 3.00**

Provides classroom and lab experience in current and emerging networking technology. Includes the following networking concepts and technologies: OSI reference model, LANs, WANs, TCP/IP addressing, routers, router configuration, routed and routing protocols, Internetwork Open System (IOS) images and network troubleshooting. Students will become familiar with the use of commands and protocols that are used when configuring networks and will learn how to troubleshoot a multi-router topology. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1

### **150-125**

#### **CCNA Security**

**Credits: 4.00**

This course will lead to CCNA Security certification. This course will enhance the student's knowledge of securing Cisco routers and switches and their associated networks. Acquired skills include installation, troubleshooting and monitoring of network devices in order to maintain integrity, confidentiality and availability of data and devices. Develops competency in the technologies that Cisco uses in its security infrastructure. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

**150-126**

**Network Security Design**

**Credits: 3.00**

This course affords the network security specialist the opportunity to design a secure network in a team environment using the skills learned from the prerequisite classes. The student must demonstrate the ability to design, plan and execute an infrastructure that represents the services offered by a common business or organization. The student will research, design and prepare documents including notes, diagrams, references, and implementation instructions.

PREREQUISITES: Course 150-106 - Intrusion Detection Systems with a minimum grade of C or TR

**150-131**

**Network Specialist Internship**

**Credits: 3.00**

Establishes an opportunity for the student to apply training and skills in a business/ industrial/ academic work environment. The student will spend 144 hours at the worksite. Student contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. PREREQUISITES: Courses 150-114 - Network Concepts - CCNA1 and 107-193 - IT Essentials

**150-135**

**Switching & Wan's - CCNA 3 & 4**

**Credits: 4.00**

Continue to grow your networking skills by applying your knowledge from the two previous classes and learning more advanced concepts. New skills that will be explored include: configuring switches, implementing intermediate routing, calculating VLSMs, WAN services, NAT, PAT, configuring DHCP. Hands-on experience will be acquired by applying your knowledge to complete a comprehensive threaded case study. PREREQUISITES: Course 150-124 - Routing CCNA 2

**150-136**

**Server Technologies**

**Credits: 3.00**

Learn advanced server technology skills to prepare you to support a production server. These skills include server upgrades, fault tolerance, advanced networking, disaster planning and more. Develop a basic technology plan which includes server management and disaster recovery plans. This class will also prepare you to take the CompTIA's Server+ industry certification exam. PREREQUISITES: Courses 107-193 - IT Essentials and 801-197 - Technical Reporting

**150-143**

**Computer Security and Penetration Test**

**Credits: 4.00**

Students will examine current network security topics through real world examples. They will explore how and why people attack computers and networks and prepare to defend and protect networks and their components.

PREREQUISITES: Course 151-130 - Cisco CyberOps (soc) with a minimum grade of C or TR

**150-144****Firewalls & VPNs****Credits: 4.00**

Students will setup and configure hardware and software firewalls. They will compare and contrast firewall technologies, design firewall controls to meet various security scenarios and establish VPNs. Security controls will be deployed and performance analyzed. PREREQUISITES: Course 150-124 - Routing CCNA 2 with a minimum grade of C or TR

**150-145****IT Scripting****Credits: 3.00**

This course is designed to provide an overview of modern scripting languages commonly used to build and extend network administration and security tools. The course will introduce the student to scripting on both the Microsoft and Linux platforms. Students will explore the uses of scripting languages and third party modules for accomplishing tasks including scanning, enumeration and automation of network tasks.

**150-146****CyberSecurity****Credits: 4.00**

Students will develop ethical offensive and defensive strategies to protect various network configurations. They will determine which current tools and technologies to utilize while simulating attacks, analyzing and securing the network systems. PREREQUISITES: Course 150-194 - Network Security with a minimum grade of C or TR

**150-147****Network Administration Microsoft 1****Credits: 3.00**

Perform basic administration tasks of core services in a Windows Server environment. The class is the first in a series of three classes. Microsoft Official Academic Course materials are used. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1 with a minimum grade of C or TR

**150-148****Network Administration Microsoft 2****Credits: 3.00**

Perform intermediate administration tasks of infrastructure services in a Windows Server network environment. This class is the second in a series of three classes. Microsoft Official Academic coursework is used. PREREQUISITES: Course 150-147 - Network Administration Microsoft 1 with a minimum grade of C or TR

**150-180****What's in the Cloud?****Credits: 3.00**

Learn about the IT cloud. This course is designed to teach students the basic concepts and terminology of cloud computing. In addition to learning the definition of cloud computing, the students will be able to describe the various service delivery options of a cloud computing architecture, and cloud deployment models including private, public and community clouds. Students also learn about the security challenges that cloud deployments experience, and how these are addressed. Current cloud technologies, tools, configurations and trends will be discussed. PREREQUISITES: Course 150-194 - Network Security

### **150-181**

#### **Cloud Technologies**

**Credits: 4.00**

In this course, learners are introduced to different cloud computing infrastructures. Learners will develop skills for architecting the best cloud infrastructure solution for a business' goals. Cloud virtualization technologies will be examined and cloud solutions will be deployed. Cloud-related virtualization, networking, management, storage, security, and performance will be explored. Upon completion of the course, students will be able to deploy technology solutions within the cloud based infrastructure. PREREQUISITES: Complete course 150-124 - Routing CCNA 2

### **150-182**

#### **IoT: Connecting Devices**

**Credits: 3.00**

In this course, learners are introduced to the interconnection of data, people, processes and things that forms the Internet of Things (IoT). Learners will differentiate among smart devices, connected devices, and Internet of Things (IoT) devices. Machine-to-machine (M2M), machine-to-people (M2P), and people-to-people (P2P) connections in an IoT solution will be examined. Security concerns that must be considered when implementing IoT solutions will be investigated. Upon completion of the course, learners will be able communicate with data over networks to IoT frameworks.

### **150-183**

#### **VCP: Virtualization Technologies**

**Credits: 3.00**

In this course, learners are introduced to Enterprise virtualization using VMware vSphere, ESXi and vCenter. Through hands-on experience, learners install, configure, and manage VMware vSphere environments. Storage and networking concepts related to virtualization are examined. Upon completion of the course, learners will be prepared to take the VCP certification exam. PREREQUISITES: Complete course 150-110 - Network Admin Microsoft Server 2 2016

### **150-194**

#### **Network Security**

**Credits: 3.00**

Students will learn how to maintain security in the workplace. Security plans will be created based on, but not limited to, ten key security technologies: access control, network security, management security procedures, systems development security, cryptography, security models, operations security, disaster recovery, laws and ethics, and physical security.

**150-198****Interconnecting Cisco Network Dev P1****Credits: 1.00**

640-822 ICND1: Interconnecting Cisco Networking Devices Part 1, this course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small branch office Enterprise network, including configuring a switch, router, and connecting to a WAN and implementing network security. A student should be able to complete configuration and implementation of a small branch office network under supervision. PREREQUISITES: Course 150-124 - Routing CCNA 2 with a minimum grade of C or TR

**150-199****Interconnecting Cisco Network Dev P2****Credits: 1.00**

640-816 ICND2: Interconnecting Cisco Networking Devices Part 2 this course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small to medium-size branch office Enterprise network, including configuring several switches and routers, connecting to a WAN and implementing network security. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

**150-301****Networking Principles****Credits: 2.00**

This course will provide you with networking concepts. Topics will include the OSI model, wireless, security, topologies, basic router setup and switch configuration, network connectivity, and hardware and software configurations. You will also learn how to create local area networks. Individuals will learn real-world skills related to employment.

**151-120****Cloud Data Security****Credits: 4.00**

The Cloud Infrastructure and Services (CIS) course educates students about cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. For all definitions of cloud computing, the course has resorted to the U.S. National Institute of Standards and Technology as a guide. The course covers technologies required to build classic (traditional), virtualized, and cloud data center environments. These technologies include compute, storage, networking, desktop and application virtualization. Additional areas of focus are backup/recovery, business continuity, security, and management. Students will learn about the key considerations and steps involved in transitioning from the current state of a data center to a cloud computing environment. Upon completing this course, students will have the knowledge to make informed decisions about migrating to cloud infrastructure and choosing the best deployment model for an organization. PREREQUISITES: Course 150-146 - CyberSecurity

**151-130****Cisco CyberOps (soc)****Credits: 3.00**

The CCNA Cybersecurity Operations curriculum provides an introduction to the knowledge and skills needed for a Network Security Specialist working with a Security Operations Center (SOC) team. Students learn core security skills needed for monitoring, detecting, investigating, analyzing and responding to security events, thus protecting systems and organizations from cybersecurity risks, threats and vulnerabilities. Upon completion of this course, students can prepare for the Implementing Cisco Cybersecurity Operations (SECOPS) Certification Exam. PREREQUISITES: Course 150-146 - CyberSecurity

### **151-131**

#### **Managing and Configuring Firewalls**

**Credits: 3.00**

In this class, students will gain an in-depth knowledge of how to install, configure, and manage firewalls for the defense of the enterprise network architecture. Students will also learn the theory, as well as configuration steps for the security, networking, threat prevention, logging, and reporting features of next-generation firewalls. Upon completion of this course, students can install, configure and update next-generation firewalls. PREREQUISITES: Courses 150-106 - Intrusion Detection Systems and 150-115 - IoT: Securing Devices

### **151-132**

#### **SOC: Monitor/Secure the Infrastructure**

**Credits: 3.00**

Learners will monitor, administer, manage, and control one or more networks. The overall function is to maintain optimal network operations across a variety of platforms, mediums and communications channels. Problems will be introduced into the networks and students will be required to work as a team to troubleshoot and fix the systems in a timely manner. Upon completion of this course, the student should be able to recognize and troubleshoot network issues while maintaining availability. PREREQUISITES: Course 151-130 - Cisco CyberOps (soc)

### **152-001**

#### **Front-End Development with React**

**Credits: 3.00**

In this course, students develop React applications using JavaScript and JSX tags. They examine the architecture of React applications including components, props and states, directives and services. Students create single-page applications that utilize data binding, the React router library and are based on components and JSX. Upon completion of the course, students will be able to create modern single page applications utilizing the React framework to solve a specific development need.

### **152-080**

#### **Databases**

**Credits: 3.00**

In this course, students explore concepts, design, documentation, and implementation of various database systems, including proprietary and open source technologies. Students implement Structured Query Language (SQL) to store, retrieve, and manipulate data. Students create queries, normalize database structures, and create stored procedures. Upon completion of this course, students will be prepared to develop and maintain databases used in application development. PREREQUISITES: Complete course 152-081 - Programming in Python or 152-184 - Java Programming 1

**152-081****Programming in Python****Credits: 3.00**

In this course, students investigate the fundamentals of computer programming using the Python programming language. Students examine data types, variables, conditional statements, looping, array structures, and structured programming techniques. Upon completion of the course, students will be able to use Python to apply problem solving skills to create applications for delivery to various platforms.

**152-082****Web Developer Orientation****Credits: 1.00**

In this course, students examine skills required for web developer success. They identify academic and professional goals and analyze their readiness to engage in studying web development. Students explore elements of the program including supporting coursework, internships, career services, and professional activities. Upon completion of the course, students will have a strategic plan for developing and showcasing their web development skills. **COREQUISITES:** Complete course 152-182 - Web Programming 1 prior or concurrently

**152-083****Web Developer Project****Credits: 3.00**

In this course, students examine the fundamental concepts of project management for web projects. Students implement the full project management life cycle, from the basics of getting started (defining the project and scope, prioritizing and estimating features) to developing and deploying the website. Students practice: user interface design, marketing strategies, secure web hosting and domain names, and search engine optimization techniques. Upon completion of this course, students apply project management skills to create a website or application, which they can add to their portfolio, for a business or industry client. **PREREQUISITES:** Complete courses 152-150 - Web Programming 2, 152-188 - PHP Web Programming, and 801-197 - Technical Reporting prior to or concurrently

**152-084****Front-End Development with Angular****Credits: 3.00**

This course introduces students to the Angular framework. Students will use Typescript for developing Angular applications. Students learn the architecture of Angular applications including components, directives and services. Students will create single-page applications that utilize data binding, the Angular router, and are based on template-driven and reactive forms. Upon completion students will be able to create modern single page applications utilizing the Angular framework to solve a specific development need. **PREREQUISITES:** Complete course 152-097 - Javascript with a minimum grade C minimum grade C;

**152-085****Java Web Internship****Credits: 1.00**

This course establishes an opportunity for the student to apply training and skills in a business/industrial academic work environment. The student will spend 36 hours at the worksite and contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. COREQUISITES: Complete course 152-150 - Web Programming 2

**152-086****Review for Java Certification Exam****Credits: 1.00**

This course helps prepare an individual for the Oracle Java certification exam. The focus of the review will be on the topic areas of the certification exam: java basics, java datatypes, operators and decision constructs, arrays, loop constructs, methods and encapsulation, inheritance, handling exceptions and the Java API. This is a one credit review class and not a hands-on lab class. COREQUISITES: Complete course 152-174 - Java Programming 2

**152-087****Review for Exam MTA 98-364 (Database)****Credits: 1.00**

This course helps prepare an individual for the Microsoft Technology Associate (MTA) Database Fundamentals certification exam. The focus of the review will be on the five topic areas of the certification exam: understanding core database concepts, create database objects, manipulate data, understand data storage and administer a database. This is a one credit review class and not a hands-on lab class. COREQUISITES: Complete course 152-146 - Databases, Advanced

**152-088****Programming Logic****Credits: 1.00**

This course introduces the student to the program development and design process, including computer-based concepts of problem-solving, structured programming logic and techniques, algorithm development, pseudocoding and program design. Enrolled students acquire a set of specific computer programming skills as they learn to think like programmers.

**152-093****IBM Advanced Java Programming****Credits: 3.00**

This course will introduce dynamic web application development using Java Servlets and JSP technologies. Moreover databases in web applications and the Java Database Connectivity (JDBC) API will also be covered. Students will also be learning to program Java Applications using XML (Extensible Markup Language), multithreading, I/O, and network programming. Students will be learning to develop N-Tier e-Business applications. PREREQUISITES: Courses 152-141 - Java Programming- IBM Systems and 152-145 - Internet Programming with a minimum grade of C or TR



**152-096**

**Developing ASP.NET Web Apps 2**

**Credits: 3.00**

This course will prepare students to develop advanced ASP.NET web applications that utilize the Model View Controller (MVC) architecture. Students will enhance their C# programming skills to power server-side, data-driven web sites, including database integration and migrations. Learners will create advanced user interfaces, integrate advanced HTML/CSS/JavaScript code, apply security and authorization techniques, optimize applications for Search Engine Optimization (SEO), and explore integration with SharePoint and cloud-based services. Skills learned will be demonstrated by completing a programming project. PREREQUISITES: Complete course 152-178 - Developing ASP.NET Web Apps with a minimum grade C

**152-097**

**Javascript**

**Credits: 3.00**

This course will introduce students how to add intuitive, dynamic and animated interaction between their web pages and visitors. Using HTML.5 as a base, we will use Javascript, Ajax, and jQuery library to react to user actions and change webpage structure, content, and appearance. Through this course, students will learn how to dynamically refine, design appearance, control and manipulate HTML elements via the DOM API, and create content within a medium that is used for both desktop and mobile device computing. PREREQUISITES: Complete course 152-182 - Web Programming 1

**152-105**

**IBM Enterprise Systems Concepts**

**Credits: 2.00**

System i Concepts will provide an overview of the i5 Operating System functions and capabilities. Emphasis will be placed upon utilities intrinsic to the operating system and provide a prelude to the programming environment. Some of the features discussed are file structures, library organization, application development tools, control language commands, and structured query. The course will demonstrate business applications without the use of formal programming languages. The labs will focus on data collection, processing, and reporting. At the end of the course, the learner should be able to access the user support facilities, command prompting, online help, and various commands to organize and manipulate the system. It is the intent of the course to make the learner knowledgeable and comfortable enough with the platform and operating system to focus on the programming languages supported by i5/OS Operating System. COREQUISITES: Course 107-011 - IT in Business

**152-122**

**Computer Programming RPG/IV (ILE)**

**Credits: 3.00**

Business oriented programming language. Topics include: specification forms, logic cycle, RPG structure commands, physical and logical file structures, externally described printer files, table and array processing, joined logical files, multiple physical files, extensive programming and documentation of business related applications. PREREQUISITES: Courses 152-126 - Programming & Database, Introduction to Concepts 152-133 - IBM Control Language 801-136 - English Composition 1 AND course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

**152-124****Computer Programming C****Credits: 3.00**

Learn the principles of object oriented programming using C++. Topics include: formatted 1/10 streams, variables, constants, references, functions, decisions, loops, classes, objects, inheritance, memory management, libraries, and error handlers. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

**152-125****Computer Programming RPG/IV (ILE), Adv****Credits: 3.00**

Describe and define syntax for constructing online business applications using IBM's High Level Language RPG/400. Competencies learned in RPG/400 are enhanced with additional focus on the following topics: creating sub-file structures, interactive programming techniques, use of arrays and matrixes, creating and using Help screens, introduction to group update techniques and to DB2 relational database. PREREQUISITES: Course 152-122 - Computer Programming RPG/IV (ILE)

**152-126****Programming & Database, Introduction to Concepts****Credits: 4.00**

This class will introduce students to the structures, logic, and controls of programming techniques and database applications. Students will be able to develop a program that will utilize a database.

**152-129****Web Project Management****Credits: 2.00**

This course covers the fundamentals of project management for web projects. The course covers the full project management lifecycle, from the basics of getting started (defining the project and scope, prioritizing and estimating features) to developing and deploying the website. In this course the students will work with a business client to design, develop and deploy a website. PREREQUISITES: Course 152-150 - Web Programming 2

**152-131****Systems Design and Development****Credits: 3.00**

Introduction to systems development and design concepts. Survey of business applications and their relationship to computers. Students will develop a business system and its associated documentation. PREREQUISITES: Course 152-122 - Computer Programming RPG/IV (ILE) with a minimum grade of C or TR

**152-133****IBM Control Language****Credits: 2.00**

AS/400 Control Language (CL) commands, functions, and applications are used in a hands-on environment.

PREREQUISITES: Course 152-105 - IBM Enterprise Systems Concepts

### **152-139**

#### **Ruby on Rails**

**Credits: 3.00**

This course introduces the student to the Ruby a popular, open-source, dynamic object-oriented scripting language, and the Rails Application framework based on an MVC architecture. Topics will include installing Ruby and Rails, an introduction to the Ruby programming language, an overview of the Rails framework, ActiveRecord basics, ActionController coding, Action Views, AJAX and the Web 2.0 Action mailer basics, security, deployment and scaling. Students will produce a very modern web application that can be adapted to many professional web development needs.

PREREQUISITES: Course 152-188 - PHP Web Programming

### **152-140**

#### **Web Internship**

**Credits: 3.00**

This course establishes an opportunity for the student to apply training and skills in a business/industrial/academic work environment. The student will spend 144 hours at the worksite and contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. COREQUISITES: Course 152-146 - Databases, Advanced

### **152-141**

#### **Java Programming- IBM Systems**

**Credits: 3.00**

This course introduces the new learner to the Java programming language, specifically as it relates to the IBM iSeries platform. Specific iSeries subjects covered will include using WebSphere Development Studio, accessing AS/400 objects from Java, working with AS/400 databases, and building AS/400 graphical applications. PREREQUISITES: Courses 152-105 - IBM Enterprise Systems Concepts and 152-126 - Programming & Database, Introduction to Concepts

### **152-145**

#### **Internet Programming**

**Credits: 3.00**

This introduction to web programming will explore a variety of tools used for web page creation. An introduction to client side internet website programming, this course covers HTML, CSS, DHTML, and JavaScript. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

### **152-146**

#### **Databases, Advanced**

**Credits: 3.00**

This course offers students an introduction to enterprise data server technology. The class covers the concepts of both relational and object relational databases and the powerful SQL programming language. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. Demonstrations and hands-on practice reinforce the fundamental concepts. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts or 152-184 - Java Programming 1

### **152-149**

#### **IBM i System Administration**

**Credits: 3.00**

This course is designed to prepare the student for a junior IBM i administrator position. After completing this course the student will have a in-depth understanding of the IBM i operating system as well as the ability configure hardware and software on the system. This course provides the student with hands-on exercises configuring IBM i software and hardware.

### **152-150**

#### **Web Programming 2**

**Credits: 3.00**

This course provides an introduction to HTML, CSS, and JavaScript. The course focuses on using HTML/CSS/JavaScript to apply programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications. This course will help prepare students for exam 70-480. PREREQUISITES: Courses 152-182 - Web Programming 1 AND 152-097 - Javascript with minimum grade of C

### **152-151**

#### **Microcomputer Programming Advanced**

**Credits: 3.00**

A class in advanced microcomputer programming techniques. This class will examine trends in microcomputer program development including: use of objects, database access, receiving user input, displaying output, error handling, application controls, and online assistance. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

### **152-157**

#### **Game Programming I**

**Credits: 3.00**

This course is an introduction to computer game programming. Students will create their own computer games utilizing development tools. Through hands-on work students will learn how to develop a typical game. Topics include graphics, game design, bitmaps, sprites and backgrounds. Students will design, implement, and test interactive computer games. This course requires prior computer programming skills. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

**152-158**

**DB2 UDB Programming & Stored Procedures**

**Credits: 3.00**

Exploring the powerful programming features of RDBMS is required in developing enterprise wide applications. This course provides a comprehensive review of DB2 programming using Java, embedded SQL, and stored procedures. This course also discusses advanced RDBMS concepts. This course may only be offered by authorized e-business application advanced career education program providers with IBM authorized instructors, software, and hardware. PREREQUISITES: Courses 152-126 - Programming & Database, Introduction to Concepts and 152-105 - IBM Enterprise Systems Concepts

**152-161**

**Game Programming Technologies**

**Credits: 2.00**

This class examines modern technologies for computer game development. Students will learn how to install development components. In addition, students will learn how to draw game elements. PREREQUISITES: Course 152-157 - Game Programming I

**152-164**

**Mobile Device Application Programming**

**Credits: 3.00**

This course teaches students to develop applications for mobile platforms. Students will utilize a Software Development Kit (SDK) to develop working applications. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts or 152-184 - Java Programming 1

**152-167**

**Zend (PHP) Application Prog - IBM SYS**

**Credits: 3.00**

Topics covered include techniques for modernizing traditional applications using i5 Toolkit Utilizing DB2 Storage Engine for MySQL. Development techniques necessary for the full PHP application lifecycle using a comprehensive set of editing, debugging, analysis, optimization, database tools and testing. Zend Studio for Eclipse i5 Edition. PREREQUISITES: Course 152-141 - Java Programming- IBM Systems with a minimum grade of C or TR

**152-168**

**IBM and .NET Enterprise Programming**

**Credits: 3.00**

Topics covered include advanced .NET tools for creating front end applications for the IBM i. Additional topics include database access using ADO.NET and ASP.Net, XML, Multithreaded and Parallel Programming. The course will also examine advanced .NET topics like WPF and LINQ. PREREQUISITES: Course 152-151 - Microcomputer Programming Advanced with a minimum grade of C or TR

**152-170**

**IT WEB Project Lab 1**

**Credits: 4.00**

In this lab course students will apply their knowledge and skills of Visual Basic Programming and HTML to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

**152-171**

**IT Web Project Lab 2**

**Credits: 5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, Java, C+, and SQL to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

**152-172**

**IT Web Project Lab 3**

**Credits: 5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, PHP, MySQL and Java to develop projects(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

**152-173**

**IT Web Project Lab 4**

**Credits: 5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, ASP.NET, and SharePoint Programming to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

**152-174**

**Java Programming 2**

**Credits: 3.00**

This course focuses on the advanced language features of Java. Topics will include Java servlets, database access with Java Database Connectivity (JDBC), JavaServer Pages and JavaBeans. A portion of the class deals with application design issues in a web environment as well as connecting to a backed database server. Labs and hands-on projects are a required element to this class and provide the student with experience working with the more advanced features of the Java language. PREREQUISITES: Course 152-184 - Java Programming 1 with a minimum grade of C or TR

## **152-175**

### **MCSO HTML w JavaScript & CSS Review**

**Credits: 1.00**

This course helps prepare an individual for the MCSO HTML with JavaScript and CSS certification exam. This is the first of four exams that must be passed for an individual to achieve the Microsoft Certified Sharepoint Developer certification.

PREREQUISITES: Course 152-150 - Web Programming 2 with a minimum grade of C or TR

## **152-176**

### **Adv Prog Sharepoint Solutions**

**Credits: 3.00**

In this course students will learn the information needed to implement SharePoint solutions using Enterprise Search, Managed Metadata Service (MMS), Business Connectivity Services (BCS), Enterprise Content Management (ECM), Web Content Management (WCM), Social computing features and SharePoint Apps. This course will help prepare students for exam 70-489. COREQUISITES: Course 152-177 - Core Prog Sharepoint Solutions

## **152-177**

### **Core Prog Sharepoint Solutions**

**Credits: 3.00**

In this course students will cover core skills that are common to almost all SharePoint development activities. Including working with the server- and client-side object models, developing and deploying features, solutions and apps, managing identity and permissions, querying and updating list data, managing taxonomy, using workflow to manage business processes, and customizing the user interface. This course will help prepare students for exam 70-488. PREREQUISITES: Course 152-178 - Developing ASP.NET Web Apps with a minimum grade of C or TR

## **152-178**

### **Developing ASP.NET Web Apps**

**Credits: 3.00**

In this course students will learn to use .NET Framework tools and technologies to develop advanced ASP.NET MVC applications. The focus will be on coding activities that improve performance and scalability of Web site applications. ASP.NET MVC will be introduced and compared with Web Forms so that students know when each should/could be used. This course will help prepare students for exam 70-486. PREREQUISITES: Course 152-182 - Web Programming 1 minimum grade of C AND course 152-097 - Javascript or 152-184 - Java Programming 1 or 152-081 - Programming in Python minimum grade of C

## **152-179**

### **MCSO ASP.NET MVC Review**

**Credits: 1.00**

This course helps prepare an individual for the MCSO ASP.NET MVC Web Applications certification exam. This is the second of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint Developer certification. PREREQUISITES: Course 152-178 - Developing ASP.NET Web Apps with a minimum grade of C or TR

**152-180**

**MCSA Server Advanced Review**

**Credits: 1.00**

This course helps prepare an individual for the MCSA Server Advanced Solutions certification exam. This is the last of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint Developer certification.

PREREQUISITES: Course 152-176 - Adv Prog Sharepoint Solutions with a minimum grade of C or TR

**152-181**

**MCSA Server Core Review**

**Credits: 1.00**

This course helps prepare an individual for the MCSA Server Core Solutions certification exam. This is the third of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint certification. PREREQUISITES:

Course 152-177 - Core Prog Sharepoint Solutions with a minimum grade of C or TR

**152-182**

**Web Programming 1**

**Credits: 3.00**

This course teaches students essential Web page development skills. Students will build an understanding of how to manage the Application Life Cycle, build the User Interface by Using HTML5, and format the User Interface by Using CSS.

Other topics include validating HTML and CSS code, recognizing the importance of marketing, and implementing fundamental design concepts. COREQUISITES: Course 152-082 - Web Developer Orientation

**152-183**

**Review MTA 98-375 Exam**

**Credits: 1.00**

This focused course helps prepare a student to take the HTML5 Application Development Fundamentals: MTA Exam 98-375. The Microsoft Technology Associate exam focuses on the areas of Managing the Application Life Cycle, building the User Interface by Using HTML5, formatting the User Interface by Using CSS, and Coding by Using JavaScript.

PREREQUISITES: Course 152-182 - Web Programming 1 with a minimum grade of C or TR

**152-184**

**Java Programming 1**

**Credits: 3.00**

The course introduces the student to the fundamentals of object-oriented programming using the Java programming language. Students will learn the core aspects of Java including how to write and debug Java code. Labs and hands-on projects are a required element to this class and provide the student with experience working with the Java language.

COREQUISITES: Course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1



**152-185****Advanced PHP****Credits: 3.00**

This course prepares the student to develop advanced PHP and MySQL web applications. Students will learn advanced techniques for session management, validation, and authentication. Advanced web application features such as shopping carts, content management using Drupal, web forums and connecting to web services are discussed.

PREREQUISITES: Course 152-188 - PHP Web Programming minimum grade C AND 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1 minimum grade C

**152-186****Mobile Game Programming****Credits: 3.00**

This class is designed to give students a foundation for writing games on mobile devices. PREREQUISITES: Course 152-157 - Game Programming I

**152-187****Web Developer/Administrator Orientation****Credits: 1.00**

Students develop skills to enhance their success in the Gateway Technical College Web Developer/Administrator program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the Web Programming/Administrator field through the Internet, periodicals, and surveys. Students design an academic and career development plan and initiate their ongoing program portfolio.

**152-188****PHP Web Programming****Credits: 3.00**

This hands-on PHP Web Programming course provides the knowledge necessary to design and develop dynamic, database-driven web pages. Students will learn how to write and debug PHP code, how to effectively use many of its powerful features, and how to design and build their own PHP web applications. Students will design and create a Web Database using the popular MySQL DBMS to function as a backend database for their PHP website. PREREQUISITES: Course 152-182 - Web Programming 1 with a minimum grade of C AND course 152-184 - Java Programming 1 or 152-081 - Programming in Python minimum grade C

**152-1892****Graphics Programming with Dynamic Elements****Credits: 3.00**

This advanced course uses the languages and elements introduced in the prerequisite and extend the dynamic interaction and animation of HTML5 and Javascript. Students will use JQuery and Ajax Animator to create animations; use still and video motion to further enrich dynamic websites that could be used for desktop and mobile computing alike. Students will use Web based Object Oriented programming to create interactive projects. PREREQUISITES: Course 152-190 - Elements of Dynamic Web Design

**152-190****Elements of Dynamic Web Design****Credits: 2.00**

This course will introduce students to how to add intuitive, dynamic and animated interaction between their webpages and its visitors. Using HTML5 as a base, we will be using the universal languages of Javascript and Ajax to react to user actions and change webpage structure, content, and appearance. Through this course, we will learn how to dynamically refine design appearance and create content within a medium that is used for both desktop and mobile device computing. PREREQUISITES: Course 152-182 - Web Programming 1 and 152-187 - Web Developer/Administrator Orientation with a minimum grade of C or TR

**154-109****Computer Support Specialist Internship****Credits: 3.00**

Establishes an opportunity for the student to apply training and skills in a business/ industrial/ academic work environment. The student will spend 144 hours at the worksite. Student contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. COREQUISITES: Courses 154-113 - IT Apps Server & Support and 154-114 - Hardware & Software Support

**154-112****Data Security & Recovery Support****Credits: 3.00**

Focus will be on desktop data security, data retention and recovery. Students will be introduced to computer forensics / data recovery tools, local security issues, disaster recovery plans and legal data requirements (i.e. HIPPA requirements, Sarbanes-Oxley Act, etc.). PREREQUISITES: Course 154-114 - Hardware & Software Support with a minimum grade of C AND course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

**154-113****IT Apps Server & Support****Credits: 3.00**

Students will learn to resolve operating system and application issues by telephone, remote access, or by visiting an end user's desktop. Students will gain a working knowledge of operating in a workgroup and a client/server environment.

NOTE: This course will help prepare the student to take the Microsoft Certified Desktop Technician Exam 70-272.

PREREQUISITES: Course 154-114 - Hardware & Software Support with a minimum grade of C or TR

**154-114****Hardware & Software Support****Credits: 3.00**

Students will learn to resolve hardware and software issues in a multiplatform environment. Students will troubleshoot and repair various systems and applications, as well as desktop issues. NOTE: This course will help prepare students to

attain certifications if desired. PREREQUISITES: Course 154-119 - System Software Support and 107-193 - IT Essentials with a minimum grade of C or TR

### **154-116**

#### **Emerging Technologies & Applications**

**Credits: 2.00**

Students will research, explore and evaluate new and future hardware and software advancements and trends. Areas to investigate may include contemporary package development applications, collaboration tools, reporting software, and innovative equipment and hardware, as well as new versions of current standards in software and applications.

PREREQUISITES: Course 154-112 - Data Security & Recovery Support with a minimum grade of C

### **154-118**

#### **CSS Skills Implementation & Career Prep**

**Credits: 3.00**

This capstone class will provide students with opportunities to apply knowledge and concepts acquired in program coursework. Students will develop proficiency while resolving issues in a simulated, scenario-based environment. In addition to reinforcement of concepts previously covered in the curriculum, the course will include employment seeking skills (resumes, portfolios, interviewing), image creation and deployment, and remote desktop diagnostics/troubleshooting. PREREQUISITES: Complete course 154-113 - IT Apps Server & Support with a minimum grade of C and complete course 801-197 - Technical Reporting

### **154-119**

#### **System Software Support**

**Credits: 3.00**

Focus will be on the principles of system software and utilities. This course will enable the learner to effectively configure and troubleshoot system software in multiple environments. Students will be introduced to integrated tools within the software and the different methods for interacting with system software. Topics will include Windows command-line, Linux GUI and command-line, emulation/connectivity to other non-PC-based systems and network directory services. COREQUISITES: Course 154-121 - CSS Program Orientation and 801-136 - English Composition 1

### **154-120**

#### **Advanced Help Service Desk**

**Credits: 3.00**

This capstone class broadens the students' customer service skill set. The course continues to build on end user communication methods, both oral and written. Students will be exposed to Information Technology Infrastructure Library (ITIL) methodology and Help Desk Institute (HDI) best practices. PREREQUISITES: Course 154-122 - Help Service Desk, Intro

### **154-121**

#### **CSS Program Orientation**

**Credits: 1.00**

Students will develop skills to enhance their success in the Gateway Technical College Computer Support Specialist program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the CSS field through the Internet, periodicals, and surveys. Students will design an academic and career development plan and initiate their ongoing program portfolio.

### **154-122**

#### **Help Service Desk, Intro**

**Credits: 3.00**

This class broadens the students' customer service skill set. The course continues to build on end user communication methods, both oral and written. Students will be expected to prepare and deliver end user training, create written and online manuals and FAQ's (Frequently Asked Questions), and perform the day-to-day duties in a variety of help desk environments. PREREQUISITES: Course 107-193 - IT Essentials with a minimum grade of C COREQUISITES: Course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

### **154-124**

#### **Support Technician Internship**

**Credits: 1.00**

This course provides an opportunity for the student to apply training and skills in a business/industrial/academic work environment. The student will spend 36 hours at the worksite and contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques.

### **154-125**

#### **HDI-SCA Certification Review**

**Credits: 1.00**

This course focuses on reviewing the material covered in the certification exams that a student must pass to achieve their Help Desk Institute Support Center Analyst (HDI-SCA) certification. This class is intended for students who want to review the HDI Standards.

### **154-126**

#### **IT Project Management Essentials**

**Credits: 1.00**

This course prepares the student for a foundation in project management. Content includes project management principles, leadership, and team building.

### **154-127**

#### **Introduction to IT Troubleshooting**

**Credits: 2.00**

This course introduces the student to the process of basic troubleshooting of computing problems. Topics covered will include: computer-based concepts of problem-solving, structured diagnosis and resolution techniques, and professional

communication practices. Enrolled students acquire basic IT customer support skills as they begin their journey to becoming an IT support technician.

### **154-130**

#### **Google IT Support Professional 1**

**Credits: 2.00**

This course is the first of two required courses for the Gateway Technical College Google IT Professional Certificate and aligns with courses 1 and 2 of the Google IT Support Professional Certificate. Students prepare for an entry-level Information Technology (IT) support role through an introduction to the world of IT and its history. Students explore hardware and software, operating systems, and the Internet to acquire skills related to computer network technologies, protocols, applications, troubleshooting, cloud computing and storage. Upon completion, students relate the fundamentals of IT support to workplace success and are ready to participate in the second Gateway Technical College Google IT Professional Certificate course.

### **154-131**

#### **Google IT Support Professional 2**

**Credits: 3.00**

This is the second of two required courses for the Gateway Technical College Google IT Professional Certificate and aligns with courses 3, 4, and 5 of the Google IT Support Professional Certificate. Students build on the skills acquired in Course 1 to continue their preparation for an entry-level Information Technology (IT) support role. Students analyze operating system components and practice hardware configuration and software and user management tasks. In addition, learners examine systems administration and best practices for selecting hardware, investigate IT security, perform risk evaluation and investigate securing networks. Upon completion of the course, students perform fundamental IT support tasks in support of workplace success and are prepared to seek the Google IT Support Professional Certificate.

### **156-018**

#### **Fundamentals of IT**

**Credits: 3.00**

In this course, students will explore the fundamental aspects of information technology. Students investigate basic hardware systems, various operating systems, important software packages, networking fundamentals, basic internet technologies, and essential problem solving techniques. Upon completion of the class, students are prepared to utilize their IT skills to work effectively in IT-related tasks.

### **156-019**

#### **Introduction to Management Info Systems**

**Credits: 3.00**

In this course, students explore information systems and their role in organizations. They examine management decision support systems, system analysis and design methodologies, information processing technologies, and their role in decision making. Students will explore tools and techniques for supporting and executing organizational processes. Upon completion of the course, students will work as a team to design an information systems solution to meet a specific business need. COREQUISITES: Complete course 801-136 - English Composition 1

**156-100****Data Analytics 1****Credits: 3.00**

In this course, students will learn the basic concepts of data analysis and how they are used to drive business processes. Students will learn to identify and retrieve relevant data sources, and to prepare data for analysis with pre-configured and custom tools. Upon completion of this course, students will be able to prepare data for further analysis to drive decision making for business. PREREQUISITES: Complete course 152-081 - Programming in Python minimum grade C and course 804-135 - Quantitative Reasoning COREQUISITES: Complete course 804-189;

**156-101****Data Analytics 2****Credits: 3.00**

In this course, students will build upon the skills learned in Data Analytics 1. Students will learn to work with large data sets and organize that information for effective data analysis. Students utilize commercial data analysis software packages, and create custom computer programs to analyze data. Upon completion of the course, students will be able to perform analysis of relevant data with various software tools, and use the generated information to help make informed business decisions. PREREQUISITES: Complete courses 156-100 - Data Analytics 1 and 152-080 - Databases minimum grade C

**156-120****Programming in R****Credits: 3.00**

In this course, students will learn to use the R programming language to analyze data. Students will learn the syntax and data structures of the R language, and how to apply the language to perform traditional statistical analysis, such as means testing, variable correlations, and linear regressions. Upon completion, students will be able to create R programs to process data and create meaningful output rooted in sound statistical techniques. PREREQUISITES: Complete course 156-100 - Data Analytics 1 minimum grade C and complete course 804-189 - Statistics, Introductory

**156-125****Business Intelligence and Visualization****Credits: 3.00**

In this course, students will learn to organize, manage and analyze very large data sets from various sources. Students will use software tools to present complex data in visually meaningful representations that can be communicated to business stakeholders. Upon completion, students will learn how to transform raw data into meaningful information that will be utilized for data-driven decision making. PREREQUISITES: Complete courses 156-101 - Data Analytics 2 and 156-120 - Programming in R minimum grade C

**156-130****Data Analytics Capstone****Credits: 3.00**

In this course, students apply data analysis techniques to a real world project. Students will interface with a client data source and prepare the data for analysis to help determine the outcome a industry problem that needs to be solved. Upon completion of this course, students will work in teams to create visualizations, gather business intelligence information, and provide structured data to assist in making a business decision. PREREQUISITES: Complete courses 156-101 - Data Analytics 2 and 156-120 - Programming in R minimum grade C and complete course 801-197 - Technical Reporting COREQUISITES: Complete course 156-125 - Business Intelligence and Visualization

### **182-101**

#### **Supply Chain Management**

**Credits: 3.00**

The Supply Chain Management course is designed to examine Supply Chain Management Fundamentals; Procurement, Manufacturing and Operations Management, Transportation and Logistics, Inventory and Warehousing, Demand Planning, Scheduling and Performance Management or Analysis. Topics include creating and executing supply chain strategies that meet customer needs and increase profits; learning how successful supply chain management adds value to your organization; understanding customer loyalty and the lifetime value of a customer; understanding the role of data and information technology in support of the supply chain; and exploring the IT infrastructure as it relates to supply chain management systems.

### **182-102**

#### **Logistics**

**Credits: 3.00**

This course prepares the students to be able to explain the historical and economic significance of transportation in US and world economies, utilize the correct transportation terminology, analyze the operating and service characteristics of the five major modes of transportation, differentiate cost and pricing structures of five major modes of transportation, decide the best mode of transportation to use for specific shipments, analyze the forms of special transportation services, and analyze the information technology systems used in the transportation industry. Students in this class will learn the language and benefits of efficient transportation and warehousing strategies.

### **182-103**

#### **Global Supply Chain Management**

**Credits: 3.00**

This course introduces the student to supply chain financial transactions which include foreign exchange market, fluctuations of the market, role of the global capital market, major determinants in country risk, methods of foreign market entry, international contracts and commercial documents, export packaging, customs clearance, and global supply chain logistics infrastructure. PREREQUISITES: Course 182-101 - Supply Chain Management with minimum grade C

### **182-106**

#### **Enterprise Resource Planning & Control**

**Credits: 3.00**

This course will provide the fundamentals of enterprise resource planning (ERP) systems concepts, and the importance of integrated information systems in an organization. The focus of this course is on illustrating procurement, production, and

sales business processes using ERP software. This course introduces the world of ERP's to future Supply Chain employee's. The understanding of the benefits of technology use within the efficient movement of materials and products is essential in the world of Supply Chain. PREREQUISITES: Courses 182-101 - Supply Chain Management 801-136 - English Composition 1 and 804-135 - Quantitative Reasoning with a minimum grade of C

### **182-107**

#### **Supply Chain Internship**

**Credits: 3.00**

This course is an occupational experience opportunity within the district for students in their final semester of the Supply Chain Management degree. Instructor consent is mandatory prior to registration for this course. The course will include work related observation and written reports to the program faculty regarding the practical application of what is learned in the Supply Chain Management Program.

### **182-108**

#### **Purchasing**

**Credits: 3.00**

This course includes an analysis of the purchasing process, a review of purchasing activities, and identification of purchasing problems in modern organizations. Attention is given to the role of purchasing in the organization, supplier selection, negotiation, sourcing issues, inventory management, and quality concerns.

### **182-115**

#### **Introduction to Manufacturing & Robotics**

**Credits: 3.00**

In this course, learners examine the historical significance of manufacturing and robotics in the US and world economies. Learners identify a wide variety of manufacturing processes, and analyze manufacturing systems in terms of material flow and storage, information flow, capacities, and times and durations of events. Learners explore the relationships among the properties of the material, the manufacturing process, and the design of components. Upon successful completion of the course, learners will be able to communicate the language and benefits of manufacturing and robotics.

### **196-123**

#### **Problem Solving and Decision Making**

**Credits: 2.00**

Practice sessions on problems faced on the job, problem resolution using various techniques learned in the classroom. Topics: marginal analysis; psychological decision making; cause and effect; intuition; experimental, past experience and follow-the-leader approaches, group problem-solving techniques.

### **196-129**

#### **Management Orientation**

**Credits: 1.00**



This course will introduce the student to the skills necessary to be successful in the Supervisory Management and Business Management programs. The language and navigation of the accelerated learning model will be explored. The student will demonstrate the use of Blackboard and Mind Mapping as well as the software used in the program such as Microsoft Word, PowerPoint and use of the internet as a research tool. This is the first course a student should take within the Supervisory Management and Business management programs.

### **196-133**

#### **Negotiations**

**Credits: 3.00**

This course introduces techniques and skills used in bargaining to maximize a company's profits and competitiveness for both domestic and global concessions. Interpersonal negotiations skills are essential for any person working in the business world. Students will be introduced to an interest based negotiations strategy and to conflict resolution techniques that will prove valuable throughout one's personal and professional life.

### **196-134**

#### **Legal Issues for Supervisors**

**Credits: 3.00**

In Legal Issues for Supervisors, the learner applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Each learner will demonstrate the application of legal practices in both union and nonunion environments, the analysis of the impact of U.S. employment laws, the impact of the global economy, and the appeal process. Students will also learn to deal with harassment and privacy issues and summarize legal issues facing contemporary supervisors. COREQUISITES: Complete course 196-129 - Management Orientation

### **196-136**

#### **Safety in the Workplace**

**Credits: 3.00**

In Safety in the Workplace, the learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, risk analysis, issues of workplace violence, substance abuse, health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

### **196-137**

#### **Certified Service Specialist**

**Credits: 3.00**

This course validates the students interpersonal and business skills by providing the necessary work to prepare for the certification exam to earn the Certified Service Specialist Certification. The exam is the final exam for the course and certifies the student's ability to work with customers. This course explores the skills of communications, policies and procedure manuals, record keeping and evaluating performance. Focus on teams and proper functioning roles within teams in a company setting that values ethical actions in the workplace and respect for the customer and fellow workers. Problem solving, interpersonal relationships and sales and marketing skills will be honed throughout this course.

Successful students will be able to represent themselves with a national certification that illustrates their understanding of the skills necessary for the service and manufacturing industry as an employee or employer.

### **196-138**

#### **Management for Supervisors Capstone**

**Credits: 2.00**

This course is designed to be the capstone of the Supervisory Management Program. This course validates the student's management skills by providing the necessary work to prepare for the certification exam to earn the Certified Service Manager Certification. The exam is the final exam for the course and certifies the student's ability to work with customers and team members. This course explores the knowledge of business management, project management and employee management. The student's mastery of skills in managing employees and teams are exemplified in change management, conflict resolution and leadership skills. Students will explore basic financial reports and employee management. Successful students will be able to represent themselves with a national certification that illustrates their understanding of the skills necessary for management in the service and manufacturing industries as a supervisor.

**COREQUISITES:** Courses 196-168 - Organizational Development and 196-188 - Project Management

### **196-151**

#### **Operations Management**

**Credits: 3.00**

This course is designed to acquaint students with the specialized vocabulary and problems encountered in manufacturing management. Tools and techniques for solving production process problems are presented with an emphasis on quality and productivity.

### **196-155**

#### **Certified Customer Service**

**Credits: 1.00**

This course helps students build the necessary skills needed to be successful in working with internal and external customers. Students learn how to work with customers in a professional manner by providing world class customer service. The course prepares them for the ETA-I Customer Service Specialist (CSS) exam.

### **196-156**

#### **Leadership Development Capstone**

**Credits: 3.00**

In this course, students apply their knowledge and skills acquired through participation in the Leadership Development Program. Students investigate business management and project management. They examine basic financial reports and the management of employees. They apply leadership skills to change management and conflict resolution related to both individual employees and teams. Upon completion of the course, students will be ready to take the Certified Service Manager Certification exam to illustrate their acquisition of supervisory skills for the service and manufacturing industries. **PREREQUISITES:** Complete courses 196-129 - Management Orientation 196-137 - Certified Service Specialist 196-164 - Personal Skills for Supervisors 196-192 - Managing for Quality and 196-193 - Human Resource Management

**196-164****Personal Skills for Supervisors****Credits: 3.00**

In Personal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress. PREREQUISITES: Complete courses 801-136 - English Composition 1 and 804-135 - Quantitative Reasoning minimum grade C- COREQUISITES: Complete course 196-129 - Management Orientation

**196-168****Organizational Development****Credits: 3.00**

In Organizational Development, the learner applies the skills and tools necessary to deal with organizational behavior and change. Each learner will demonstrate the application of the impacts of globalization on an organization, dealing with organizational culture, change and future challenges affecting the total organization, organizational decision making, vision, goals, performance management, and planning, and the role of organizational structure.

**196-169****Diversity and Change Management****Credits: 3.00**

In Diversity and Change Management, the learner applies the skills and tools necessary to implement and maintain a diverse work environment which values change. Each learner will demonstrate the application of: assessing the current extent of diversity in the workplace; analyzing the effect of perceptions, attitudes, biases, and organizational culture on diversity; dealing with barriers; changing management strategies, processes, and reactions; measuring progress; and celebrating success. COREQUISITES: Complete course 196-129 - Management Orientation

**196-188****Project Management****Credits: 3.00**

In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will: demonstrate the application of the role of project management; develop a project proposal; use relevant software; work with project teams; sequence tasks; chart progress; and deal with variations, budgets, resources, implementation, and assessment.

**196-189****Team Building and Problem Solving****Credits: 3.00**

In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process

of problem definition, data acquisition, analysis, the development of alternative solutions, solution implementation, and evaluation.

### **196-190**

#### **Leadership Development**

**Credits: 3.00**

In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of: evaluating leadership effectiveness and organization requirements, using individual and group motivation strategies, implementing mission and goals, observing ethical behavior, developing personal leadership style and adaptation, understanding the impact of power, facilitating employee development, coaching, managing change, and resolving conflict effectively.

### **196-191**

#### **Supervision**

**Credits: 3.00**

In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role, including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

### **196-192**

#### **Managing for Quality**

**Credits: 3.00**

This course is designed to examine the role of the supervisor in assisting an organization to produce a quality product or service. The meaning and benefits of quality, the cost of quality, how to interact with customers, and problem solving tools for continuous improvement will be covered. COREQUISITES: Complete course 196-129 - Management Orientation

### **196-193**

#### **Human Resource Management**

**Credits: 3.00**

This course establishes a foundation for development of employee effectiveness by focusing on the supervisor's role in understanding, communicating, and implementing organizational policies. The organizational topics covered include: employee hiring, training, performance management, contract compliance, employment law, employee assistance programs, and related topics that affect the supervisor's work group. COREQUISITES: Complete course 196-129 - Management Orientation

### **203-120**

#### **Field Photography**

**Credits: 2.00**

This course will explore the use of cameras, lenses and digital media as they apply to newsworthy photography as well as location and nature photography. Students will learn how to get good shots in fast paced environments like sporting events. Special tools used in field of photography will be examined. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to with a minimum grade of C or TR

### **203-121**

#### **Studio Lighting and Tools**

**Credits: 2.00**

Students will examine lighting, drapes, reflectors and special studio photography tools, for a variety of subjects. Shutter and aperture settings will be explained. Commercial photography, portraiture, food photography and macro photography will be explored. Students will plan photo shoots and coordinate all aspects of a shoot. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to with a minimum grade of C or TR

### **204-100**

#### **Design Concepts**

**Credits: 4.00**

Students will study typography, color, and layout. Studies include symmetrical and asymmetrical compositions, grid method systems, designing with type, image, and the graphic functions of typography. Students will develop an understanding of the basic design principles, including space, line, form, color, and the use of letterforms and design contrasts to convey a visual message. Students will be introduced to target markets and designing for an audience. Projects will be completed with various design media while exploring the importance of working in stages from research to rough idea to finished design work.

### **204-105**

#### **Computer Illustration & Drawing Tech**

**Credits: 3.00**

Students will use Vector Illustration software for technical drawing, composition and implementation of created art into print, web and social media. Students will incorporate traditional drawing skills and scanning methods into their digital illustration and drawings. Composition, digital color specification and current graphic design trends will be emphasized.

### **204-107**

#### **Digital Photography/ Introduction to**

**Credits: 3.00**

This course explores the use of digital photography, desktop scanning and photo manipulation software in the creation of photo compositions and support materials for graphic design.

### **204-109**

#### **Graphic Design Professional Practices**

**Credits: 3.00**

This course introduces students to the workflow of graphic design, from the initial conceptualization of a project to the printed piece. Attention to customer needs, development of presentation materials, and cost estimates are discussed. Students will become familiar with graphic design, job titles and duties. Stress management and time management are incorporated into the course. Legal and ethical issues, as well as those involving copyrights and trademarks, are discussed. PREREQUISITES: Complete course 204-140 - Design, Publishing and Prepress

### **204-115**

#### **Digital Photography/Advanced**

**Credits: 3.00**

Course focuses on advanced use of photomanipulation software including special effects and new applications. In addition, the basics of good photography and its use in the various areas of graphic design will be studied.

PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to

### **204-116**

#### **Webpage Design for Graphic Designers**

**Credits: 3.00**

Students will use GUI software to design, test, publish, and edit web pages that apply basic visual principles and communication strategies. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to

### **204-120**

#### **Multimedia Survey**

**Credits: 3.00**

This course offers tips on presentation design and the use of multimedia in the graphic design field. Students will learn how to create slides, overheads, and on screen presentations. Transition effects and the use of sound and video will be incorporated into on screen presentations. Students will create an interactive portfolio and at least on presentation for class demonstration. COREQUISITES: Course 804-135 - Quantitative Reasoning

### **204-125**

#### **Illustration Media Concepts**

**Credits: 3.00**

This course guides students through an organized experimentation of traditional art media to create images that convey specific messages to viewers. A variety of media is used including: watercolor, acrylic, oil pastel, inks, dyes, collage, and computers. Good composition, visual organization, development of creative thinking and visual problem will be emphasized. This course will include a study of perspective, light, shade, and color theory. Current illustration and color trends will be explored. COREQUISITES: Course 801-136 - English Composition 1

### **204-126**

#### **Design & Publishing**

**Credits: 3.00**

This course examines the basic concepts of graphic design page layout and focuses on the principles, equipment, software, and workflow used in the design and publishing process. Students will integrate basic marketing principles in their design strategies and will apply graphic design concepts to produce page layout projects. In so doing, they will understand the primary components of design and publishing: research, strategy, input, composition, project development, and output. Using scanners and importing text from other programs are also covered. PREREQUISITES: Course 204-100 - Design Concepts

### **204-127**

#### **Digital Prepress Fundamentals**

**Credits: 3.00**

Students will study basic concepts in digital prepress fundamentals used in preparing graphic design artwork for printing and publishing. They will become familiar with the complete graphic design creation process: from initial concept and planning through to the final printed collateral. Simple color separations and trapped and/or press ready artwork is the main focus of this course. History and discussion of traditional and digital prepress equipment and techniques will be introduced. Customer needs, technical accuracy, prepress troubleshooting issues, timelines, and proofing will be included. COREQUISITES: Course 204-126 - Design & Publishing

### **204-128**

#### **Business of Photography**

**Credits: 2.00**

This course deals with all aspects of running a photography business, including studio management, copyright law, career options, contracts, proposals, marketing and self-promotion. Student will create a digital portfolio and examine several successful photography businesses. History of photography from film to digital will be studied.

### **204-129**

#### **Field Photography**

**Credits: 2.00**

This course will explore the use of cameras, lenses and digital media as they apply to newsworthy photography as well as location and nature photography. Students will learn how to get good shots in fast paced environments like sporting events. Special tools used in field photography will be examined.

### **204-130**

#### **Studio Lighting and Tools**

**Credits: 2.00**

Students will examine lighting, drapes, reflectors and special studio photography tools, for a variety of subjects. Shutter and aperture settings will be explained. Commercial photography, portraiture, food photography and macro photography will be explored. Students will plan photo shoots and coordinate all aspects of a shoot.

### **204-134**

#### **Problems in Graphic Design, Advanced**

**Credits: 3.00**

Students will produce advanced level projects in graphic design. Various software applications will be integrated in the creation process. Emphasis will be placed on solving advanced visual problems, creating portfolio quality pieces, participating in classroom critiques and final production options and issues. Students will develop problem-solving techniques to guide them through the process of organizing a complete project, including research, marketing, conceptualization, full design development, file preparation, analysis of the project components, color (ink) selections, paper selection, photography, and various finishing techniques. Reproduction issues including timelines, budgets, ink properties, paper properties and design mechanics will be applied to individual projects. PREREQUISITES: Complete course 204-140 - Design, Publishing and Prepress

## **204-135**

### **Design Concepts, Advanced**

**Credits: 4.00**

This course examines advanced concepts of graphic design page layout and focuses on the marketing, software, and workflow used in the design and publishing process. Students will use layout, illustration, and photomanipulation software at an advanced level to create portfolio quality projects. Color usage, scanning principles, file formats, importing of text and graphics will be reinforced. All projects will be properly prepared for commercial production. Students will integrate research, and marketing principles in their design strategies. Projects will be presented and critiqued through written and oral presentation processes. PREREQUISITES: Complete course 204-140 - Design, Publishing and Prepress

## **204-140**

### **Design, Publishing and Prepress**

**Credits: 4.00**

This course examines the basic concepts of graphic design page layout and focuses on the principles, equipment, software, and workflow used in the design and publishing process. Students will integrate basic marketing principles in their design strategies and will apply graphic design concepts to produce page layout projects. In so doing, they will understand the primary components of design and publishing; research, strategy, input, composition, project development, and output. Digital prepress fundamentals used in preparing graphic design artwork for printing and publishing will be studied. Color separations, trapping and/or press ready artwork as well as History and discussion of traditional and digital prepress equipment and techniques will be introduced. Customer needs, technical accuracy, prepress troubleshooting issues, timelines and proofing will be included. PREREQUISITES: Course 204-100 - Design Concepts

## **204-141**

### **Advanced Design Concepts**

**Credits: 4.00**

This course examines advanced concepts of graphic design, page layout, and focuses on the marketing, software, and workflow used in the design and publishing process. Students will use layout, illustration, and photomanipulation of text and graphics will be reinforced. All projects will be properly prepared for commercial production. Students will integrate research, and marketing principles in their design strategies. Projects will be presented and critiqued through written and oral presentation processes. History and discussion of traditional and digital prepress equipment and techniques will be introduced. Customer needs, technical accuracy, prepress troubleshooting issues, timelines and proofing will be included.



**204-142****Applied Exit Strategies/Display Graphics****Credits: 3.00**

Students will focus on resume, portfolio development and interview practices. Career exploration, professional practices, networking will also be discussed. All aspects of this course will lend to the professional development of the individual student. In order to showcase and promote the accomplishments of the student, a graduate design display requirement will be met at the Annual Student Design Show. COREQUISITES: Course 204-109 - Graphic Design Professional Practices

**204-143****Illustration, Advanced****Credits: 3.00**

This course will teach students the basics of using 3D software for design. Animation, modeling and storyboarding will be examined, as well as the technical aspects and vocabulary involved in mastering 3D software. 3D computer graphics will be compared to 2D. Practical applications for 3D software will be examined as they relate to graphic design, web design, and game design. PREREQUISITES: Courses 801-136 - English Composition 1 and 804-135 - Quantitative Reasoning

**204-149****Advanced Web Page Design for Graphics****Credits: 3.00**

Students will build upon the knowledge learned from the prerequisite course. Emphasis will be placed on current webpage editors, while adding video and animation elements to their own website. The course will include current topics in web development. Principles of web design for development and posting of websites will be emphasized. PREREQUISITES: Course 204-116 - Webpage Design for Graphic Designers

**204-162****Graphics for Gaming****Credits: 1.00**

This course is designed to introduce programming students to graphics and graphics creation. Specifically, the graphics used in computer games will be discussed.

**204-179****FabLab Capstone****Credits: 3.00**

In this course, learners use Fab Lab equipment and resources to create art, illustrations, and prototypes. Upon completion of the course, students will be able to develop a capstone project for a real-life product and create it using Fab Lab resources.

**304-101****History of Furniture and Decorative Arts****Credits: 3.00**

Emphasizes the history of decorative arts from ancient times through the technological era especially concerning furnishings and interiors. Interior design careers, projects and markets are surveyed.

**304-102****Interior Design, Principles of****Credits: 3.00**

This course will provide the beginning college student with the fundamentals of interior design. Students will explore the elements and principles of art and design as they are applied to interior environments. The learner will also gain knowledge of basic concepts in the design process, human ecology, space planning, selecting finishes and furnishings, and design communications techniques.

**304-104****Advanced Technology for Interior Design****Credits: 3.00**

Students will learn to integrate technology across different phases of design and learn to produce well composed and thorough designs quickly and efficiently. The student will develop a strategic overview of the design process, examining how different software can be best woven into the traditional phases of an interior design project and demonstrate tactics within those programs to optimize workflow and interoperability. By lining the standard phases and processes of an interior design project with the capabilities of the software most commonly used student will produce enhanced deliverables such as presentations, renderings and construction drawings. PREREQUISITES: Courses 607-170 - AutoCAD for Construction Sciences, 614-150 - 3D CAD:Building information Model, and 304-116 - Kitchen and Bathroom Planning with a minimum grade C or TR

**304-107****Internship for Interior Designers****Credits: 2.00**

Provides an opportunity to gain practical work experience through supervised internships at an approved job site to gain practical knowledge of the interior design skills learned in the classroom. PREREQUISITES: Complete courses 304-116 - Kitchen and Bathroom Planning 304-132 - Sales and Professional Practice for ID 304-154 - Interior Elements of Building Const. 304-156 - Residential Design Studio 1 with a minimum grade of C COREQUISITES: Complete 304-130 - Contract Design Studio

**304-116****Kitchen and Bathroom Planning****Credits: 3.00**

Students will develop the skills of planning and remodeling kitchens and bathrooms through drawing methods using the National Kitchen and Bath Association (NKBA) standards. The course provides client-oriented design problems and includes planning using standard components and fixtures. PREREQUISITES: Complete courses 804-135 - Quantitative

Reasoning 801-136 - English Composition 1 304-129 - Visual Communication for Interior Design 304-137 - Advanced Architectural Drawing and 304-156 - Residential Design Studio 1 with a minimum grade of C COREQUISITES: Complete course 304-138 - Residential Design Studio II

### **304-118**

#### **Art History**

**Credits: 3.00**

Briefly traces western arts from prehistoric through contemporary art. Surveys Oriental and American art. Delves into the complexities of artwork, created by females. Makes application to the field of Interior Design, including art media, techniques, art terms, current artists, replica art methods, and resources for original and duplicate artworks. CD-ROM, internet computer programs, slides, videos, and prints provide visual sources as well as a beautifully illustrated textbook with thousands of examples. This class is culturally and educationally expanding for the student.

### **304-119**

#### **Portfolio Presentation**

**Credits: 1.00**

The learner gains knowledge and assistance in preparing a professional portfolio. The course culminates with a portfolio show presenting the students design achievement, body of work, and skills to the professional community.

### **304-120**

#### **Interior Design Internship & Sales**

**Credits: 3.00**

This includes, planning, presentation, handling resistance, and closing the sale. The internship portion introduces students to entry level interior design work experiences and career planning skills. Students will select an area of interest in the design field where they will complete 72 hours of internship. PREREQUISITES: Course 304-156 - Residential Design Studio 1 with a minimum grade of C or TR COREQUISITES: Course 304-152 - Commercial Design Studio

### **304-122**

#### **Textiles**

**Credits: 3.00**

Students will study the selection, use and care of textile fabrics. All fibers, natural and synthetic, will be dealt with. The most recent technology in construction, finishes and color application will be emphasized.

### **304-123**

#### **Business of Interior Design**

**Credits: 3.00**

Design business procedures and resources used by designers to expedite dealing with clients, vendors, and contractors. Surveys methods of billing, business forms and types of businesses. Introduces students to the various types of window treatments and methods for fabrication, measurement and charging.

**304-128****Basic Architectural Drawing****Credits: 3.00**

This course will introduce students to basic manual and computer-aided drawing for interior design. Students will learn how to properly use equipment and produce two-dimensional drawings. COREQUISITES: Course 801-136 - English Composition 1

**304-129****Visual Communication for Interior Design****Credits: 3.00**

Students develop skills in manually sketching and rendering three-dimensional drawings of interior spaces to communicate design concepts. Additionally, students create professional-quality presentation boards and visual displays using both physical and digital methods. PREREQUISITES: Complete course 304-128 - Basic Architectural Drawing Basic Architectural Drawing and course 304-102 - Interior Design, Principles of Principles of Interior Design with a minimum grade of C

**304-130****Contract Design Studio****Credits: 4.00**

Contract design, also referred to as Commercial Interior Design, is the design of non-residential environments. This course will focus on programming, planning, design and specification of interior space as it relates to various types of commercial spaces such as; offices, health care facilities, hospitality industry, food and beverage facilities, and retail design. Students apply their knowledge of materials, finishes, furniture, lighting and building construction through all phases of the design process. In addition, students further develop CAD skills necessary to produce project documentation and presentations for a comprehensive commercial design problem. PREREQUISITES: Complete courses 304-116 - Kitchen and Bathroom Planning 304-132 - Sales and Professional Practice for ID 304-154 - Interior Elements of Building Const. 304-156 - Residential Design Studio 1 with a minimum grade of C COREQUISITES: Complete course 304-107 - Internship for Interior Designers

**304-132****Sales and Professional Practice for ID****Credits: 3.00**

Covers essential interior design business practices and procedures, including business formations, fees, contracts, project management, business forms and record keeping. Professional work conduct and interior design sales techniques are also covered. PREREQUISITES: Complete course 304-156 - Residential Design Studio 1 with a minimum grade of C

**304-133****Sustainable Materials and Finishes****Credits: 3.00**

Focuses on identifying building materials to satisfy the design criteria. Students will learn appropriate selection of: materials, finishes, and products based on their properties, sustainability, performance criteria, installation methods, and

maintenance requirements. Additionally insight will be gained in procedures within the construction industry from; organizational culture, to the interior designer's role, responsibilities and documentation of specifications.

### **304-137**

#### **Advanced Architectural Drawing**

**Credits: 3.00**

This course will build on the Basic Architectural Drawing coursework and further develop student skills in computer-aided drawing techniques for interior design. Computer-aided three-dimensional modeling will also be introduced and explored as a method to communicate design. PREREQUISITES: Complete course 304-128 - Basic Architectural Drawing Basic Architectural Drawing and course 304-102 - Interior Design, Principles of Principles of Interior Design with minimum grade of C

### **304-138**

#### **Residential Design Studio II**

**Credits: 3.00**

Students demonstrate their accumulated skills through the resolution of a comprehensive residential design project. PREREQUISITES: Complete course 304-156 - Residential Design Studio 1 with a minimum grade of C

### **304-149**

#### **Kitchen and Bath Planning, Advanced**

**Credits: 3.00**

Through this studio, Kitchen and Bath Design students gain advanced approaches to their design solutions, including knowledge of NKBA Planning Guidelines for the kitchen, and NKBA Access Planning Guidelines used in universal design projects. Building upon skills learned in K&B Design, students improve their ability to develop and present a design concept and theme. In addition, a focus will be learning to produce professional working documents of advanced kitchen projects as they progress from inception to completion. PREREQUISITES: Course 304-116 - Kitchen and Bathroom Planning with a minimum grade of C or TR

### **304-150**

#### **Architectural History**

**Credits: 3.00**

This course is introductory and assumes no background in architecture or architectural history. It seeks to provide students with an introduction to basic foundations for studying architecture.

### **304-151**

#### **Center for Sustainable Living: Practicum**

**Credits: 1.00**

With the creation of a 'green room' Interior Design students will apply what they have learned in 304-155 Principles of Interior Design and 304-133 Sustainable Materials and Finishes. Students will confirm that preliminary space plans and design concepts are safe, functional, aesthetically appropriate, and meet all public health, safety and welfare

requirements, and sustainability guidelines. Students will be performing and learning all duties related to the installation of materials, finishes and products. The space will feature re-purposed furnishings and finishes that promote sustainable and green design. PREREQUISITES: Course 304-133 - Sustainable Materials and Finishes

### **304-152**

#### **Commercial Design Studio**

**Credits: 3.00**

Examine the elements of commercial interiors through the study of human factors, codes, space planning guides with ADA and universal design, the selection and specification of; furniture, fixtures, equipment, comprehensive lighting solutions, and accessories in planning interior spaces. Projects include the steps of the design process, from programming through design finalization, for commercial spaces such as retail, restaurants, and health care facilities. Students will explore various problem solving methods, working in a design team, and presenting design solutions as if working with actual clients. PREREQUISITES: Courses 304-101 - History of Furniture and Decorative Arts, 304-104 - Advanced Technology for Interior Design, 304-116 - Kitchen and Bathroom Planning, 304-122 - Textiles, 304-123 - Business of Interior Design, 304-133 - Sustainable Materials and Finishes, 304-153 - Drafting and Rendering Techniques, 304-154 - Interior Elements of Building Const., 304-155 - Principles of Interior Design, 304-156 - Residential Design Studio 1, 304-151 - Center for Sustainable Living: Practicum, 304-150 - Architectural History, and 607-170 - AutoCAD for Construction Sciences with a minimum grade of C or TR COREQUISITES: Course 104-114

### **304-153**

#### **Drafting and Rendering Techniques**

**Credits: 4.00**

This course covers the development of 2D and 3-D graphic communication techniques in developing preliminary and final interior design presentations to convey design concepts and solutions. Student will use manual and digital methods to produce construction plans, perspective drawings, axonometric, presentation boards, 3-D models, freehand sketching and rendered drawings using pen and ink, color media. COREQUISITES: Courses 607-170 - AutoCAD for Construction Sciences and 614-150 - 3D CAD:Building information Model

### **304-154**

#### **Interior Elements of Building Const.**

**Credits: 2.00**

This course will introduce students to basic components of building construction, including structural components and mechanical systems Students will learn basic structural principles applied to the building environment through a review of common building methods including timber frame, masonry, and steel construction for residential and commercial projects as applicable. Sustainable design and the health and welfare of occupants will be considered throughout. PREREQUISITES: Complete course 304-156 - Residential Design Studio 1 with a minimum grade of C

### **304-155**

#### **Principles of Interior Design**

**Credits: 4.00**

This course will provide the beginning college student with the fundamentals of interior design. Study and apply elements of interior design to interior environments while focusing on basic concepts in the design process, human ecology, space

planning, color theory, selecting finishes and furnishings, and design communications techniques. Develop an understanding of the space allocation skills required for the practical and aesthetic manipulation of a building's interior space. Use the fundamentals of design in hands-on lab experiences.

### **304-156**

#### **Residential Design Studio 1**

**Credits: 3.00**

This course focuses on the problem-solving discipline of the design process and its application to residential design. Students develop concepts to achieve design goals and apply theoretical knowledge and technical skills to their design solutions as they work on a variety of professionally relevant interior design projects. Student will examine the elements of residential interiors through the study of human factors, codes, space planning guides with ADA and universal design, the selection and specification of; furniture, fixtures, equipment, comprehensive lighting solutions, and accessories in planning interior spaces. Projects include the steps of the design process, from programming through design finalization, for residential spaces such as single family homes, multi-unit residences and other specialized areas. Students will explore various problem solving methods, working in a design team, and presenting design solutions as if working with actual clients. **PREREQUISITES:** Complete courses 304-128 - Basic Architectural Drawing Basic Architectural Drawing and 304-102 - Interior Design, Principles of Principles of Interior Design with a minimum grade of C **COREQUISITES:** Course 804-135 - Quantitative Reasoning

### **307-108**

#### **ECE: Early Language & Literacy**

**Credits: 3.00**

This course explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

### **307-110**

#### **ECE: Soc S, Art, & Music**

**Credits: 3.00**

This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).

### **307-112**

#### **ECE: STEM**

**Credits: 3.00**

This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of science, technology, engineering and mathematics. **COREQUISITES:** Complete 307-148 - ECE: Foundations of Early Childhood Education

**307-115****ECE: Infant Toddler Capstone****Credits: 3.00**

This course integrates the theory, practice and reflection of courses 1-3 in the Infant/Toddler Credential and requires demonstration of best practices. PREREQUISITES: Courses 307-151 - ECE: Infant & Toddler Development, 307-169 - ECE: Infant Toddler Group Care, and 307-195 - ECE: Family and Community Relationships

**307-140****ECE: Behavior and Emotional Challenges****Credits: 3.00**

This course helps promote children's success by building relationships and creating supportive environments, and learning how to demonstrate positive social-emotional teaching strategies. Specific discipline and guidance strategies will be described. Individualized intensive interventions for developing behavior support plans as they relate to challenging behavior will be created and evaluated.

**307-141****ECE: Spec Health Care Needs****Credits: 3.00**

This course explores the frequently encountered specialized health care needs of young children with disabilities. PREREQUISITES: Course 307-187 - ECE: Children with Differing Abilities

**307-142****ECE: Inclusion Cred Capstone****Credits: 3.00**

This course is designed to enhance the students understanding of the impact a child with a disability has on the family system. Students will have the opportunity to participate with a child and his/her family in daily routines and community settings. PREREQUISITES: Course 307-187 - ECE: Children with Differing Abilities

**307-144****ECE: Administrative Seminar****Credits: 3.00**

This is the culminating experience in the Early Childhood Administrator /credential course sequence. Major individual projects are required with a focus on the integration of program aspects in developing strategic planning for change.

**307-148****ECE: Foundations of Early Childhood Education****Credits: 3.00**



This three credit course introduces you to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; and explore early childhood curriculum models.

### **307-149**

#### **ECE: Child Care Operations Management**

**Credits: 3.00**

This course includes discussion and practical applications related to scheduling, staffing, facilities management, equipment acquisition and maintenance, record keeping, and communication.

### **307-151**

#### **ECE: Infant & Toddler Development**

**Credits: 3.00**

In this three credit course, you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; and examine culturally and developmentally appropriate environments for infants and toddlers.

### **307-166**

#### **ECE: Curriculum Planning**

**Credits: 3.00**

This three credit course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; examine caregiving routines as curriculum; develop activity plans that promote child development and learning; develop unit plans that promote child development and learning; and analyze early childhood curriculum models. PREREQUISITES: Course 307-174 - ECE: Introductory Practicum with a minimum grade of C or TR

### **307-167**

#### **ECE: Health, Safety, & Nutrition**

**Credits: 3.00**

This three credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety, and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; and incorporate health, safety, and nutrition concepts into the children's curriculum.

**307-169****ECE: Infant Toddler Group Care****Credits: 3.00**

This course focuses on caring for infants and toddlers in center based and family child care settings. Materials will cover program quality, philosophy, structure, environments, health and safety, and developmentally appropriate practice.

**307-174****ECE: Introductory Practicum****Credits: 3.00**

In this practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children; and practice positive interpersonal skills with adults. COREQUISITES: Courses 307-167 - ECE: Health, Safety, & Nutrition and 307-148 - ECE: Foundations of Early Childhood Education and 801-136 - English Composition 1

**307-175****ECE: Preschool Practicum****Credits: 3.00**

This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers.

**307-177****ECE: Intermediate Practicum****Credits: 3.00**

In this 3-credit course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children. PREREQUISITES: Complete course 307-175 - ECE: Preschool Practicum with minimum grade C and complete courses 804-135 - Quantitative Reasoning and 801-136 - English Composition 1 COREQUISITES: Course 307-151 - ECE: Infant & Toddler Development

**307-178****ECE: Art, Music, and Language Arts****Credits: 3.00**

This three credit course will focus on beginning level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote

child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; and create developmentally appropriate music and movement activities.

### **307-179**

#### **ECE: Child Development**

**Credits: 3.00**

This three credit course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children age three through eight; summarize the methods and designs of child development research; and analyze the role of heredity and environment.

### **307-181**

#### **ECE: Child Care Operations Management**

**Credits: 3.00**

This is course two in the Administrator Credential. This course includes discussion and practical applications related to early care and education program scheduling, staffing, facilities management, equipment acquisition and maintenance, record keeping and communication.

### **307-182**

#### **ECE: Child Care Financial Management**

**Credits: 3.00**

This course includes principles and practices in budget planning, preparation and fiscal management including hands-on preparation with program applications.

### **307-184**

#### **ECE: Child Care External Environment**

**Credits: 3.00**

Review of external factors which affect the operation of early care and education programs including determination of community child care needs, marketing, laws and regulations, working with government and community agencies, political and social issues and trends.

### **307-185**

#### **ECE: Child Care Best Practices**

**Credits: 3.00**

Establishing and maintaining quality programs based on professional standards and the best available information on child growth and development and family friendly environment/services. Coursework includes a review of the literature and research studies, licensing laws and regulations, criteria for staff credentials (CDA) and the accreditation of programs by the National Academy of Early Childhood Programs and funding requirements and performance standards such as those for Head Start.

**307-186****ECE: Child Care Administrator Capstone****Credits: 3.00**

This is the culminating experience in the Administrator Credential course sequence. Major individual projects are required with a focus on the integration of program aspects in developing strategic planning for change. Prerequisites: Courses 1 through 5 of the Administrator Credential course sequence. COREQUISITES: Complete courses 307-204 - ECE: Child Care Admin and Supervision, 307-181 - ECE: Child Care Operations Management, 307-182 - ECE: Child Care Financial Management, 307-184 - ECE: Child Care External Environment, and 307-185 - ECE: Child Care Best Practices

**307-187****ECE: Children with Differing Abilities****Credits: 3.00**

This three credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; and cultivate partnerships with families who have children with developmental differences.

**307-188****ECE: Guiding Children's Behavior****Credits: 3.00**

This three credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; and create a guidance philosophy.

**307-192****ECE: Practicum 2****Credits: 3.00**

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student-teacher developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behavior; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults. PREREQUISITES: Courses 307-174 - ECE: Introductory Practicum and 307-164 with a minimum grade of C or TR

**307-194****ECE: Math, Science, & Social Studies****Credits: 3.00**

This three credit course will focus on beginning level curriculum development in the specific areas of math, science, and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; and create developmentally appropriate social studies activities.

**307-195****ECE: Family and Community Relationships****Credits: 3.00**

In this three credit course, you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; and work collaboratively with community resources.

**307-197****ECE: Practicum 3****Credits: 3.00**

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults. PREREQUISITES: Course 307-192 - ECE: Practicum 2 with a minimum grade of C or TR COREQUISITES: Course 307-151 - ECE: Infant & Toddler Development

**307-198****ECE: Administering an Early Childhood Education Program****Credits: 3.00**

This three credit course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze the components of an ECE facility; design an ECE program; analyze the aspects of personnel supervision; outline financial components of an ECE program; apply laws and regulations related to an ECE facility; and advocate for the early childhood profession.

**307-199****ECE: Advanced Practicum****Credits: 3.00**

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; and explore professional options in early childhood education. PREREQUISITES: Course 307-177 - ECE: Intermediate Practicum with a minimum grade of C or TR

### **307-204**

#### **ECE: Child Care Admin and Supervision**

**Credits: 3.00**

This course provides an overview of roles and responsibilities of directors, coordinators, supervisors and other administrators in early childhood programs.

### **316-104**

#### **Short Order/Deli**

**Credits: 2.00**

Practice in short order food preparation; frying, grilling, sandwich making, salad and dessert preparation. Analysis of cost and returns. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

### **316-105**

#### **International Buffets**

**Credits: 4.00**

Organization and service of buffets are stressed. Includes menu planning, cost control and dining room set up. Emphasis is placed on preparation and cooking of international cuisine. PREREQUISITES: Course 316-132 - Culinary Skills II

### **316-109**

#### **Short Order Deli**

**Credits: 3.00**

This course provides learners with the opportunity to practice short order food preparation including: frying, grilling, sandwich making, salad, and dessert preparation. Menu planning and cost analysis is presented. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131;

### **316-125**

#### **Fine Dining**

**Credits: 4.00**

Training in the duties of a waiter is given including table setting, taking orders and placing in the kitchen and clearing the table. Students also learn how to set up foods in the service line, serve hot and cold foods, prepare beverages and keep a flow of foods in the service line. PREREQUISITES: Complete courses 316-105 - International Buffets 316-131 - Culinary Skills I 316-132 - Culinary Skills II 316-135 - Catering/Banquets 316-170 - Sanitation and Hygiene 804-135 -

Quantitative Reasoning 801-136 - English Composition 1 OR complete courses 316-131 - Culinary Skills I and 109-122 - Service in the Hospitality Ind, Intro to

**316-130**

**Nutrition**

**Credits: 2.00**

Basic principles and current nutritional concepts are explored with emphasis on meeting the nutritional needs of various individuals.

**316-131**

**Culinary Skills I**

**Credits: 4.00**

Practical experience in basic food preparation is emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Luncheon items will be prepared and served by students for cafeteria patrons during the final weeks of this course. COREQUISITES: Courses 804-135 - Quantitative Reasoning and 316-170 - Sanitation and Hygiene

**316-132**

**Culinary Skills II**

**Credits: 4.00**

Students reinforce knowledge and skills learned in Culinary Skills I to begin building on that knowledge. Includes cooking luncheon menus, garnishing, plate presentation and kitchen management. PREREQUISITES: Course 316-131 - Culinary Skills I COREQUISITES: Course 801-136 - English Composition 1

**316-133**

**Menu Planning Purchasing Cost Control**

**Credits: 3.00**

Menu planning as affected by acceptability, cost, labor requirements, available space and equipment. Principles of purchasing, receiving, issuing and managing food products, restaurant wares and equipment. Study and utilization of several systems used in the food service business to provide management information in food and beverage cost.

**316-134**

**Garde Manger**

**Credits: 1.00**

Preparation of decorative meats and centerpieces and decorating and arranging food platters for buffet presentation.

**316-135**

**Catering/Banquets**

**Credits: 2.00**

Practical experience in organizing, menu planning, room set-up, preparation, cooking and serving banquets of various sizes. PREREQUISITES: Course 316-132 - Culinary Skills II

### **316-136**

#### **Culinary Competition I**

**Credits: 1.00**

This course introduces new students to the rules and regulations of culinary competition. Emphasis is on food styling concepts that meet the American Culinary Federation's judging standards. As a final project, students compete in the WRA student culinary arts salon.

### **316-137**

#### **Culinary Competition II**

**Credits: 1.00**

This course builds on skills and knowledge gained in Culinary Competition I. Emphasis is on food styling concepts that meet the American Culinary Federation's judging standards. As a final project, students compete in the WRA student culinary arts salon.

### **316-138**

#### **Basic Baking**

**Credits: 2.00**

This course presents basic baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

### **316-139**

#### **Convenience Baking**

**Credits: 1.00**

This course presents convenience baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

### **316-140**

#### **Basic Baking Techniques**

**Credits: 3.00**

This course presents basic baking techniques and convenience baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed.



**316-170**

**Sanitation and Hygiene**

**Credits: 1.00**

A study of sanitary conditions and the methods used in applying the measure effectively. Includes organisms responsible for food contamination, spoilage, and the diseases transmitted by food. Personal health habits necessary for food service personnel and the laws regarding sanitary practices are interpreted.

**316-190**

**Food Service Supervision**

**Credits: 3.00**

How to fulfill a leadership role; how to organize resources of people, time, equipment and jobs; how to motivate people and communicate effectively with subordinates; how to select, interview and appraise employees; how to handle problems of discipline, morale and grievances.

**401-501**

**Introduction to HVAC**

**Credits: 1.00**

This introductory course introduces the student to the terminology used; the basic math concepts relevant to the HVAC industry and basic electrical concepts are covered.

**401-502**

**Tube and Piping Skills**

**Credits: 1.00**

This course introduces the mechanical skills necessary to identify, select, and construct plastic, copper and ferrous tubing and pipe to industry and Code standards.

**401-506**

**Forced Air Heating Intro to**

**Credits: 1.00**

The theory of heating using air as the medium is introduced. The common components of each fuel are covered and how efficiency changes affects the heating cycle. The importance of proper venting and vent design and basic troubleshooting are introduced.

**401-508**

**Cooling Fundamentals**

**Credits: 1.00**

This course introduces the student to the concepts of heat transfer, the refrigeration cycle and use of the P/T chart. Evacuation, recovery, leak detection and basic troubleshooting are covered.

**401-509****Troubleshooting HVAC****Credits: 1.00**

Expanded troubleshooting of gas, electric furnaces and central air forced air systems are covered in detail.

**401-513****Indoor Air Quality and DDC Controls****Credits: 1.25**

Factors that affect indoor air quality (IAQ), the use of Direct Digital Controller (DDC) controls in energy management are covered. Economizers, energy recovery and ice storage concepts are introduced.

**401-560****Comm/Ind Refrigeration & Alt. Systems****Credits: 1.00**

This week will deepen the student's understanding of the complex controls and operation of large scale refrigeration equipment. The week will also introduce the student to emerging technologies that have not been used in large scale to date. Geothermal, radiant, waste heat, and other alternatives are explored.

**401-561****Heating & Cooling Design****Credits: 1.00**

Use of construction drawings, the fundamentals of heat loss/gain, equipment selection, and the fundamentals of leadership are covered in the student's final week.

**401-562****Commercial Concepts, Advanced****Credits: 1.00**

This week broadens the knowledge base for the fourth year student. Topics include the effects of water quality on cooling towers, boilers and chillers, proper startup/shutdown of physical plants, and how new energy conservation equipment is being used in HVAC.

**401-563****IAQ/DDC Controls & Air Balancing****Credits: 1.00**

This week covers the factors that affect IAQ, the use of automated controls in our energy management, and the effects of proper airflow on comfort in structures.

**401-564**  
**Heat Pumps**  
**Credits: 1.00**

This week moves the student from the introduction of the fundamentals of heat pump technology to component identification and troubleshooting of the various kinds of heat pumps. The student is also introduced to customer relation principles as they move towards their last year.

**401-565**  
**Refrigerant; Advanced Topics**  
**Credits: 1.00**

This week covers troubleshooting techniques a student needs when working on A/C and refrigeration systems. This week also introduces the student to the emerging VRF, ductless and zoned systems that have entered into the marketplace.

**401-566**  
**Troubleshooting HVAC Systems**  
**Credits: 1.00**

This intense week contains concentrated review of troubleshooting techniques for fuel fired appliances, motors, and controls. The correct use of installation fasteners, terminal connectors, and hardware are also covered.

**401-567**  
**Hydronics & Steam Systems**  
**Credits: 1.00**

This week expands on the student's general knowledge of hydronics by covering individual components, their function, and operation. The student is then introduced to the operation of unique controls of steam plants.

**401-568**  
**Venting & Introduction to Hydronics**  
**Credits: 1.00**

This week is split between the complex requirements for venting fuel burning appliances and introducing the student to the basics of hydronic heating concepts and the components used.

**401-569**  
**Alternating Current and PM Basics**  
**Credits: 1.00**

This week expands on the student's basic understanding of AC electricity by covering motors, transformers and other loads found in HVAC equipment. This week also covers basic preventative maintenance procedures for typical HVAC equipment.

**401-570**

**Ductwork Construction & Airside Basics**

**Credits: 1.00**

This week covers the selection and fabrication of common materials used in ductwork applications and the uses of those delivery systems in commercial buildings.

**401-571**

**Mechanical Refrigeration Circuit**

**Credits: 1.00**

This comprehensive week focuses on the major working components of a mechanical refrigeration device. Refrigerant oils, types of refrigerants, leak detection, recovery and proper charging techniques are covered in depth.

**402-120**

**Aeronautical Decision Making**

**Credits: 2.00**

The student will apply theories and procedures learned in Aviation Safety in simulated flight conditions. Analysis and evaluation of student actions, individual and as a flight crew, will be completed for each flight scenario. PREREQUISITES: Course 402-173 - Professional Piloting II with minimum grade C COREQUISITES: Course 402-138 - Aero Science Aviation Safety

**402-122**

**Aircraft Systems-Advanced**

**Credits: 3.00**

This lecture based course covers the principles of turbine engine theory and operation. Turbine aircraft systems are studied, including pressurization, anti and de-ice systems, pneumatic and hydraulic systems and aircraft control systems. Advanced electronic and navigation systems are learned. Low and high performance aircraft structures are evaluated and compared. FAR's pertaining to advanced aircraft are learned and applied to a daily flight routine. PREREQUISITES: Course 402-139 - Aero Science Engine/ Structures/ Systems

**402-123**

**Aircraft Systems Advanced**

**Credits: 2.00**

This lecture based course covers the principles of turbine engine theory and operation. Turbine aircraft systems are studied, including pressurization, anti and de-ice systems, pneumatic and hydraulic systems and aircraft control systems. Advanced electronic and navigation systems are learned. FAR's pertaining to advanced aircraft are learned and applied to a daily flight routine. PREREQUISITES: Complete 402-139 - Aero Science Engine/ Structures/ Systems minimum grade C

**402-129**

**Aviation/Introduction**

**Credits: 3.00**

An introductory aviation ground course designed to prepare the student for the FAA Private Pilot Airplane written examination.

#### **402-131**

##### **Aero Science Fundamentals of Instruction**

**Credits: 2.00**

An advanced aviation ground course designed to prepare the student for the FAA Fundamentals of Instruction written examination. PREREQUISITES: Course 402-133 - Aero Science Commercial minimum grade C

#### **402-133**

##### **Aero Science Commercial**

**Credits: 3.00**

An advanced aviation ground course designed to prepare the student for the FAA Commercial Pilot Airplane written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot with a minimum grade of C or TR

#### **402-134**

##### **Aero Science Certified Flight Instructor Airplane**

**Credits: 2.00**

An advanced aviation ground course designed to prepare the student for the FAA Airplane Flight Instructor written examination. COREQUISITES: Course 402-145 - Flight/Certified Flight Instructor Airplane

#### **402-135**

##### **Aero Science Aerophysics/ Aerodynamics**

**Credits: 3.00**

Principles of physics as applied to the flight topics of velocity and acceleration and application to take-off and landing performance. Lift, gravity, thrust and drag relationships in accelerated and unaccelerated flight are included.

PREREQUISITES: Courses 804-135 - Quantitative Reasoning and 801-136 - English Composition 1

#### **402-136**

##### **Aero Science Aviation Weather**

**Credits: 3.00**

Covers basic concepts of aviation meteorology including temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing and fog. Analysis and use of weather data for flight planning and safe flying and interpretation of U.S. Weather Bureau maps, reports and forecast are discussed. COREQUISITES: Course 402-129 - Aviation/Introduction

#### **402-137**

##### **Aero Science Instrument**

**Credits: 3.00**

An advanced aviation ground course designed to prepare a student for the FAA Instrument Airplane rating written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot

#### **402-138**

##### **Aero Science Aviation Safety**

**Credits: 3.00**

This course will develop the student's awareness and understanding of the safe, legal, and efficient operation of an aircraft in the modern aviation environment. This will be accomplished through the study of specific listed topics, NTSB reports, and presentation by aviation professionals.

#### **402-139**

##### **Aero Science Engine/ Structures/ Systems**

**Credits: 3.00**

Principles of aircraft engine theory and operation including construction, lubrication, carburetion, ignition, supercharging and propellers. Principles of aircraft structures including basic stresses, types of construction, advantage of each type and an overview of FAA repair procedures.

#### **402-140**

##### **Flight Private Pilot**

**Credits: 3.00**

Introduces the student to flight. Develops the necessary skills and knowledge to solo and prepare for the private pilot flight test. COREQUISITES: Course 402-129 - Aviation/Introduction

#### **402-140C**

##### **Flight Private Pilot A**

**Credits: 1.00**

This is the first of 2 courses (402-140C and 402-140D) required to attain a private pilot certificate. Introduces the student to flight. Develops the necessary skills and knowledge to solo. Part B must be taken either the same semester as Part A, or no later than the following semester. COREQUISITES: Course 402-129 - Aviation/Introduction

#### **402-140D**

##### **Flight Private Pilot B**

**Credits: 2.00**

This is the second of two courses (402-140C and 402-140D) required to attain a private pilot certificate. Develops the necessary skills and knowledge to prepare for the private pilot flight test. Part B must be taken either the same semester as Part A, or no later than the following semester. PREREQUISITES: Course 402-140C - Flight Private Pilot A

**402-145****Flight/Certified Flight Instructor Airplane****Credits: 2.00**

Prepares the commercial rated pilot for the FAA flight instructor airplane certificate. PREREQUISITES: Course 402-177 - Professional Piloting IV with minimum grade C COREQUISITES: Courses 402-134 - Aero Science Certified Flight Instructor Airplane and 402-131 - Aero Science Fundamentals of Instruction

**402-146****Flight Certified Instructor Instrument****Credits: 1.00**

Prepares the CFI for the addition of an instrument instructor rating to the flight instructor certificate. PREREQUISITES: Course 402-145 - Flight/Certified Flight Instructor Airplane with minimum grade C

**402-166****Aeronautical Skills Development****Credits: 1.00**

This flight course will prepare the student for the completion of an FAA certificate or rating.

**402-170****Professional Piloting I****Credits: 3.00**

This is the first in a series of four courses approved as an FAA Part 141 combined commercial instrument certification course. This course will focus on instrument flying skills. Additionally, the student will receive experience operating a multi-engine aircraft. PREREQUISITES: Complete course 402-140 - Flight Private Pilot with minimum grade of C COREQUISITES: Complete 402-137 - Aero Science Instrument

**402-171****Professional Piloting I****Credits: 2.00**

This is the first in a series of four courses approved as an FAA Part 141 combined commercial/ instrument certification course. This course will focus on the addition of the multi-engine rating to the student's existing private pilot certification. PREREQUISITES: Course 402-140 - Flight Private Pilot or 402-140D - Flight Private Pilot B with a minimum grade of C or TR COREQUISITES: Course 402-137 - Aero Science Instrument

**402-173****Professional Piloting II****Credits: 2.00**

In this course, students with existing private pilot certification develop instrument skills. This course is approved as an FAA Part 141 Instrument certification course. This course will focus on the addition of an instrument rating to the student's existing private pilot certificate. Flight instruction will be conducted in a single-engine aircraft. Upon completion

of the course under Part 141, students will receive an endorsement for the FAA Instrument Airplane Practical test.  
COREQUISITES: Complete course 402-137 - Aero Science Instrument

### **402-175**

#### **Professional Piloting III**

**Credits: 2.00**

In this course, students participate in the second of three flight courses approved for the FAA Part 141 combined commercial/instrument certification. Upon completion of this course under part 141, students will have met the cross country aeronautical experience requirements for our FAA Part 141 approved combined commercial/instrument certification course. PREREQUISITES: Course 402-173 - Professional Piloting II with minimum grade C COREQUISITES: Course 402-133 - Aero Science Commercial

### **402-177**

#### **Professional Piloting IV**

**Credits: 2.00**

In this course, students participate in the third of three flight courses approved for FAA Part 141 combined commercial/instrument certification. Students focus on flight training to acquire skills necessary to meet the requirements of the FAA Commercial Pilot Certification. Upon completion of the course under Part 141, students will receive an endorsement for the FAA Commercial Pilot Airplane Practical test. PREREQUISITES: Course 804-135 - Quantitative Reasoning and 801-136 - English Composition 1 COREQUISITES: Course 402-175 - Professional Piloting III

### **412-105**

#### **Diesel Control Systems, Advanced**

**Credits: 4.00**

This course will continue to develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle control systems. Emphasis will be place on the skills that are required of a technician to utilize advanced electronic diagnostic tools. Topics include multiplex systems, active and inactive codes, system reprogramming intermittent codes (EBS), electronic braking systems, control systems and hydraulic control systems. The theory and operation of the Global Positioning System (GPS) and related systems will be covered. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental 412-108 - Diesel Electricity 2 412-109 - Diesel Engine Service 412-112 - Diesel Drive Trains or courses 412-126 - Construction Equipment Drive Train 412-113 - Diesel Fuel Systems, Advanced 412-114;

### **412-106**

#### **Diesel Brake Systems**

**Credits: 4.00**

This course will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle braking systems. Hydraulic and pneumatic drum and disc systems will be covered. This course will help prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental and courses 412-117 - Diesel Suspension & Steering Systems or 412-125.



**412-107****Diesel Electricity 1****Credits: 4.00**

This course will develop the basic knowledge and skills required to troubleshoot, repair and maintain basic electrical/electronic systems that are utilized on today's heavy duty vehicles. Emphasis will be placed on the Direct Current (DC) fundamentals and vehicle charging and starting systems. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental with a minimum grade of C

**412-108****Diesel Electricity 2****Credits: 3.00**

This course will focus on the development of troubleshooting and repair skills as they relate to electrical systems found on heavy duty vehicles. An emphasis will be placed on the understanding and application of electronic diagnostic tools and their application to modern heavy duty vehicles. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental and 412-107 - Diesel Electricity 1

**412-109****Diesel Engine Service****Credits: 5.00**

This course provides the student with the knowledge and skills required to maintain basic diesel engines. Students will gain practical experience in rebuilding, testing, and troubleshooting by disassembling a diesel engine, inspecting it's components, explaining their function and reassembly. Diesel engine cooling and lubrication systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental and 412-110 - Diesel Fuel Systems

**412-110****Diesel Fuel Systems****Credits: 3.00**

This course develops the knowledge and skills required to maintain basic diesel fuel systems. Operation and troubleshooting of system components such as fuel supply systems, fuel injection pumps and injectors, intake systems, turbo chargers and exhaust systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental 801-136 - English Composition 1 804-135 - Quantitative Reasoning

**412-111****Diesel Maintenance Fundamental****Credits: 2.00**

The student will develop the knowledge and skills to operate in today's heavy duty vehicle repair facility. Shop safety, hazardous material handling, hand tool identification and tool and personal safety will be emphasized. Skills development will be stress in the areas of precision measurement instrument usage, basic mechanical skills, and basic wiring skills learn the basic skills. Additionally, the course will include instruction on use of electronic information services, hard copy

shop manuals and Wisconsin automotive practice regulations (ATCP132.) COREQUISITES: Course 804-135 - Quantitative Reasoning

#### **412-112**

##### **Diesel Drive Trains**

**Credits: 4.00**

The student will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle power trains. Topics will include clutches, manual transmissions, drive shafts, universal joints, and drive axles. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-106 - Diesel Brake Systems and 412-111 - Diesel Maintenance Fundamental COREQUISITES: Course 801-136 - English Composition 1

#### **412-113**

##### **Diesel Fuel Systems, Advanced**

**Credits: 3.00**

The student will develop the knowledge and skills required to troubleshoot and repair advanced heavy duty vehicle fuel systems. Fuel designs and characteristics (including alternative fuels), electronic management control and emission control systems will be emphasized. Exploration of diesel hybrid systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental, 412-110 - Diesel Fuel Systems, 412-107 - Diesel Electricity 1, and 412-108 - Diesel Electricity 2

#### **412-114**

##### **Diesel Heating, Cooling & Air Cond**

**Credits: 3.00**

This course will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle heating, cooling and air-conditioning systems. Students will be required to take and pass the federal and state air-conditioning certification. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-107 - Diesel Electricity 1 and 412-111 - Diesel Maintenance Fundamental

#### **412-115**

##### **Diesel Hydraulic Systems**

**Credits: 2.00**

This course will provide the application of basic hydraulic principles as they relate to typical heavy duty vehicle applications. The student will develop the knowledge and skills required to diagnose, service and repair and maintain hydraulic systems and components including valves, pumps, and cylinders. Servicing, diagnosing and preventive maintenance procedures will be performed on trucks and other equipment. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

#### **412-116**

##### **Diesel Preventative Maintenance**

**Credits: 3.00**

The student will develop the knowledge and skills that are required to conduct preventative maintenance on today's heavy duty vehicles. Students will become familiar with established industry standards and regulations (state and federal) and the NORTH AMERICAN out of service criteria. Vehicle inspections will be conducted on both on and off road vehicles with emphasis on component identification and inspections and preventative maintenance services. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-106 - Diesel Brake Systems and 412-111 - Diesel Maintenance Fundamental and course 412-112 - Diesel Drive Trains or 412-126 - Construction Equipment Drive Train

#### **412-117**

##### **Diesel Suspension & Steering Systems**

**Credits: 3.00**

This course will focus on the skills and knowledge required for today's technician to effectively diagnose, service and repair heavy duty suspension systems. Analysis of the construction and working principles of chassis components including vehicle frames, suspension systems, steering systems, wheels and tires will be covered along with wheel alignment. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

#### **412-118**

##### **I/C Engines**

**Credits: 3.00**

This course provides the student with knowledge of gas and diesel engine theory. Its focus will be operation, maintenance, and repair of diesel and gasoaline powered engines. Lubrication and cooling systems will also be covered. PREREQUISITES: Course 412-121 - Shop Tools and Safety Principles with a minimum grade of C or TR

#### **412-119**

##### **Mobile Electrical Systems**

**Credits: 3.00**

This course introduces the student to electrical theory in terms of voltage, amperage, resistance, and impedance in various circuits. Operation and troubleshooting methods using multimeters will be covered. Students will learn how to read and utilize electrical schematics and sysmbols. Batteries, starting circuits, charging circuits and electrical accessories will be covered.

#### **412-120**

##### **Mobile Hydraulic Systems**

**Credits: 3.00**

This course introduces the students to the fundamentals of fluid power, components, different hydraulic systems, hydraulic schematics and terminology of the hydraulic systems used on modern mobile equipment. Includes operation of fluid flow on various systems, maintenance, and system diagnostics.

**412-121****Shop Tools and Safety Principles****Credits: 2.00**

This course will introduce the student to the diverse mechanical skills required in today's service and repair facilities for mobile equipment. The student will demonstrate, through practical hands-on lab exercises, the proper care and use of common hand and power tools. General drilling, tapping, threading, and proper lifting and supporting various mobile equipment will also be focused on. The student will also be required to use test instruments to gather data on length, volume, area, depth, and torque. Safety is stressed in this course.

**412-123****Diesel Equipment Technology Internship****Credits: 3.00**

In this internship, students will participate in a planned diesel equipment technology learning experience in the workplace. Through direct occupational experience, students will participate in the supervised performance of maintenance, troubleshooting, and repair activities of diesel components. Worksite activities will focus on advanced fuel systems, engine overhaul, advanced control systems, and hydraulics. PREREQUISITES: Courses 412-116 - Diesel Preventative Maintenance with a minimum grade of C or TR, 801-196 - Oral/Interpersonal Communication, and 801-197 - Technical Reporting

**412-125****Construction Equip Dr/Steering System****Credits: 3.00**

This course will highlight an analysis of the construction and working principles of chassis components on heavy equipment. Included will be frames, suspension systems, steering systems, wheels and tires, tracks and undercarriage. Prepares the student with the knowledge and skills needed to adjust, diagnose, service and repair heavy duty suspension systems. Through participation in this course, students can prepare for AED Technical Assessments. PREREQUISITES: Complete course 412-111 - Diesel Maintenance Fundamental with a minimum grade C

**412-126****Construction Equipment Drive Train****Credits: 4.00**

The course will provide training with heavy equipment for proper diagnosis and repair of clutches, manual transmissions, drive shafts, universal joints, drive axles and planetary. Diagnostic and service procedures will apply to the heavy equipment construction industries. Through participation in this course, students can prepare for AED Technical Assessments. PREREQUISITES: Complete courses 412-111 - Diesel Maintenance Fundamental 412-106 - Diesel Brake Systems 412-125 - Construction Equip Dr/Steering System with a minimum grade C

**412-127****Construction Hydraulic Systems****Credits: 4.00**

This course will provide the conditioned development of hydraulic principles and understanding of compounds used in heavy and light equipment. The student will experience activities with advanced hydraulic components including, disassembly and assembly of pumps, motors, accumulators, mechanical and electrical controlled hydrostatic systems. Servicing diagnosing and preventive maintenance procedures will also be performed on heavy equipment. Through participation in this course, students can prepare for AED Technical Assessments. PREREQUISITES: Complete courses 412-108 - Diesel Electricity 2 412-109 - Diesel Engine Service 412-111 - Diesel Maintenance Fundamental 412-115 - Diesel Hydraulic Systems 412-126 - Construction Equipment Drive Train with a minimum grade C

### **413-501**

#### **Arithmetic and Introduction to Algebra For Electrical Crafts**

**Credits: 1.00**

This course is an intensive review of arithmetic, with emphasis on common and decimal fractions, ratio and proportion, percentage, systems, units of measurement, conversions, and square root. An introduction to algebra, including terminology, additive functions, grouping symbols, axioms, basic procedures, multiplication, and division, is included.

### **413-502**

#### **Electrical Circuitry Algebra and Trigonometry**

**Credits: 1.00**

This course covers sign numbers, grouping symbols, factoring equations in one unknown, fractions, fractional equations, exponents and radicals, solution of simultaneous equations, and an introduction to factors.

### **413-503**

#### **Basic AC/DC Current Motor Control**

**Credits: 1.00**

This course is an introduction to DC and AC motor control concepts. Topics include: fundamental concepts of electricity and magnetism, three phase motors, single-phase motors, DC motors and generators, and DC motor controls.

### **413-505**

#### **AC/DC Fundamentals Apprentice**

**Credits: 1.00**

### **413-506**

#### **Electrical Theory I/Construction**

**Credits: 4.00**

Introduces the apprentice to the basic electrical concepts of structure of matter, electron theory; Ohm's law for series-parallel circuits; volt and current measurements; conductors and resisters; electrical power and energy; and the National Electrical Code.

**413-510**  
**Motor Control**  
**Credits: 1.00**

The principle objective is to present the fundamentals of motor control by developing the ability to read and draw control circuits given many control problems using schematic, wiring and piping diagrams.

**413-516**  
**Electrical Theory II/Construction**  
**Credits: 4.00**

**413-521**  
**Polyphase Alternating Current Fundamentals**  
**Credits: 1.00**

Students learn about three and four wire two-phase circuits, three-phase induction, star and delta circuits, power balanced and unbalanced loads, transformer principles, characteristics, and connection, electrical instruments, self synchronous systems, protective relays, lamps, and illumination.

**413-526**  
**Electrical Theory III/Construction**  
**Credits: 4.00**

**413-528**  
**Direct Current Fundamentals**  
**Credits: 1.00**

This course covers electron theory, Ohm's Law, series and parallel circuits, power, Kirchoff's Law, work effective heat torque, motor sizes, wire sizes, voltage drop, wiring systems, and kinds of wire insulation.

**413-529**  
**Single Phase AC Fundamentals**  
**Credits: 1.00**

This course covers properties of alternating current, AC measurement, inductance and inductive resistance, capacitance and capacitive resistance, impedance, series and parallel AC circuits, resonance, and power and power factor correction.

**413-531**  
**Industrial Electronics Fundamentals**  
**Credits: 1.00**

This course is an introduction to electronics, which includes semi-conductor theory and circuits, transistor theory and circuits, power supplies, integrated circuits, oscillator circuits, photosensitive devices, and pulse circuits.

**413-536**

**Electrical Theory IV/Construction**

**Credits: 4.00**

**413-537**

**Wiring Commercial & Industrial**

**Credits: 1.00**

This course covers the accurate interpretation of the requirements of the NEC with regard to industrial wiring. The text includes industrial building plans and blueprints. The course builds upon the knowledge and experience gained from working with the text, the NEC, and blueprints.

**413-538**

**Alternating Current Fundamentals**

**Credits: 1.00**

This course covers alternators, rotating magnetic fields, AC motors, speed control, types of winding, and an introduction to AC motor control.

**413-539**

**National Electric Code (BAT)**

**Credits: 1.00**

This course is a study of national and local electrical codes for wiring and apparatus. It covers wiring design and protection, wiring methods and materials, general use equipment, special occupancies, special equipment, and the use of tables and diagrams for the solution of practical wiring problems.

**413-540**

**Automation Circuits & Introduction to Programmable Logic Controllers**

**Credits: 1.00**

This course is an introduction to programmable controllers, specifically the Allen Bradley SLC-500. It covers basic instructions, programming software, input and output files, timers and counters, and programming instructions.

**413-541**

**Electronic Controller Applications**

**Credits: 1.00**

This course covers electronic motor controls, DC motor control by means of phase shifters, three phase rectifiers, AC motor controls, adjustable frequency drives, and synchronous motor controls.

**413-546**

**Electrical Theory V/Construction**

**Credits: 4.00**

**413-548**

**Programmable Logic Controllers I**

**Credits: 1.00**

This course is an introduction to programming techniques, hardware configuration, and theory of operation of a programmable logic controller. The Modicon industrial controller is the system to be studied.

**413-556**

**Electrical Theory VI/Construction**

**Credits: 4.00**

**413-557**

**AC Electricity**

**Credits: 2.00**

This course is designed to introduce the industrial electrical student to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems.

**413-558**

**Codes 2: OCPD/Electrical Device Install**

**Credits: 0.50**

In this module of Codes for Industrial Electricians, students will learn how to plan for the installation of overcurrent protection devices and how to select the proper boxes, cabinets and conduits for industrial electrical installations as called for in the NEC and other electrical codes.

**413-559**

**Codes 3: Article 250 Part A**

**Credits: 0.50**

This course examines the application of grounding to industrial electrical situations as required by the NEC and other electrical codes.

**413-562**

**Codes 4: Article 250 Part B**

**Credits: 0.50**

This course examines Article 250 and grounding applications for industrial electrical installations. Students will complete their review of this portion of the NEC and examine additional related codes in effect across Wisconsin.



**413-563****Codes 5 Art.300, Crds/Cble, Haz Install****Credits: 0.50**

This course examines Article 300 of the NEC and wiring methods for industrial electrical applications. Students will determine sizing requirements for cords and cables for installations common to industrial facilities. This course will identify code requirements for equipment installations in hazardous locations.

**413-564****Codes 6 Cond., Raceways, Data/Comm Cabl****Credits: 0.50**

This course covers the selection of proper conductors and raceways for industrial electrical installations as required by the NEC and other electrical codes. Course competencies will include examining the installation requirements for data and communication cables.

**413-569****Codes 7: Motors and Generators****Credits: 0.50**

This course reviews the code requirements for the selection of electrical components for typical industrial electrical motor installations. Course module includes sizing of controls, conductors, switches, branches, and more.

**413-570****Codes 8: Transformers****Credits: 0.50**

This course reviews the electrical code requirements which provide for the protection of various industrial transformer installations. Course competencies include developing plans, sizing equipment and components, safety, and references to applicable sections of the NEC.

**413-571****Codes 1: Introduction to NEC****Credits: 0.50**

This course introduces the student to the layout and purpose of the National Electric Code. It will teach the student proper methodology to research a code question and correctly interpret what is read. Students will research the structure of the NEC and define the requirements of the code that are common to all electrical installations. Students will examine the installation requirements for fire pumps, emergency systems and fire alarms.

**413-576****DC Electricity****Credits: 2.00**

This course introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included.

**413-577**

**Motor Controls 1**

**Credits: 1.00**

This course will lead the student through the fundamentals of electric motor control. Students will learn to recognize and draw the basic symbols, the language of motor control, and how to apply these symbols into current industrial format. Students will learn to draw and read ladder and wiring diagrams. Students will be introduced to the logic used in motor control and be required to apply this logic in order to correctly interpret, design, and wire control circuits.

**413-578**

**Motor Controls 2**

**Credits: 1.00**

This course will examine motor controls applicable to the industrial electrician trade.

**413-579**

**Motor Controls 3**

**Credits: 1.00**

This course examines motor controls applicable to the industrial electrician trade. Applications and assessment activities are intended in this course.

**413-586**

**Motors and Generators**

**Credits: 1.00**

This course introduces concepts, terminology, and safety. This course is designed to give the student the knowledge required by industry to maintain electric motors and generators. This course will cover DC motors and generators, single phase motors as well as alternators.

**413-587**

**Power Systems & Variable Speed Drives**

**Credits: 2.00**

This course provides the opportunity for students to learn about power systems and variable speed drives. Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Students will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's.

**413-588**

**Solid State Electronics**

**Credits: 2.00**

This course provides the student with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identifications, and operating characteristics of solid-state devices is investigated. The student builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective components are applied. The replacement of printed circuit board components is performed. Also examined is the effect of temperature on the operation of solid state devices.

**413-589**

**Transformers**

**Credits: 1.00**

This course is designed to introduce the Industrial Electrician student to the basic concepts of single and three-phase transformers. The course will cover transformer theory, turns, current and voltage ratios as well as proper connections and use of various transformers.

**413-590**

**National Electrical Codes**

**Credits: 1.25**

This course comprehensively covers the National Electrical Code. It is designed to acquaint the student with NEC calculations, NEC theory, and NEC content. This program explains the strategies of taking an exam & you get to see how prepared you are by taking simulated tests for the Journeyman or Masters Electrician Exam.

**413-595**

**Fluid Power Systems - Hydraulics**

**Credits: 0.50**

The hydraulics course is customized for Industrial Electricians and relates the basics of hydraulic theory and hydraulic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized.

**413-596**

**Fluid Power Systems - Pneumatics**

**Credits: 0.50**

This is a pneumatics course customized for industrial electrician students who deal with fluid power systems. This course will relate the basics of pneumatic theory and pneumatic components. Safety and the interrelationship between pneumatic power with electrical control is emphasized.

**413-597**

**Green Awareness for the E & I Trades**

**Credits: 1.00**

Green Awareness for the E&I trades examines new and emerging technologies influenced by green trends which are impacting work processes today and in the future. The course introduces students to green related knowledge and skills. Green topics covered in this course include energy efficiency; energy conservation; changes in state, national and local codes; lighting alternatives; alternative energy generation; energy efficient motors, drives, controllers and equipment; eliminating toxic materials and reducing wastes; and specific 'green' applications for the various trades involved under the E & I trades.

#### **413-598**

##### **Programmable Logic Controllers 1**

**Credits: 1.00**

This course is designed to teach fundamentals of programmable logic controller and its programming software. This course will introduce terminology, concepts, print reading and safety.

#### **413-599**

##### **Programmable Logic Controllers 2**

**Credits: 1.00**

This is the second of 3 courses for industrial electrician students.

#### **413-600**

##### **Programmable Logic Controllers 3**

**Credits: 1.00**

This is the third course of 3 for industrial electrician students. PLC applications and assessment projects are planned.

#### **413-601**

##### **Safety and Print Reading**

**Credits: 0.50**

This course will acquaint the student with the interpretation of 'Prints' (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied.

#### **413-602**

##### **AC & DC Motors**

**Credits: 1.00**

This course identifies the components of an AC motor, introduces the student to DC motors, basic components and theory, and discusses split-phase motors and capacitance start motors. Defines and explains AC motor functions, synchronous speed and how to calculate it, the components and functions of various three-phase motors, the components and functions of externally excited motors, starters, and variable speed drives, basic magnetic principles, sine waves, methods of increasing magnetic flux in a conductor, how rotating field is created in an AC motor, torque, and role in motor operation, and the components and functions of externally excited motors, starters, and variable speed drives. Demonstrates the relationship between phased current and rotor spin, induction, its effect on a rotor, armature

reaction, compensations, and introduced voltage. Trains the student to practice slip and how to calculate it using a formula and distinguish single-phase motors from three-phase motors.

### **413-603**

#### **Solid State Electronics Basics**

**Credits: 1.00**

This course provides the student with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identifications, and operating characteristics of solid-state devices is investigated. The student builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective components are applied. The replacement of printed circuit board components is performed. Also examined is the effect of temperature on the operation of solid state devices.

### **413-604**

#### **Variable Speed Drives**

**Credits: 1.00**

This course provides the opportunity for students to learn about power systems and variable speed drives. Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Students will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's.

### **413-701**

#### **Elect. Safety & Print Reading Electrical Safety & Print Reading**

**Credits: 1.00**

This course is designed to provide basic electrical skills to those who need to perform first-line electrical maintenance tasks including the safe isolation, replacement, and testing of a range of common electrical devices (motors, sensors, heating elements, solenoids, etc.) in a safe and effective manner. In addition to basic electrical skills, this course will acquaint the student with the interpretation of 'Prints' (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied. Importantly, the format of the course is specifically designed so that, when combined with suitable on-site consolidation of training, it will assist the maintenance manager in meeting the legal requirements for employee competence in electrical work.

### **413-705**

#### **Codes for Industrial Electricians**

**Credits: 2.25**

This course introduces the student to the layout and purpose of the National Electric Code. It also strives to teach the student proper methodology to research a code question and correctly interpret what they are reading. Students will research the structure of the National Electric Code and define the requirements of the code that are common to all electrical installations. In addition, students will examine the installation requirements for fire pumps, emergency systems and fire alarms, plan for the installation of overcurrent protection devices and how to select the proper boxes, cabinets, and conduit, the application of grounding, examine Article 250, Article 300 of the NEC and wiring methods, determine sizing requirements for cords and cables for installations common to industrial facilities, the selection of proper

conductors and raceways for industrial facilities, the code requirements which provide for the protection of various industrial transformer installations.

**419-511**

**Hydraulic Pumps Apprenticeship**

**Credits: 0.75**

The student will be able to design hydraulic pumps using a variety of pressure and flow control valves.

**419-512**

**Hydraulic Controls Apprenticeship**

**Credits: 1.00**

The student will study and analyze the effects of various control valve applications.

**419-551**

**Pneumatics Apprentice**

**Credits: 1.00**

Learning is accomplished with lecture and laboratory using hydraulic, pneumatic, and electrical hardware, videotapes, multi-media interactive video, reference books, and computer simulation software.

**419-567**

**Basic Hydraulics Beginning**

**Credits: 1.00**

Students study all the basic components of hydraulics in simple fluid power systems, covering topics such as symbols, flow control valves, pressure control valves, and directional control valves and pumps.

**419-570**

**Fluid Power - Apprentice**

**Credits: 1.00**

This course introduces the student to all the basic concepts without going into detail and applications.

**420-317**

**CNC Machining Operations**

**Credits: 2.00**

This course presents Computer Numerical Control (CNC) concepts and skills. Students learn how to setup and operate CNC machinery. Basic programming, G and M codes, and fundamental features of CNC control panels are introduced. PREREQUISITES: Course 420-330 - Machine Tool I with a Minimum grade of C or TR

**420-318**  
**Die Stamping**  
**Credits: 4.00**

This course presents concepts and skills used in the construction of progressive dies. Through critical thinking and practical applications, students will construct two progressive pierce and blank dies that will produce the parts for a non-twist clamp. They will make the hardware that turns the stamped pieces into five separate working clamps and perform entry-level machining tasks for employment in the machining industry. PREREQUISITES: Course 420-332 - Machine Tool II with a Minimum grade of C or TR

**420-319**  
**Electrical Discharge Machining**  
**Credits: 2.00**

This course presents concepts and skills needed to use CNC programming to operate a wire Electrical Discharge Machine (EDM). Students will program a Mitsubishi wire EDM and perform routine maintenance of the machine and part set-up. PREREQUISITES: Course 420-317 - CNC Machining Operations with a minimum grade of C or TR

**420-326**  
**GD & T for Die Making**  
**Credits: 1.00**

This course presents concepts to interpret more complex prints and tolerancing techniques. Students will examine part dimensions and assemblies and construct stamping dies. PREREQUISITES: Course 420-329 - Industrial Print Interpretation with a minimum grade of C or TR

**420-328**  
**Heat Treating Processes**  
**Credits: 2.00**

This course explores the properties of industrial metals with a focus on ferrous metals and tool steels. Students will examine a variety of heat treating applications and will perform metal hardness and stress testing.

**420-329**  
**Industrial Print Interpretation**  
**Credits: 2.00**

This course presents universal techniques for interpreting mechanical and industrial prints. Students learn to visualize parts and assembly through interpretation and sketching activities. Drawing standards, abbreviations, dimensioning rules and sectional views are emphasized. Geometric dimensioning and tolerancing are introduced.

**420-330**  
**Machine Tool I**  
**Credits: 4.00**

This course introduces the basic concepts and skills needed to operate engine lathes, power saws, drill presses and bench applications. Safe and proper operation of tools and machines is emphasized. Students will operate speeds, feeds, cutting tools, tool geometry, tool grinding and work-holding devices. Dimensional accuracy and finished quality will be emphasized.

#### **420-332**

##### **Machine Tool II**

**Credits: 4.00**

This course expands on the basic concepts and skills introduced in Machine Tool I related to engine lathes, power saws, drill presses, bench applications, CNC setup and operation. Safety and proper operation of tools and machines is emphasized. Speeds feeds, cutting tools, tool geometry, tool grinding and work-holding devices are examined. Dimensional accuracy and finished quality are emphasized. **COREQUISITES:** Courses 420-330 - Machine Tool I and 804-370 - Mathematics I/Applied

#### **420-333**

##### **Metallurgy Principles**

**Credits: 1.00**

This course examines the principles concerning the metals used in the industrial world. The production and properties of these materials are presented as well as their application. Students investigate the behavior of ferrous and non ferrous metals with an introduction to steel alloys.

#### **420-334**

##### **Precision Measuring and Gauging**

**Credits: 1.00**

This course introduces the student to precision measuring equipment and techniques. Students will measure a wide variety of interior and exterior part features. Advanced equipment such as the dial caliper and outside micrometer will be presented.

#### **420-335**

##### **Surface Grinding**

**Credits: 1.00**

This course presents techniques for the precision grinding of various metals. Students perform a variety of complex setups and precise machining. Safety and cleanliness are emphasized. **PREREQUISITES:** Course 420-330 - Machine Tool I

#### **420-342**

##### **CNC Introduction and Support Equipment Basics**

**Credits: 1.00**

This course is designed to give the students a familiarization with the necessary practices and techniques used to operate Computer Numerical Controlled (CNC) machines. Some of the topics covered include CNC machine introduction,



safe practices and techniques used to remove burrs, Machinery's Handbook usage, basic CNC machine operator maintenance, and production support equipment use and operation. COREQUISITES: Course 420-345 - Gauging/Inspection and 623-147 - Manufacturing Shop Safety

#### **420-343**

##### **CNC Machine Tool Operation**

**Credits: 4.00**

This course is actual run time in the lab for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run. Students bring together all of the theories learned in other classes and apply them to the production process.

#### **420-344**

##### **CNC Offsets and Operations**

**Credits: 1.00**

In this course, we will cover CNC machine operations. Topics covered include machine homing, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine. COREQUISITES: Course 420-345 - Gauging/Inspection

#### **420-345**

##### **Gauging/Inspection**

**Credits: 2.00**

Students will learn to apply blueprint specifications, perform shop math calculations, understand geometric dimensions and tolerances, and correctly use many different analog and digital measuring instruments, including various types of micrometers, calipers, stales, gauges (height, plug, thread, and surface roughness), and optical comparators. COREQUISITES: Courses 421-376 - Blueprint Reading and 804-370 - Mathematics I/Applied

#### **420-494**

##### **Cost Estimating**

**Credits: 0.25**

This course will provide the learner knowledge of the necessary steps to cost and build the various componenets used in manufacturing, including dies, mold, fixtures and gauges. The learner will utilize a hands-on approach to performing cost estimations as if they were in the position of doing so in the real world for a company.

#### **420-495**

##### **Grinding, Drilling, & Cut-Off Machine**

**Credits: 1.00**

In this course. the techniques and machines used for surface grinding, hand grinding, and ID+OD grinding will be reviewed. The use of different types of drilling machines and their functions will be presented, including how they benefit the tool and die maker. The importance of cut-off machines including the various types, pros and cons will also be discussed.

**420-505****Machine Technology I****Credits: 1.00**

Survey different areas of machine technology. Variety of areas covered are: safety, measurement, layout, hand tools, drills, grinding, lathe, milling.

**420-506****Basic CAD/CAM****Credits: 1.00**

This course is designed for students in the CNC Apprenticeship program to gain basic knowledge of what CAD/CAM is and how it is effective in the CNC manufacturing area. The student will be introduced to various concepts and methods of producing parts and drawings and then uploading them to the CNC machine for machining. The student will learn the basics of drawing a part from a concept or looking at a drawing and implementing the tools in the CAM program.

**420-507****Machine Technology II****Credits: 1.00**

Advanced manual machine operation will be explored in this course. Practical tasks and assignments will be performed on the drill press, lathe, and milling machine.

**420-509****CNC Programming and Planning****Credits: 1.00**

This course is designed for students in the CNC program to gain knowledge of planning the steps to machine a part and learn how to program the machine using these steps. The student will be given a print and they will need to decide how to hold the part, what features to machine first and second, and why they need to be machined in this order. The student will also learn about various machines and which one works best with their applications in industry. The student will utilize the CAD/CAM from other courses to help with the programming and planning.

**420-510****Industrial Manufacturing Tech. Appr. 1****Credits: 2.75**

The first semester of related instruction includes an orientation to the trade and manufacturing, then followed by the MSSC safety module, MSSC quality module, OSHA 10 certification, blueprint reading, visual inspection, measurement and first aid and CPR training. Manufacturing concepts will be introduced and applied in a variety of manufacturing settings. MSSC modules 1 and 2 are aligned with the learning plans for this course along with the MATC course Machine Trades Math.

**420-512****Industrial Manufacturing Tech. Appr. 2****Credits: 2.75**

The second semester of related instruction includes the MSSC manufacturing processes and production and maintenance awareness modules, along with communication, lean manufacturing, problem solving, and frontline leadership. Manufacturing related concepts will be applied to a variety of industrial settings. The course wraps-up with an examination of emerging trends and technologies, and future directions for manufacturing. MSSC learning objectives in modules 3 and 4 are aligned with the learning plans for this course. In addition, the MATC Communication for Apprentices course is included in the learning plans, but will stand alone for registration and transcript purposes.

**420-516****Precision Measurement****Credits: 1.00**

This course introduces students to the use of various types of precision measurement instruments used in the CNC/Tool & Die manufacturing environment. The students will learn about different types of Micrometers, Calipers, Gage blocks, and Gage pins. The students will be taught how to measure inside the part with telescoping gauges or Bore gauges. The students will also be introduced to SPC. The method of holding light tolerances will be discussed in this course also.

**420-517****Cutting Tools****Credits: 0.50**

This course will introduce various types of cutting tools used in the Tool & Die/Mold Maker fields. While in the class, the students will learn the basics of drills and taps to the many different types of inserts, cutting edges and angles associated with these cutting tools. We will also discuss the different types of tool holders for these tools and the pros and cons of the different types of holders.

**420-518****Machinery Handbook****Credits: 0.25**

This course is designed to introduce the students to the Machinery's Handbook. The Machinery's Handbook is an in depth book comprised of information pertaining to the manufacturing world. We will focus on the Tool & Die/Mold making information found in the book. The students will also focus on various ways to look up information using this book.

**420-519****Geometric Dimensioning & Tolerancing****Credits: 0.25**

This course is designed to introduce the students to Geometric Dimensioning & Tolerancing (GD&T) systems. We will discuss the 5 different groups and the symbols associated within the GD&T groups. The students will be shown how and why the GD&T symbols are used on a blueprint. While introducing the different symbols for GD&T, the students will be shown how to check or verify the manufactured parts using these various symbols.

**420-520**

**Precision Measurement**

**Credits: 0.50**

This course introduces students to the use of various types of precision measurement instruments used in the CNC/Tool & Die manufacturing environment. The students will learn about different types of Micrometers, Calipers, Gage blocks, and Gage pins. The students will be taught how to measure inside the part with telescoping gauges or Bore gauges. The students will also be introduced to SPC. The method of holding light tolerances will be discussed in this course also.

**420-542**

**Metal Science for Metal Trades**

**Credits: 1.00**

This course provides the apprentice with technical related instruction in metallurgy, to learn the proper terminology and technical information used by tool and die makers.

**420-560**

**Machine Trades/Mathematics 3**

**Credits: 1.00**

**420-561**

**Machine Trades/Mathematics 4**

**Credits: 1.00**

**420-569**

**Electrical Discharge Machining Apprenticeship**

**Credits: 1.00**

Course is designed to give apprentices a basic understanding of theory and process of sinker and wire EDM in toolmaking.

**420-592**

**Numerical Control**

**Credits: 1.00**

This course is a basic course as it relates to machine tools. Learning the operation of numerical control and the programming of simple jobs. Designed to introduce numerical control to machine trades apprentices.

**421-316**

**Blueprint Reading/Advanced**

**Credits: 2.00**

Review of basic blueprint reading principles. Deals with more forgings, castings and complex prints. New material introduced includes surface textures, fits, auxiliary views, cast iron, pin fasteners, gears, cams, ratchet wheels, and

additional GDT coverage. Students read information units, perform mathematical calculations, and answer questions pertaining to part prints. PREREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety COREQUISITES: Courses 801-301 - Writing Principles and 804-371 - Mathematics II/Applied

**421-376**

**Blueprint Reading**

**Credits: 2.00**

Read and interpret information found on shop prints. Students answer questions in text relating to part prints. Learn to visualize objects from various views provided. Perform math calculations to obtain necessary dimensions and tolerances shown by symbols, notes and various views. Covers rectangular coordinate system and inch/metric systems. Introductory information on geometric dimensioning and tolerancing (GD&T).

**421-515**

**Blueprint Reading I/Metal Trades**

**Credits: 1.00**

This course covers the basic principles necessary for training in the interpretation of blueprints and free hand drawings of machine parts.

**421-516**

**Blueprint Reading 2/Machine Trades**

**Credits: 1.00**

This course teaches students proficiency in the interpretation of blueprints which illustrate job procedure tactics and their relation to drafting. Special attention is given to drawings which represent common machine processes.

**423-501**

**Equipment Installation**

**Credits: 0.75**

Students will layout equipment installations, plan for moving equipment, and set and level equipment.

**423-502**

**Mechanical Power Transmission**

**Credits: 0.75**

Course examines drive transmission systems and their applications, including roller chains. Students will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems.

**423-503**

**Packings, Seals, Gaskets**

**Credits: 0.50**

Students will examine packing, seals, and gaskets and compare materials and applications. Then skills in layout, cutting, inspecting, removing, and installing these components will be developed.

**423-504**

**Pipefitting and Valves**

**Credits: 0.75**

Course introduces students to pipe sizes, materials and schedules, examines fittings, tubing and valves, and develops skills related to layout, installation, and maintenance.

**423-506**

**Sheet Metal & Structural Steel Fab**

**Credits: 0.75**

Course compares types of sheet metal and tools used by the trade. Students will develop skills related to fabricating sheet metal and structural steel and then erecting structural steel.

**423-507**

**Vacuum Systems**

**Credits: 0.75**

Course introduces principles of vacuum systems and interpreting vacuum system schematics. Students will then develop skills related to installing, repairing, replacing and applying troubleshooting principles to vacuum systems and components. Course examines preventative maintenance techniques commonly used on the job.

**423-508**

**Fasteners**

**Credits: 0.25**

Course provides students with a chance to compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners.

**423-560**

**Principles of Screw Threads, Mechanical Fasteners, Adhesives, and Sealants**

**Credits: 0.50**

Learning is accomplished by using a combination of lecture and practical lab assignments. The identification, application, selection, and making of screw threads and other mechanical fasteners will be explored.

**423-565**

**Principles of Rigging**

**Credits: 0.50**

Learning is accomplished by using a combination of lecture and practical lab assignments. The basic principles of safe rigging will be explored.

**423-716**

**Metallurgy**

**Credits: 1.00**

This course develops skills regarding metallurgical concepts. Students will compare various metals and their applications, apply metallurgical techniques to work processes, test metals for hardness, and examine heat treating applications.

**423-724**

**Preventative & Predictive Maintenance**

**Credits: 1.00**

Course examines both preventative and predictive maintenance concepts as they apply to millwright work processes and machine maintenance. Students will develop skills related to assessing machine conditions and faults based on both preventative and predictive maintenance.

**423-730**

**Bearings**

**Credits: 0.75**

Students will examine bearing types and applications, and compare equipment bearings. Learners will develop skills related to bearing inspection, selection, removal, mounting, lubrication and diagnosing bearing failures.

**423-731**

**Couplings & Alignment**

**Credits: 1.00**

Course compares different coupling types and examines common misalignment problems. Learners will develop skills related to inspecting, troubleshooting, and preparing couplings for removal and installation, and also aligning and lubricating couplings.

**424-510**

**Painting/Decorating I/ Related**

**Credits: 2.00**

History of apprenticeship, painting and trade organizations. Common trade terms, mathematical review. Materials of the trade, tools and equipment, ladders and scaffolding. Surface preparation and application procedures. Paint failures and remedies, safety will be covered.

**424-512****Painting/Decorating III/Related****Credits: 2.00**

Surface preparation for wallcoverings. Tools, equipment and adhesives. Wallcovering materials, wallcovering estimating and application. Conventional air spray systems, use of. Safety in spray painting. Airless spray systems. Specialized spray systems and equipment.

**424-513****Painting/Decorating IV/Related****Credits: 2.00**

Subjects covered: wood and wood products. Materials and procedures for wood surface preparations. Wood finishing materials and procedures. Maintenance and repair of old finishes. Finishing schedules and finishing problems. Corrosion, film thickness and surface preparation. Safety with special coatings, materials and their use, inspection and testing.

**424-514****Painting/Decorating V/Related****Credits: 2.00**

Subjects covered: types of abrasive blasting equipment and their use. Surface preparations with abrasive blasting, selection of abrasives. Blasting standards and specifications. Water blasting, steam cleaning. Blasting exposed aggregate finishes, various parts of a set of blueprints and specifications. Lines, symbols, scales and dimensions. Practice reading architectural and engineering drawings.

**424-515****Painting/Decorating VI/Related****Credits: 2.00**

Subjects covered: drywall tools and equipment. Materials of the trade, taping and finishing applications, texturing and special effects, common problems and corrections. Techniques, materials and tools for: glazing, antiquing, woodgraining, marbleizing, stipple finishing, texturing, gilding, stenciling.

**424-517****Painting and Decorating VII****Credits: 2.00**

The history of painting, decorating and apprenticeship will be covered along with trade organizations. Painting failures and remedies will be covered and demonstrated.

**427-500****Plumbing I/Related****Credits: 2.00**



**427-501**  
**Plumbing II/Related**  
**Credits: 2.00**

**427-502**  
**Plumbing III/Related**  
**Credits: 2.00**

**427-503**  
**Plumbing IV/Related**  
**Credits: 2.00**

**427-504**  
**Plumbing V/Related**  
**Credits: 2.00**

**427-505**  
**Plumbing VI/Related**  
**Credits: 2.00**

**427-515**  
**Plumbing Fundamentals Apprenticeship**  
**Credits: 1.00**

Students will learn the basic fundamental practices and techniques of the plumbing trade with an emphasis on safety throughout the course. Learning will be accomplished through a combination of class discussion and practical exercises.

**427-516**  
**Plumbing Heating Apprenticeship**  
**Credits: 1.00**

Students will learn the fundamental principles of various types of hot water heating systems. Learning will be accomplished through a combination of class discussion and practical exercises.

**427-578**  
**Green Plumbing Applications**  
**Credits: 2.00**

This course provides plumbing apprentices with an introduction to green applications. Apprentices will be instructed on how to identify, install and maintain a variety of green products and systems. They will apply the Wisconsin Plumbing Code to various installations. This introduction will give an apprentice the basic knowledge to study for a variety of green certifications.

**427-579**

**Plumbing Advanced Topics**

**Credits: 2.00**

Plumbing Apprentices will be required to interpret building plans and specifications, and apply code requirements to site plans, floor plans, and isometric drawings of DWV, water, POWTS, and stormwater systems.

**432-510**

**Sheet Metal Techniques I**

**Credits: 2.00**

**432-511**

**Sheet Metal Techniques II**

**Credits: 2.00**

**432-513**

**Sheet Metal Techniques IV**

**Credits: 2.00**

**432-515**

**Sheet Metal Techniques VI**

**Credits: 2.00**

**432-516**

**Sheet Metal Techniques VII**

**Credits: 2.00**

**435-505**

**Industrial Pipefitting I Apprenticeship**

**Credits: 1.00**

The purpose of this course is to provide the student with knowledge and experience in specifying and selecting materials for a particular piping system. Often, there may not be a set design to a specific piping system. A general system may have been designed, but it is the experienced pipefitter who must select components and determine the location and size of piping runs. Pipefitting I is an engineering course that will focus on the mechanical design of a piping system and how to make it both safe and efficient.

**435-506**

**Industrial Pipefitting II Apprenticeship**

**Credits: 1.00**

In our Pipefitting I course, we used an engineering approach to design piping systems. Pipefitting II will take the skills learned in this course and apply them to the actual hands-on application. The student must not only design the piping system, but select the components and build the system. This course is a measurement of all we have learned previously and should allow the student to showcase the skills learned.

#### **439-300**

##### **Basic CAD and Basic Toolroom CAM**

**Credits: 2.00**

This course is designed to introduce the student to Basic CAD (Computer Aided Design) / Basic CAM (Computer Aided Machining) practices used in the tool room. The student will complete a machined part from the beginning to the end using the CAD/CAM software. Each student will draw a part using CAD software, the student will then assign the necessary tools needed to machine the part, and program the tools to machine part. The students will then run the part through a simulator and prove out their program. Once the part is proven they will then download the program to a tool room machine and produce the part safely and correct. **COREQUISITES:** Course 804-370 - Mathematics I/Applied

#### **439-301**

##### **Tool Room Theory**

**Credits: 1.00**

The Tool Room Theory course will cover topics such as Die Stamping, Jig and Fixtures, Mold Making and advanced tooling techniques. The students will gain knowledge in each of these topics through various class discussions and hands on displays. This course will also cover various types of cutting tools and their purpose on the machining floor.

#### **439-505**

##### **Stamping and Die Design Applications**

**Credits: 1.00**

This course presents concepts and skills used in the construction of various types of stamping and forming dies. Students will learn how stamping dies work and what parts make-up the design.

#### **439-506**

##### **Mold Die Design Applications**

**Credits: 1.00**

Students will research design applications and the construction of various types of molds used in industry today. Instruction will include how molds work and what parts make-up the mold design.

#### **439-507**

##### **Milling/Turning 1**

**Credits: 1.00**

This course introduces the basic and minor advanced Milling and Turning used in industry today. Safe and proper operation of tools and machines is emphasized. Students will learn speeds and feeds and use various types of tools used on the lathe and mill.

**439-508****Milling and Turning II****Credits: 1.00**

This course is designed for students in the CNC Apprentice program to gain advanced knowledge of the support machines used in the tool room and CNC manufacturing environments. This is an advanced class and uses advanced techniques from the Milling and Turning I course. Students will make advanced parts and fixtures for the CNC machines. Machine processes used in this class will help support CNC machining methods.

**439-530****Die Making/Apprentice****Credits: 1.00**

This course presents advanced concepts and skills used in the construction of various types of stamping and forming dies. Students will learn how these dies work and what parts make up the die design.

**439-535****Jig and Fixture Design****Credits: 1.00**

This course explores the basic types and functions of jigs and Fixtures, design economics. Design and construction of jigs, fixtures, and specialized workholding topics.

**442-101****Welding Basics****Credits: 1.00**

This lab course covers the fundamentals of welding. Welding, soldering, brazing, and fabrication of various metals are included.

**442-102****Introduction to Welding****Credits: 2.00**

This course provides the theory and practical experience for arc and gas welding techniques. An emphasis is placed on basic safety, equipment usage, and proper procedures. The welding of ferrous and non-ferrous metals will be explored.

**442-303****Welding/Basics of Robotic Welding****Credits: 3.00**

This course provides instruction in basic welding robot operation including powering up, homing procedures, powering down, and proper work angles for all welding processes. The student will also learn the importance of proper travel

speeds and welding equipment setup to ensure for quality welds when programming robots. A heavy emphasis on robotic cell safety is also included in this course. COREQUISITES: Complete course 442-321 - Welding/Gas Metal Arc Welding

#### **442-304**

##### **Welding/Robotic Advanced GMAW**

**Credits: 3.00**

This course builds on the principles taught in both GMAW courses and the Basics of Robotic Welding course and how to integrate those principles to achieve industry-ready robotic programming and welding skills. This course reinforces the importance of safety when working in a robotic welding environment and focuses on all aspects of safely operating and basic consumable replacement and repair. This course also covers fixture and jig building to help create an atmosphere for repeatable weldments for production parts runs.

#### **442-305**

##### **Welding/Robotic Advanced GTAW**

**Credits: 3.00**

This course reinforces the principles taught in the hands-on GTAW courses along with the Basics of Robotic Welding course and describes how to integrate those principles to achieve industry-ready robotic programming/welding skills. There is a heavy emphasis on the importance of balancing safety and efficiency in a robotic welding environment. An extensive focus on fixture and jig building design will be incorporated. Students will build their own fixtures to demonstrate the ability to produce production parts with a robot.

#### **442-306**

##### **Pipe Gas Metal Arc Welding**

**Credits: 3.00**

This course builds on the principles taught in the GMAW classes and provides instruction on the skills necessary for the pipe welding industry. The fundamentals of pipe fit-up, preparation, tacking, and electrode selection for both ASME and API standards. Students will perform open butt GMAW root and fillers with ER70S-2 in 2G, 5G and 6G positions. The course will focus on safely performing work and the necessary qualifications required for the pipe welding environment. COREQUISITES: Complete course 442-321 - Welding/Gas Metal Arc Welding

#### **442-307**

##### **Welding/Pipe Gas Tungsten Arc Welding**

**Credits: 3.00**

This course builds on the principles taught in the GTAW classes and provides instruction on the skills necessary for the pipe welding industry. The fundamentals of pipe fit-up, preparation, tacking, and electrode selection for both ASME and API standards. Students will perform open butt GTAW root and fillers with ER70S in 2G, 5G and 6G positions. Welding on aluminum, stainless, and other alloy pipes will also be performed. The course will focus on safely performing work and the necessary qualifications required for the pipe welding environment. COREQUISITES: Complete courses 442-322 - Welding/Shielded Metal Arc Welding and 422-323

**442-308****Welding/Pipe Shielded Metal Arc Welding****Credits: 3.00**

This course builds on the principles taught in the SMAW classes and provides instruction on the skills necessary for the pipe welding industry. The fundamentals of pipe fit-up, preparation, tacking, and electrode selection for both ASME and API standards will be covered. Students will perform open butt SMAW welding with E6010, E7018 electrodes in 2G, 5G and 6G positions. The course will focus on safely performing work and the necessary qualifications required for the pipe welding environment. COREQUISITES: Complete course 442-322 - Welding/Shielded Metal Arc Welding

**442-314****Welding/Fundamentals of****Credits: 2.00**

This course covers the four main welding processes of gas metal ARC (mig wire) shielded metal arc (stick) gas tungsten arc (tig, heliarc) and oxyacetylene weld, cut and braze. Ideal course for beginners, home welders or apprentices.

**442-321****Welding/Gas Metal Arc Welding****Credits: 3.00**

(GMAW; MIG; Short-Arc; Wire. Instructs in basic safety, equipment usages and procedures with various filler metal in four basic welding positions. Instruction in plasma arc cutting of various metals. Provides considerable hands-on experience as well as technical information.

**442-322****Welding/Shielded Metal Arc Welding****Credits: 3.00**

(SMAW,Stick,Stick-Arc) Instructs in basic safety, equipment usages and procedures with five basic welding electrodes in four basic welding positions. Provides considerable hands-on experience as well as technical information. Allows for simulated structural steel welding certification opportunity.

**442-323****Welding/Gas Tungsten Arc Welding****Credits: 3.00**

(GTAW, TIG, Heli-Arc, Tungsten) Instructs in basic safety, equipment usages and procedures with various filler rods in three basic welding positions. Provides considerable hands-on experience as well as technical information.

**442-324****Weld Printreading and Fabrication Procedures****Credits: 2.00**

Instructs in basic graphic communication relating to the welding field. Provides for hands-on application of fabrication from blueprints. Follows American Welding Society welding symbol format.

**442-330****Welding/Advanced Shielded Metal Arc Welding****Credits: 3.00**

Provides advanced welding applications in SMAW welding with small (3/23 inch) and large (5/32 inch) electrodes hardface, aluminum, structural and pipe applications. PREREQUISITES: Course 442-322 - Welding/Shielded Metal Arc Welding

**442-332****Welding/Advanced Gas Metal Arc Welding****Credits: 3.00**

Provide advanced welding applications in GMAW welding using various size and types of electrodes of hard and soft wires on structural applications. Includes Gateway Technical College flux cored weld certification. PREREQUISITES: Course 442-321 - Welding/Gas Metal Arc Welding

**442-333****Welding/Advanced Gas Tungsten Arc Weld****Credits: 3.00**

Provides advanced welding applications in GTAW welding using stainless steel, aluminum and mild steel. Includes Gateway Technical College aluminum tensile certification and steel plate certification. PREREQUISITES: Course 442-323 - Welding/Gas Tungsten Arc Welding

**442-334****Welding/Oxyacetylene****Credits: 3.00**

(O-A; Gas) Instructs in basic safety, equipment usage and procedures with steel and braze filler rods in the four basic welding positions. Instructs in O-A cutting; providing considerable hands-on experience as well as technical information.

**442-510****Welding Fundamentals (apprentices)****Credits: 1.00****442-580****Welding Tech I****Credits: 1.00**

Students learn how to set up and operate gas welding and shielded metal arc welding equipment and safely function in a welding shop. They weld various joints using gas welding and arc welding processes in the flat position.

**442-581**

**Welding Tech II**

**Credits: 1.00**

Students learn how to set up and operate Acetylene and Mapp gas welding equipment and safely function in a welding shop. They weld various joints using Acetylene and Mapp gas welding processes in the various positions.

**443-101**

**Forklift Operation and Maintenance**

**Credits: 1.00**

This course is intended to prevent accidents, injuries, and fatalities that may be caused by the improper and unsafe use of forklifts. The course will cover pre-operation, operation, and load handling by means of presentations and hands-on training. Course participants will earn certification after passing a driving test on a forklift.

**443-310**

**Fundamentals of Construction**

**Credits: 1.00**

In this course, students apply safe operating procedures to their use of hand tools and power tools for construction tasks. They interpret construction drawings, perform basic construction calculations, and practice using test instruments to gather data on length, volume, area, depth, and dimensions. Upon successful completion of the course, students will be able to safely complete basic construction tasks using hand tools and power tools.

**443-311**

**Electrical Applications**

**Credits: 3.00**

This course introduces the student to the basics of building electrical maintenance. Repair and replacement of 110 and 220 volt electrical components are emphasized. PREREQUISITES: Complete course 605-107 - Fundamentals of Electricity/Electronics or 601-304 - Electricity and Electronics for HVAC COREQUISITES: Complete course 601-111 - Workplace Fundamentals or 443-310 - Fundamentals of Construction

**443-312**

**Carpentry and Repair, Basic**

**Credits: 2.00**

Basic construction methods and building materials are discussed. Students develop the knowledge and skills to perform a wide range of building maintenance activities. COREQUISITES: Complete course 601-111 - Workplace Fundamentals or 443-310 - Fundamentals of Construction

**443-313**

**Interior Finishing**

**Credits: 2.00**



This course will introduce the student to the basics of building interior finishing. Dry walling, painting, wall papering, and preventative maintenance will be emphasized. PREREQUISITES: Course 804-370 - Mathematics I/Applied minimum grade C COREQUISITES: Complete course 601-111 - Workplace Fundamentals or 443-310 - Fundamentals of Construction

#### **443-314**

##### **Mechanical Systems**

**Credits: 2.00**

The knowledge and skills required to perform basic plumbing installations and repairs are covered. COREQUISITES: Complete course 601-111 - Workplace Fundamentals or 443-310 - Fundamentals of Construction

#### **443-315**

##### **Industrial Preventative Maintenance**

**Credits: 2.00**

This course will cover the basics of industrial preventative maintenance equipment, scheduling, and repair that will be covered in lecture and lab. COREQUISITES: Complete course 443-310 - Fundamentals of Construction or 601-111 - Workplace Fundamentals

#### **444-306**

##### **Swiss CNC Setup and Operation**

**Credits: 3.00**

This course will further expose students to the setup of CNC Swiss Style Lathes, tooling, and the bar feeder. The student will setup and operate CNC Swiss-Style Lathes. Parts will be machined from selected programs. This course will also require students to write and produce programs for CNC Swiss Style Lathes. The student will also produce projects on the CNC Swiss Style Lathes using these programs. Setup and cycle reduction time will also be covered. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

#### **444-307**

##### **Fundamentals of Swiss CNC Turning**

**Credits: 3.00**

This course demonstrates the similarities and differences between conventional and Swiss turning processes. This course will also review the bar feeder, main collect, guide bushing, gang slide tools and live tool options. Controller orientation and basic programming with the discussion and demonstration of basic swiss-specific G codes will be covered. Machine operation and processes will be the main focus of this course. This course will review the characteristics of hazardous wastes and its safe handling, storage and disposal. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

#### **444-308**

##### **Fundamentals of Live Tooling**

**Credits: 3.00**

This course is acutely aligned to provide the specific skills required to efficiently and effectively operate machines employing the 4 axis part processing to maximize machine productivity. This course covers concepts of CNC machining, set-up and operations, tooling and work-holding systems, and basics of manual part programming for drilling, milling, tapping, as well as boring operations by utilizing G codes. Hands-on practice is an integral part of the class.

PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

#### **444-309**

##### **Live Tooling Setup and Operation**

**Credits: 3.00**

The course is aligned to providing the knowledge and skills required to 'translate' the part drawing into a finished product. Part programs will be created with a consistent focus on identifying those specific part features that readily lend themselves to 4 axis structured programming, and simultaneous machining. The individual will be capable of defining the list of required processes, their optimum sequential order, create the complete CNC part program, install the appropriate tools correctly, establish the program zero points, perform corresponding tool offsets, and related machine safety procedures. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

#### **444-311**

##### **CNC Lathe Process**

**Credits: 3.00**

This course is designed to provide the knowledge and skills required to create a CNC program that will convert stock material into a finished product. The student will be capable of defining the list of required processes, their optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC Lathe at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC Turning Center. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

#### **444-314**

##### **CNC Mill Process**

**Credits: 3.00**

This course is designed to provide the knowledge and skills required to create a CNC program that will convert stock material into a finished product on a Vertical Machining Center. The students will be capable of defining the list of required processes, their logical / optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced hands-on study of Computer Aided Design/Computer Aided Manufacturing theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC Mill at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC Vertical Machining Center. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

**444-315****Intro to Coordinate Measuring Machine****Credits: 1.00**

In this course, students use a coordinate measuring machine (CMM) to measure the geometric characteristics of physical objects. Students measure work piece sizes including diameters, lengths, and distances as well as common features such as planes, lines, points, and cylinders. Students interpret geometric dimensioning and tolerancing (GD & T). Using Calypso Software on a Zeiss CMM, students examine how CMM programs are written and executed. Upon completion of the course, students will be able to perform initial machine start up including probe calibration as well as perform alignments, measurements, dimensioning and manual operation.

**444-331****CNC Machining Technology****Credits: 3.00**

This course provides an introduction to CNC machining processes and the technology that supports them. Some of the processes covered are spot drilling, drilling, reaming, tapping, counterboring, countersinking, defining and calculating speed and feed rates, screw thread identification, and drill sharpening. Students will perform these processes on manual equipment prior to observing them on CNC equipment. Basic computer skills are also covered in this course.

COREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety

**444-332****CNC Production Applications****Credits: 2.00**

This course is actual run time in the lab for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run. They bring together all of the theories learned, in other classes, to the production process and apply them. PREREQUISITES: Course 420-342 - CNC Introduction and Support Equipment Basics COREQUISITES: Courses 420-344 - CNC Offsets and Operations and 444-331 - CNC Machining Technology

**444-333****Fundamentals of CNC Turning Applications****Credits: 3.00**

This course provides an introduction to CNC turning processes and their proper application. Some of the topics covered include lathe set-up and operation, lathe safety, types of lathes, lathe workholding devices, lathe cutting tools, grinding and sharpening of lathe cutters, and a review of lathe machining speeds and feeds. In this course, you will perform O.D. and I.D. turning operations on engine lathes as well as facing, drilling, reaming, tapping, grooving, chamfering, boring, knurling, tapering, and thread cutting operations. PREREQUISITES: Course 444-331 - CNC Machining Technology COREQUISITES: Courses 421-316 - Blueprint Reading/Advanced and 804-371 - Mathematics II/Applied

**444-334****Fundamentals of CNC Milling Applications****Credits: 3.00**

This course provides an introduction to CNC milling processes and their proper application. Some of the topics covered include machine set-up and operation, machine safety, types of milling machines, use and care of various cutting tools, and a review of milling speeds and feeds. The student will perform face and end milling operations as well as drilling, reaming, tapping, and slotting operations on manual milling machines. The proper use and care of accessories, such as edge finders, digital readouts, dial indicators, and boring heads, and an introduction to a Computer Numerical Control milling machine is also covered.

#### **444-335**

##### **CNC Lathe Set-Up**

**Credits: 3.00**

Students will produce and troubleshoot CNC lathe set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 2-axis turning center utilizing various CNC controllers. Set-ups will include faceting, turning, drilling, grooving, and thread operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

#### **444-336**

##### **CNC Mill Set-Up**

**Credits: 3.00**

Students will produce and troubleshoot CNC mill set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 3-axis machining centers using various CNC controllers. Set-ups will include face, end, and profile milling and drilling, slotting, boring, and tapping operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

#### **444-337**

##### **Fund of Blueprint and Shop Safety**

**Credits: 3.00**

This course provides students with the skills to read and interpret information found on shop prints. Rectangular coordinate and inch/metric systems will be covered and will allow students to perform math calculations to obtain necessary dimensions and tolerances shown by symbols, notes and various views. Students will also study general shop safety for a machining environment, raising the awareness of workers to the hazards around them and identifying work and personal safety practices. Other safety topics will be covered, including MSDS sheets, personal protective equipment, and lockout tag out. Students who successfully complete this course will be eligible to complete an additional exam to receive MSSC certification.

#### **444-338**

##### **Fundamentals of CNC Machine Application**

**Credits: 4.00**

This course is designed to give students a familiarization with the necessary practices and techniques used to operate Computer Numerical Controlled (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, basic CNC machine operator maintenance, and production support equipment use and operation. Topics such as machine homing, tooling used, an understanding of offsets, setting offsets,

and the application of offsets in the CNC machine will also be covered. Actual run time in the lab will be provided for hands on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run, applying theories learned to the production process. COREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety

#### **444-339**

##### **Gauging and Quality Control**

**Credits: 3.00**

This course introduces the methods and applications of Statistical Process Control (SPC) used in manufacturing operations. Emphasis will be placed upon the concepts of central tendency, variation and normal distribution of data. The development, application, and interpretation of variable and attribute control charts will be the main focus of this course. Students will also learn to apply blueprint specifications, perform shop math calculations, understand geometric dimensions and tolerances, and correctly use different analog and digital measuring instruments, including various types of micrometers, calipers, scales, gauges (height, plug, thread, and surface roughness), and optical comparators.

#### **457-309**

##### **Metal Fabrication I**

**Credits: 2.00**

This course provides instruction in basic fabrication techniques, tool identification, tool usage, and layout principles while preparing the student with a good foundation in fabrication. Students will build a series of projects based upon the techniques and tooling introduced. This course emphasizes the use of hands-on application-based learning to create a good foundation of understanding for seamless transition into Metal Fabrication II.

#### **457-336**

##### **Metal Fabrication II**

**Credits: 3.00**

This course presents layout application, blueprint and weld symbol interpretation, welding, fabrication, equipment set ups, and operation skills to safely complete metal fabrications. Selection of fabrication equipment and its safe operation is emphasized. Tools and techniques used in metal fabrication are introduced and students practice their use. PREREQUISITES: Complete course 442-309 OR 457-309 - Metal Fabrication I AND complete course 442-322 - Welding/Shielded Metal Arc Welding OR 442-323 - Welding/Gas Tungsten Arc Welding AND complete courses 442-324 - Weld Printreading and Fabrication Procedures and 442-321. COREQUISITES: Complete course 804-370 - Mathematics I/Applied

#### **457-337**

##### **Metal Fabrication III**

**Credits: 3.00**

This course provides instruction in advanced fabrication techniques in fixture and jig building, advanced pattern/buck design and construction, and an opportunity for a capstone group project. Students will be responsible for making a fixture and/or jig based off of their design and then create multiple parts to ensure repeatability of the part. This course will be extensively hands-on and application-based. COREQUISITES: Complete course 804-370 - Mathematics I/Applied Complete course 457-336 - Metal Fabrication II

**458-301****CDL & Inspection Law and Logistics****Credits: 3.00**

In this course, students examine laws related to the commercial driver's license (CDL) and the operation of a commercial motor vehicle (CMV). Through simulation and hands-on learning experiences, students explore vehicle systems, inspect and operate a CMV safely, and investigate the operations of a tractor semi-trailer. By the completion of the course, students must obtain a CDL instruction permit.

**458-302****CDL License, Driving Skills, Safety****Credits: 4.00**

In this course, students practice driving skills in anticipation of obtaining a commercial driver's license (CDL). Students enhance their skills by driving in a variety of situations and environments they will encounter as a professional driver. They investigate topics related to trip planning, loading procedures, weight distribution techniques, and security issues. Upon completion of the course, students will be able to properly inspect and safely operate a commercial motor vehicle (CMV) in controlled settings. PREREQUISITES: Complete course 458-301 - CDL & Inspection Law and Logistics with a minimum grade of B-

**458-303****Continuous Improvement & Hazard Safety****Credits: 3.00**

In this course, students improve their operating skills required for the day-to-day demands of the career. Students examine the truck driver's role as a professional. Students apply transportation rules and regulations as they relate to safety, special rigs, and hazardous material. Students must obtain a commercial driver's license (CDL) to successfully complete the course. PREREQUISITES: Complete course 458-302 - CDL License, Driving Skills, Safety with a minimum grade of B-

**461-120****Small Power Equipment****Credits: 3.00**

Structure and theory of the two and four cycle engines. Troubleshooting, storage, maintenance, and repair of the small gas engine are included. Safety of the operator is stressed along with the use and study of operator's manuals for small power equipment.

**461-300****Four Cycle Engines****Credits: 3.00**

In this course, students will examine the structure and theory of four-cycle engines. Fuel systems, lubrication systems, ignition systems, and valve train operations will be explored. Upon completion of this course, students will be able to

disassemble, diagnose engine problems, and reassemble a four-cycle engine. COREQUISITES: Complete course 461-307 - Fundamental Shop Skills

**461-301**  
**Hydraulic Systems**  
**Credits: 3.00**

In this course, students will examine mobile hydraulic systems. Various hydraulic components, schematics, and terminology will be explored. Upon completion of the course, students will be able to maintain and diagnose various mobile hydraulic systems. PREREQUISITES: Complete course 461-307 - Fundamental Shop Skills with minimum grade of C

**461-302**  
**Inboard Engines**  
**Credits: 2.00**

In this course, students will examine inboard fuel systems, ignition systems, cooling systems, starting systems, and charging systems. Four-stroke marine engine operations will be investigated. Upon completion of the course, students will be able to repair and maintain four-stroke inboard engines. COREQUISITES: Complete courses 461-120 - Small Power Equipment and 461-307 - Fundamental Shop Skills

**461-303**  
**Light Motorcycle Service**  
**Credits: 3.00**

In this course, students will examine components and systems unique to motorcycles. Fuel, ignition, suspension, and power train systems will be investigated. Students will apply basic techniques and procedures of small engine service and perform regular maintenance and adjustments to motorcycles. Upon completion of this course, students will be able to perform preventative maintenance and diagnose problems unique to motorcycles. PREREQUISITES: Course 804-370 - Mathematics I/Applied

**461-304**  
**Outboard Engines**  
**Credits: 3.00**

In this course, students will examine fuel systems, ignition systems, manual and electric starting systems, and charging systems. Lower unit/propulsion systems will be explored. Students will investigate rigging and lifting. Upon completion of the course, students will be able to safely repair and maintain two-stroke and four stroke outboard engines. PREREQUISITES: Course 804-370 - Mathematics I/Applied minimum grade D COREQUISITES: Course 801-301 - Writing Principles and 801-302 - Speaking Principles

**461-305**  
**Power Transmission Systems**  
**Credits: 3.00**

In this course, students will explore the components of various power train systems. Clutches, sliding gear, and hydrostatic drives will be examined. Upon successful completion of the course, students will be able to apply power train design, operation, adjustment, and maintenance to motorcycle, marine, and outdoor power products. PREREQUISITES: Complete course 461-307 - Fundamental Shop Skills with a minimum grade of C

#### **461-306**

##### **Recreational Equipment Maintenance**

**Credits: 2.00**

In this course, students will examine components and systems unique to recreational equipment. Fuel, ignition, and suspension systems will be investigated. Trailer systems will be examined. Students will apply basic techniques and procedures of recreational equipment and perform regular maintenance and adjustments. Upon completion of this course, students will be able to perform preventative maintenance and diagnose problems unique to recreational equipment. COREQUISITES: Complete course 461-307 - Fundamental Shop Skills previously or concurrently

#### **461-307**

##### **Fundamental Shop Skills**

**Credits: 2.00**

In this course, students will investigate the safe use and proper care of common hand and power tools. General drilling, tapping, threading and precision measurement techniques will be presented. Students will operate forklifts safely. Upon successful completion of the course, students will receive forklift operators certification, Safety and Pollution Prevention (S/P2) certification, and be prepared to seek Starrett Measurement certification.'

#### **461-308**

##### **Two Cycle Engines**

**Credits: 2.00**

In this course, students will examine the structure and theory of two-cycle engines. Fuel systems, lubrication systems, and ignition systems will be explored. Upon completion of this course, students will be able to disassemble, diagnose engine problems, and reassemble a two-cycle engine. NC3 Torque certification will be awarded to students upon their successful completion of the course. COREQUISITES: Complete course 461-307 - Fundamental Shop Skills previously or concurrently

#### **462-101**

##### **Maintenance Machining**

**Credits: 3.00**

Students will learn the operation of machine tools necessary for industrial machine repair. The operation of a lathe, mill, drill press, and band saw will be incorporated in the manufacturing of repair parts and fabrications. Skills using precision measuring tools will also be advanced. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or TR COREQUISITES: Course 606-121 - Blueprint/Schematic Interpretation



**462-102****Preventative/Predictive Maintenance****Credits: 3.00**

The concepts of preventative and predictive maintenance will be delivered during this course. Preventative maintenance procedures will be developed and performed on complex systems by the students. Predictive technologies as thermal imaging and vibration analysis will be studied and performed. The concepts of Reliability Centered Maintenance and Total Planned Maintenance will also be included. COREQUISITES: Course 462-103 - Mechanical Power Transmission

**462-103****Mechanical Power Transmission****Credits: 3.00**

Students will learn bearing design and application, bearing failure and analysis, properties of lubrication and correct lubrication procedures, gear drives, belt drives, gear reduction units, and chain and shaft drives. Troubleshooting and maintenance of these types of power transmissions will be emphasized. PREREQUISITES: Course 628-109 - Mechanical Skills for Technicians

**462-104****Machine and Equipment Installation****Credits: 3.00**

Machine and Equipment Installation will cover the installation and setup of complex machinery and equipment. Precision machine leveling, alignment, laser alignment, and scraping fundamentals will be included in this course. PREREQUISITES: Course 606-121 - Blueprint/Schematic Interpretation

**462-105****Robotics/Material Handling Systems****Credits: 3.00**

Students will learn the intricacies of electromechanical material handling systems during this course. Conveyors and robots will be connected to a microprocessor and the appropriate feedback devices to make a complete operational material handling system. COREQUISITES: Course 620-104 - Electro Hydraulic/Mechanical Systems

**462-106****Industrial Mechanic Capstone Project****Credits: 5.00**

During this course, students working in a team environment will assemble and test a complex project from a print analysis stage to final testing. Once the system is operational, problems will be introduced to enhance the troubleshooting skills of the students. The concepts of project management will be included in this course. COREQUISITES: Courses 462-102 - Preventative/Predictive Maintenance and 462-105 - Robotics/Material Handling Systems

**462-503****Industrial Mechanic Fundamentals I****Credits: 1.00**

The application and safe operation of hand and power tools will be explored in this course. The care and use of precision measuring tools and their application will also be covered.

**462-504****Industrial Mechanic Fundamentals II****Credits: 1.00**

Manual machine operation will be explored in this course. Practical tasks and assignments will be performed on the drill press, lathe, and milling machine.

**469-301****Introduction to Gas Utility****Credits: 1.00**

This course introduces the individual to the common job tasks and the history of the gas utility industry. Topics covered to include; the gas distribution system, the characteristics of natural gas and propane, the history and application of Operator Qualifications in the gas utility industry and discussions on customer relation skills.

**469-302****Site Safety****Credits: 2.00**

This course covers pertinent OSHA safety training in the hazards to workers and the general public at active utility sites. Trench safety, including working in and around open trenches, soil identification, confined space identification and entry and performing DOT required traffic control and worker safety in construction zones.

**469-303****Intro to Equipment Operations****Credits: 3.00**

This class submerses the student into the job tasks required by a utility worker on an active site. The students will apply their knowledge of site safety and perform the various tasks required by the utility laborer, equipment operator and crew lead. Students will operate under supervision back hoes, trenchers, directional drills, piercing tools and air compressors in field activities. Proper backing, loading and unloading of trailered loads will also be covered. COREQUISITES: Course 469-302 - Site Safety

**469-304****Field Operations****Credits: 4.00**

This class is for those who have successfully completed 'Intro to Equipment Operation'. This Field activities class requires students to perform complex field tasks such as pipe location, pipe burial, installation and repair of main, branch or

service runs, trench compaction and utility covering while being supervised. Also included will be exercises in meter and regulator setting and leak testing piping integrity using both common hand and powered machinery. PREREQUISITES: Courses 469-302 - Site Safety and 469-303 - Intro to Equipment Operations with a minimum grade of C or TR

#### **469-305**

##### **CDL Prep for Utility Workers**

**Credits: 1.00**

This course introduces the student to the Federal and State of Wisconsin for obtaining a commercial driver license (CDL). The purpose of this course is to familiarize the student with the Wisconsin Commercial Driver's Manual. The class will cover all the sections of the Manual and through practice exams prepare the student to sit and take the appropriate knowledge test required to obtain a State of Wisconsin Commercial Driver Learner Permit. COREQUISITES: Course 801-301 - Writing Principles

#### **469-306**

##### **Steel Piping**

**Credits: 2.00**

The student will be able to identify the common components of a steel distribution and service system. The student will be able to assess weld joints for defects and joint integrity. The student will also be able to demonstrate knowledge of tapping and stopping of steel gas mains. Other topics include the ability to examine/identify corrosion on steel piping and address proper protection of steel from corrosion. The student will also be expected to cut, thread and install common piping and fitting from meter to the appliance.

#### **469-307**

##### **Plastic Piping**

**Credits: 4.00**

This course covers the history of polyethylene (PE) piping in the gas industry and the proper handling, storage and uses of PE pipe. The students will learn the fusion processes common to the industry such as butt, socket and the use of saddles. The students will also learn the techniques used in the electrofusion process. The students will learn to identify proper joining processes, construct various industry connections that can withstand pressure testing and when cut apart for inspection will pass various test standards. Mechanical stab fittings for pipe connection will also be covered.

#### **469-308**

##### **National Fuel Gas Code for Utility Work**

**Credits: 1.00**

This course covers the applicable sections of the current NFGC book that apply to the gas utility worker. Air for combustion, proper venting of Category I and IV appliances, proper use of the common venting, pipe sizing and combustion air tables are covered in detail through classroom examples and lab exercises.

#### **469-309**

##### **Gas Appliance Operation**

**Credits: 3.00**

This course covers the combustion process and sequence of operation of common residential appliances. Topics include water heaters, stoves, gas dryers and heating appliances. Additional coverage of the differences between Standard, Mid and High Efficiency furnaces and boilers are addressed. The purging, leak detection and relighting of appliances after gas interruption are also covered.

#### **469-310**

##### **Propane Operations**

**Credits: 1.00**

This course covers the history of the propane gas industry. The student will be able to identify propane storage containers and their DOT requirements. This class also covers propane combustion, line sizing and safety components unique to propane fired appliances.

#### **469-311**

##### **Equipment Operations Introduction**

**Credits: 2.00**

This class submerses the student into the job tasks required by a utility worker on an active site. The students will apply their knowledge of site safety and perform the various tasks required by the utility laborer, equipment-operator and crew lead. Students will operate under supervision back hoes, trenchers, directional drills, piercing tools and air compressors in field activities. Proper backing, loading and unloading of trailered loads will also be covered. COREQUISITES: Complete course 469-302 - Site Safety

#### **469-312**

##### **Field Operations**

**Credits: 3.00**

This field activities class requires students to perform complex field tasks such as pipe location; pipe burial; installation and repair of main, branch or service runs; trench compaction and utility covering while being supervised. Also included will be exercises in meter and regulator setting, leak testing and piping integrity using both common hand and powered machinery. PREREQUISITES: Complete courses 469-302 - Site Safety and 804-370 - Mathematics I/Applied

#### **469-313**

##### **Gas Utility Tool Fundamentals**

**Credits: 1.00**

This course immerses the student in basic tool usage designed around the gas utility trades. The learners will learn proper tool identification, proper names of these tools, and proper usage of these tools to ensure a safe and efficient work site.

#### **469-314**

##### **Plastic Piping**

**Credits: 3.00**

This course covers the history of polyethylene (PE) piping in the gas industry and the proper handling, storage and uses of PE pipe. The students will learn the fusion processes common to the industry: such as butt, socket and the use of saddles. The students will also learn the techniques used in the electrofusion process. The students will learn to identify proper joining processes, construct various industry connections that can withstand pressure testing and when cut apart for inspection will pass various test standards. Mechanical stab fittings for pipe connection will also be covered.

#### **475-300**

##### **Building Construction, Introduction to**

**Credits: 3.00**

This course presents the varieties, identification, characteristics and uses of wood in the construction industry. Material measurement is introduced. Common fasteners, nails, screws and staples and their appropriate use are examined. Principles of construction safety are discussed and safe operation of power tools is demonstrated.

#### **475-301**

##### **Building Construction, Fundamentals**

**Credits: 5.00**

This course introduces the operation of power woodworking machines, portable power equipment, and hand tools. Safety is emphasized. Fasteners common to the construction industry are presented and studied. Site layout and the use of the builder's level, builder's transit, and the laser transit are explored. Building foundations, concrete and formwork are examined.

#### **475-302**

##### **Residential Print Reading**

**Credits: 2.00**

This course presents the symbols, notations, abbreviations, and conventions that are the architectural language, and acquaints the student with the basic concepts on which residential construction drawings are read and interpreted.

COREQUISITES: Course 804-370 - Mathematics I/Applied

#### **475-303**

##### **Framing Techniques I**

**Credits: 3.00**

This course presents frame construction techniques related to floor systems and staircases.

#### **475-304**

##### **Commercial Print Reading**

**Credits: 1.00**

This course is designed to provide print reading experience in commercial construction. Students will review concepts regarding elements commonly found on prints of commercial structures. Included are types of construction, sitework, structural steel construction, reinforced concrete construction and finish construction. PREREQUISITES: Course 475-302 - Residential Print Reading COREQUISITES: Course 801-301 - Writing Principles

**475-305****Framing Techniques II****Credits: 3.00**

This course presents wall layout and framing, rough-opening calculations and layouts for windows and doors. The principles of roof framing including architectural drafting of plan and elevation views for roofs are examined. Principles of layout and cutting of all roof framing members for both equal and unequal pitch roofs are presented. The Wisconsin Uniform Dwelling Code is explored in relation to wall and roof construction. PREREQUISITES: Courses 475-303 - Framing Techniques I and 804-370 - Mathematics I/Applied

**475-306****Exterior Trim****Credits: 3.00**

This course presents the skills and theory related to roof cornice detail, roof coverings, windows, skylights, doors, and decks. Exterior finish methods are explored. PREREQUISITES: Course 475-301 - Building Construction, Fundamentals and 475-302 - Residential Print Reading

**475-307****Interior Trim****Credits: 5.00**

This course presents techniques for interior trim, mitering, coping and scribing. Door hanging is examined and performed. Newel post, balustrades and handrails are studied and installed. The Wisconsin Uniform Dwelling Code is explained and emphasized. Solid wood flooring is studied along with several ceiling tile applications. Installation of cabinets is examined and performed. PREREQUISITES: Course 475-301 - Building Construction, Fundamentals and 475-302 - Residential Print Reading

**482-110****Intro to Sustainable Energy****Credits: 2.00**

Introduction to Sustainable Energy will describe force, work, energy, and power as related to alternative-energy systems. The fundamental operation of the electric power grid is described. The focus of this course is on small business and residential applications of distributed renewable-energy electrical-generation systems like small wind turbines, photovoltaic systems, and fuel cells. This course will be tied to the Alternative Energy Hybrid Systems Integrator Level I Certification examination offered by the Electronics Technicians Association, International.

**482-111****Sustainable Energy-Generation of Elec****Credits: 2.00**

Sustainable Energy: The Generation of Electricity will describe the operation of photovoltaic (PV) systems comprised of solar modules, batteries, battery chargers, and inverters to produce power-grid-quality ac voltage. Wind turbines are also studied including generators, alternators, rectification, inverters, and resistive loading during periods of light loading.

Fuel cell characteristics, control and monitoring are also explored. The integration of these three technologies is also investigated. This course will be tied to the Alternative Energy Hybrid Systems Integrator Level I Certification examination offered by the Electronics Technicians Association, International. PREREQUISITES: Course 482-110 - Intro to Sustainable Energy

#### **482-112**

##### **Sustainable Energy-Capstone Design Proj**

**Credits: 3.00**

The Sustainable Energy: Capstone Design Project course will tie together the topics covered in the 'Introduction to Sustainable Energy' course and the 'Sustainable Energy: The Generation of Electricity' course through the development of the design and implementation of a sustainable energy project. PREREQUISITES: Course 482-110 - Intro to Sustainable Energy

#### **483-178**

##### **Geological Formations for Drillers**

**Credits: 3.00**

This course introduces the student to the complex field of geology as it relates to borehole construction. The types of consolidated and unconsolidated formations, the regional occurrence, the most efficient drilling process for each as well as basic rock identification and sample classification for logging purposes are covered. Sources of possible contamination and the protection of subsurface groundwater from the drilling process or surface contaminants are covered.

#### **483-180**

##### **Rig Transport, Set-Up and Safety**

**Credits: 2.00**

This course covers the safety and regulatory issues regarding the transportation and commissioning of standard industry drilling/boring rigs for GeoExchange borehole construction. DOT issues concerning weight, trailering, CDL licensure etc. are covered. Site safety to minimize environmental impact of rig, drilled spoils and personnel protection from overhead and underground hazards are also covered.

#### **487-100**

##### **Introduction Unmanned Aircraft Systems**

**Credits: 2.00**

This class provides students with the educational knowledge for federal, state, and local regulations regarding the operations of Unmanned Aircraft Systems (UAS). This class provides the educational background pertaining towards passing the FAA Part 17 remote pilot written certification. In addition to the written certification, this class provides students with direct hands on experience with documentation and operational control of drones. This provides the experience operational training needed towards passing Gateway's UAS Flight Certification.

#### **487-101**

##### **Drone Operations and Mapping**

**Credits: 2.00**

This course prepares students for the remote pilot license exam required by the FAA for any 'non-hobby or non-recreational' use of small Unmanned Aircraft Systems, drones. This course also provides hands-on flying experience to develop drone piloting skills, and introduces how to create maps from drone aerial photos. PREREQUISITES: Course 487-100 - Introduction Unmanned Aircraft Systems

### **501-101**

#### **Medical Terminology**

**Credits: 3.00**

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms, with an emphasis on spelling, definition, and pronunciation. They are introduced to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

### **501-107**

#### **Digital Literacy for Healthcare**

**Credits: 2.00**

The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

### **502-301**

#### **Shampoo Treatments**

**Credits: 1.00**

Theory and practical training in shampooing, scalp massage, scalp and hair analysis, and procedures for treating scalp and hair conditions. Students apply knowledge and skills on customers in patron laboratory to complete competencies in subject areas.

### **502-308**

#### **Salon Service 5 Perming**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of basic perming and texture skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-309**

#### **Salon Service 6 Men's Haircutting**

**Credits: 1.00**



In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of men's haircutting skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-310**

#### **Salon Service 7 Hair Color**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hair color skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-311**

#### **Salon Service 10 Interpersonal Skills**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of interpersonal skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-312**

#### **Barber/Cosmetology/Introduction to**

**Credits: 1.00**

This course provides knowledge in the general subjects pertaining to barber/cosmetology, including: bacteriology, sanitation, anatomy and physiology, Wisconsin laws, basic chemistry, and electricity.

### **502-320**

#### **Basic Manicuring**

**Credits: 1.00**

Students will receive theory and practice training in basic and advanced manicuring, pedicuring, and nail art procedures and techniques.

### **502-324**

#### **Barber/Cosmetology Industry**

**Credits: 2.00**

This course is designed as a complete program of business instruction for the barber/cosmetology student. It supplements the usual technical training required in career development.

**502-330**

**Barber/Cosmetology Additional Hours - 2 Credits**

**Credits: 2.00**

For students who meet Barber/Cosmetology training requirements in other states who wish to complete additional hours for Wisconsin licensure. Students are evaluated per Wisconsin requirements, complete training on patron lab floor and complete a mock state board.

**502-337**

**Manicure/Nail Technician I**

**Credits: 4.00**

Theory and practical training in basic and advanced manicuring, pedicuring and nail art procedures and techniques. Students apply knowledge and skills on clients in a simulated salon environment to complete the competencies in subject area. Students completing both Manicure/ Nail Technician courses are eligible to take a state board examination for a manicurist license.

**502-338**

**Manicure/Nail Technician II**

**Credits: 5.00**

Theory and practical training in basic and advanced artificial nail procedures and techniques. Students apply knowledge and skills on clients in a simulated salon environment to complete competencies in subject area.

**502-345**

**Basic Hair Color**

**Credits: 2.00**

Theory and practical training in haircoloring techniques, procedures, and formulations.

**502-347**

**Bleaching**

**Credits: 2.00**

Theory and practical training in bleaching techniques, procedures, and stages of lightening hair. PREREQUISITES: Course 502-345 - Basic Hair Color

**502-348**

**Chemical Straightening**

**Credits: 2.00**

Theory and practical training in chemical and related hair relaxing techniques and procedures. PREREQUISITES: Course 502-353 - Perm Techniques

**502-349**

**Facials**

**Credits: 2.00**

Theory and practice training in facial massage, skin care, basic and corrective makeup application, eyebrow arching, waxing, lash and brow tinting, and seasonal color analysis.

**502-350**

**Hair Design 1**

**Credits: 2.00**

Theory and practice training in artistic design, setting, and finishing techniques. Use of blow dryer, curling iron, and rollers.

**502-351**

**Hair Design 2**

**Credits: 2.00**

Theory and practical training in wigs and hair pieces, hair pressing, and long hair designs.

**502-352**

**Men's Haircutting**

**Credits: 2.00**

Theory and practice training in haircutting concept, basic form techniques, and mustache and beard trims. Use of clippers, scissors, and thinning shears is included. PREREQUISITES: Course 502-366 - Women's Haircutting

**502-353**

**Perm Techniques**

**Credits: 2.00**

Theory and practical training in basic and advanced permanent waving procedures.

**502-354**

**Salon Service 1 Facial Skin Care**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of facials and skin care. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347 - Bleaching, 502-348 - Chemical Straightening, 502-

349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-355**

#### **Salon Service 2 Nail Skills**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of basic nail service skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347 - Bleaching, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-356**

#### **Salon Service 3 Long Hair Design**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hairstyling and finishing techniques on long hair. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-361**

#### **Salon Service 8 Hairstyling**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hairstyling and finishing techniques. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

### **502-362**

#### **Salon Service 9 Chemical Relaxing**

**Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of chemical straightening and texture skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

**502-364****Salon Service 11 Bleaching****Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of bleaching and special effects skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347 - Bleaching 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

**502-365****Salon Service 12 Shampoo****Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of shampooing skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

**502-366****Women's Haircutting****Credits: 2.00**

Theory and practice training in hair cutting concepts and basic form techniques. Use of tools such as scissors, razors, and thinning shears.

**502-367****Salon Service 4 Women's Haircutting****Credits: 1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of women's haircutting skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347 - Bleaching 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

**502-370****Mock Board Skills****Credits: 2.00**

The Mock Board skills course is designed to prepare the student for the practical portion of the Wisconsin Cosmetology State Board exam. Students will practice Practical skills on mannequins to gain accuracy and speed in each service area required to successfully pass the exam. Students will complete a final practical exam for the Cosmetology program.

**502-371****Mock Board Theory****Credits: 1.00**

The Mock Board Theory course is designed to prepare the student for the written portion of the Wisconsin Cosmetology state board exam. Students will acquire study skills and practice test taking skills on computers to retain information necessary to successfully pass the exam. Students will complete a final written exam for the Cosmetology program.

**502-508****People Skills****Credits: 0.25**

This course provides the student with the fundamental skills needed to understand and communicate with people. Instruction will be mainly theoretical and will follow a lecture discussion format.

**502-509****Shaving/Male Facials****Credits: 0.50**

This course is designed to enable the student to acquire the theory requirements for male facials as mandated by the Wisconsin Statutes and Administrative Codes. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skill will be included in the lectures.

**502-518****Haircutting for Cosmetology Apprentice****Credits: 1.00**

This course is designed to enable the apprentice student with theory knowledge of haircutting as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-519****Hairstyling for Cosmetology Apprentice****Credits: 1.00**

This course is designed to enable the apprentice student with theory knowledge of hairstyling as mandated by the Wisconsin Statutes and Administrative Code for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-522****COS Professional Development****Credits: 0.50**

This course is designed to provide fundamental guidelines for lifelong professional development. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-523**

**Salon Ecology for Cosmetology App**

**Credits: 0.50**

This course is designed to give the student a foundation for safe infection control practices and procedures that will be used in all aspects of the students' education and future salon pursuits as mandated by the Department of Safety and Professional Services. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-524**

**Trichology for Cosmetology App**

**Credits: 0.50**

This course provides fundamental knowledge regarding the phases of hair growth, common hair disorders, causes and treatments of hair loss as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-525**

**Shampoo/Haircare for Cosmetology App**

**Credits: 0.50**

This course is designed to enable the apprentice student with theory knowledge of Shampoo/Hair Care, and the skills needed during draping, shampooing, and scalp massage procedures as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-543**

**Permanent Waving for Cosmetology App**

**Credits: 0.75**

This course is designed to enable the apprentice student with theory knowledge of Permanent Waving as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-544**

**Chemical Relaxing for Cosmetology App**

**Credits: 0.50**

This course is designed to enable the apprentice student with theory knowledge of chemical relaxing as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion and hands on performance format.

**502-545****Haircolor/Hair Lightening for Cos App****Credits: 1.00**

This course is designed to enable the apprentice student with theory knowledge of haircoloring/hair lightening as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-547****Facial/Makeup/Skin Disorders for Cos****Credits: 1.00**

This course is designed to enable the apprentice student with theory knowledge of facial, makeup, skin disorders and massage as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

**502-548****Manicure/Pedicure/Artif Nails for Cos****Credits: 1.00**

This course will provide the Apprentice student with knowledge of Manicuring/Pedicuring and artificial nails as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. The class will be taught by the following methods: lecture, discussion, demonstration and hands on performance.

**502-560****Barber/Cosmetology State Board Preparation****Credits: 0.25**

This course is designed to prepare the Apprentice Student for taking the State Board Exam. A practical mock exam will be given to acquaint the student with the procedures for testing. There will be a hands-on and a written test.

**502-561****Mock State Board Prep****Credits: 0.25**

This class is designed to help Barbers and Cosmetologists successfully pack for their state board. It is designed to leave the guessing at the door so you know up front what is needed for each portion of the practical test, and how to label and assemble tools and materials. COREQUISITES: Course 502-560 - Barber/Cosmetology State Board Preparation

**502-580****Tricology for Barbering****Credits: 0.50**



This course provides fundamental knowledge regarding the phases of hair growth, common hair disorders and causes and treatments for hair loss. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-581**

**Professional Development for Barbering**

**Credits: 0.25**

This course is designed to provide fundamental guidelines for lifelong professional development and personal development. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-582**

**Hair Styling for Barbering**

**Credits: 1.00**

This course will provide the Apprenticeship student with knowledge of Hairstyling set by the guideline of the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. The class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

**502-583**

**Shampoo for Barbering**

**Credits: 0.50**

This course provides the student with fundamental knowledge of hair care and the skills needed during draping, shampooing, and scalp massage procedures.

**502-584**

**Skin Related Disorders for Barbering**

**Credits: 0.25**

This course is designed to enable the Apprentice student to acquire the theory requirements for Skin/Related disorders as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture /discussion format. Both individual and group assignments will be required to reinforce instruction.

**502-585**

**Shaving/Male Facials for Barbering**

**Credits: 0.25**

This course is designed to enable apprentice students to acquire the theory requirements for shaving/male facial as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining board. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skill will be included with in the lectures.

**502-586**

**Hair Cutting for Barbering**

**Credits: 1.25**

This course is designed to enable the Apprentice student to acquire the theory requirements as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skills will be included within the lectures. Both individual and group assignments will be required to reinforce interaction.

**502-587**

**Barbering Codes**

**Credits: 0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin laws and Administrative Code that governs the state Barbers. Instruction will be theoretical and will follow a lecture/discussion format.

**502-588**

**Barbering Laws**

**Credits: 0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin Rules of the Department of Regulations and Licensing.

**502-589**

**Salon Ecology for Barbering**

**Credits: 0.50**

This course is designed to give the student a foundation for safe and infection control practices and procedures that will be used in all aspects of the student's education and future salon pursuits. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-590**

**Chemical Relaxing for Barbering**

**Credits: 0.25**

This course will provide the Apprentice student with knowledge of chemical relaxing theory set by barber examining Board and the Wisconsin Statutes and Administrative Codes. This class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

**502-592**

**Perming for Barbering**

**Credits: 1.00**

This course is designed to enable students to acquire knowledge of Permanent Waving. Instruction will be theoretical and will follow a lecture/discussion format, with demonstrations and hands-on performance.

**502-593****Hair Color for Barbering****Credits: 1.00**

This course is designed to enable the Apprentice Student to acquire the theory requirements for Hair Coloring as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture. Discussion format. Some demonstrations of Practical skills will be included with the lectures. Both individual and group assignments will be required.

**502-594****Bleaching for Barbering****Credits: 0.25**

This course is designed to enable the Apprentice Student to acquire the theory requirements for Bleaching as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture. Discussion format. Some demonstrations of Practical skills will be included with the lectures. Both individual and group assignments will be required.

**502-595****People Skills for Barbering****Credits: 0.50**

This course provides the students with fundamental skills needed to understand and communicate with people. Instruction will be mainly theoretical and will follow a lecture/discussion format.

**502-730****Client Services 1 Haircutting****Credits: 2.00**

This course introduces client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

**502-731****Client Service 2 Chemical Services****Credits: 2.00**

In this course students explore client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 -

Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

### **502-732**

#### **Client Service 3 Male Facial/Shaving**

**Credits: 2.00**

In this course students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

### **502-733**

#### **Client Service 4 Mock Board Skills**

**Credits: 2.00**

In this course students enhance speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab and begin preparation for Wisconsin State Barber licensing exam. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

### **502-734**

#### **Client Service 5 State Board Prep**

**Credits: 2.00**

This course provides students with opportunities to acquire barbering skills in preparation for entry-level, licensed employment. Emphasis is on providing services with speed and accuracy including: hair and scalp analysis, shampooing, haircutting, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab and complete preparation for Wisconsin State Barber licensing exam.

PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

### **502-735**

#### **Advanced Haircutting**

**Credits: 2.00**

This course is designed to provide skills relating to men's haircutting. Course competencies include demonstrating draping; Afro haircuts; flat top and crew cut haircuts; fade haircuts; and head shaving. Learners perform four basic haircutting techniques using shears, razor and clippers. Learner will perform a variety of shorthair combination cuts using finger-and ?shear, comb-over-shear, shear-over-comb and freehand techniques. Additional techniques include long-layered haircut techniques; uniform layer haircut techniques; combination cut techniques; short taper cut using finger and

shear techniques; short taper cut using shear-over-comb techniques; taper cut using clipper-over-comb techniques; and haircutting for tightly curled hair. PREREQUISITES: Course 502-738 - Basic Haircutting

### **502-736**

#### **Barber Industry**

**Credits: 2.00**

This course guides the barber on a career path that includes skills related to career strategies and the job search, the basics of managing a successful establishment, developing a marketing plan, and the responsibilities of adhering to the Wisconsin Statutes and Administrative Code. This course also provides an overview of the profession of barbering, professional image, safety and decontamination in the barbershop. Course competencies include examining the importance of barbering organizations and the Department of Safety and Professional Services; comparing professional ethics and personal ethics; developing short term and long term goals; reviewing basic first aid, safety and decontamination principles for infection control; introducing current state statutes and rules as they apply to barber safety and sanitation; and learning decontamination procedures for tools, equipment and surfaces.

### **502-738**

#### **Basic Haircutting**

**Credits: 2.00**

This course will provide students with knowledge of the art and science of haircutting. Students will identify principal tools and implements, apply haircutting terminology, recognize facial shapes and anatomical features, and learn techniques to create a variety of haircutting designs. Students will apply safety and sanitation procedures adhering to the Wisconsin Statutes and Administrative codes. This course also introduces a combination of haircutting techniques and tools. Learners perform four basic haircutting techniques using shears, razor and clippers. Learner will perform a variety of shorthair combination cuts using finger-and ?shear, comb-over-shear, shear-over-comb and freehand techniques.

### **502-739**

#### **Chemical Texturing**

**Credits: 2.00**

This course will provide students to acquire knowledge of permanent waving. Course competencies include performing hair and scalp analysis; follow safety and sanitation procedures; explaining the physical and chemical actions that take place during chemical texture services; perform the basic perm wrap, curvature wrap, spiral wrap, bricklay wrap, and double-tool/piggy back wrap; hair relaxing applications and procedures, and reformation curl/chemical blow-out services. This class includes the following instructional methods: lecture, discussion, demonstration, and hands-on performance.

### **502-740**

#### **Hair Color**

**Credits: 2.00**

Students study the color wheel and the theory behind the 'Law of Color.' Students mix and apply temporary, semi-permanent, demi-permanent and permanent colors; Students identify the chemicals used in hair coloring services. Students practice client consultations, analysis and follow safety and sanitation procedures. Students learn procedures related to lightening techniques. They identify the products used to create and maintain these types of services. Students learn the chemistry to lightening products. They learn cap, foiling and corrective color procedures.

**502-741****Hairstyling****Credits: 2.00**

This course emphasizes wet and dry hairstyling and includes hair analysis, shampooing, conditioning, reconditioning, scalp and hair treatments, and blow drying. Course competencies include analyzing the condition of a client's hair; personalizing scalp and hair treatments based on client needs; completing shampoo services; completing hair conditioning treatments; create blow-dry styles; and braid hair according to client needs. This course also emphasizes fingerwaves, pincurls, roller setting, thermal styling, and hair replacement techniques. Content also includes applying basic techniques and terminology used in hairstyling; creating fingerwaves; arranging hair using pincurls; performing roller sets; demonstrating thermal styling; and demonstrating hair replacement techniques.

**502-742****Barbering, Intro to****Credits: 1.00**

Students will study microbiology, electricity, anatomy, physiology and chemistry, along with properties and disorders of the skin and scalp as these apply to barbering. Course competencies include reviewing the human systems important to barbering, diseases, and conditions; learning about bacteria; categorizing chemicals and their use in the barbering establishment; verifying diseases and disorders of the hair and scalp; and examining common electrical devices used in barbering establishments. This course also introduces current state statutes and rules as they apply to barber safety and sanitation; and learning decontamination procedures for tools, equipment and surfaces.

**502-743****Shaving****Credits: 2.00**

Students will apply safety and sanitation, facial physiology, and techniques to create a variety of facial hair designs and complete facial hair removal. Course competencies include proper infection control procedures and client safety; draping clients for facial hair services; using facial hair service tools; analyzing skin types and conditions; adapting facial hair designs for individual facial features and physiology; completing facial hair designs; and completing facial hair removal. In this course the student will analyze the skin for diseases and disorders. The learner will identify facial muscles and nerves and explain the benefits of facial massage and treatments. Students will demonstrate a male facial using a variety of products and equipment based on skin analysis and complete male facials correctly.

**503-101****Firefighting Concepts I, Advanced****Credits: 4.00**

This course introduces students to advanced firefighting principles covering fire behavior, risk management, teamwork, leadership, and a systems approach to initial firefighting tactics at fires. All of the practical portions of this course are conducted in a performance-based, training in context manner to assure that students develop and master a principled, response methodology for all four positions on an engine company. Building construction, forcible entry, and basic driver operator skills are also covered in this course. 'Nothing showing' investigations, outside fire attack and transitional positive pressure attack tactics are covered along with problem-solving for each tactic.

**503-102****Firefighting Concepts II, Advanced****Credits: 4.00**

This course introduces students to advanced firefighting principles. All of the practical portions of this course are conducted in a performance-based, training in context manner to assure that students develop and master a principled, response methodology for all four positions on an engine company. Building construction, forcible entry, and basic driver operator skills are also covered in this course. Transitional positive pressure attack above/below, vertical ventilation and 3 person staffed apparatus crew tactics are covered along with problem-solving for each tactic. PREREQUISITES: Course 503-101 - Firefighting Concepts I, Advanced with a minimum grade of C or TR

**503-103****Fire Medic Health & Wellness I****Credits: 1.00**

This course introduces students to fire service health and wellness issues, firefighter injury and death statistics along with risk management strategies. Students begin their study and application of life-long nutrition and fitness habits. Students begin preparations for the candidate Physical Ability Test (CPAT).

**503-104****Fire Medic Health & Wellness II****Credits: 1.00**

Students continue to study fire service health and wellness issues and risk management strategies. Students build on their life-long nutrition and fitness habits. Students continue preparations for the Candidate Physical Ability Test (CPAT). PREREQUISITES: Course 503-103 - Fire Medic Health & Wellness I with a minimum grade of C or TR

**503-106****Firefighting Principles II****Credits: 3.00**

This course is structured for competency-based instruction meeting the requirements of Firefighter Level II. It includes classroom and practical training sessions and meets the objectives of the Wisconsin's Firefighter II certification course. Hazardous Materials Operations is included in this course. Upon completion, students are encouraged to take the certification exam for Firefighter II, State of Wisconsin. PREREQUISITES: Course 503-142 - Firefighting Principles I or 503-720

**503-110****Fire Safety Communications****Credits: 3.00**

Students practice communication techniques needed to present fire safety messages to groups with special needs. How to identify and address unique concerns of communities and groups are outlined and practiced by the class as part of assignments and exercises.

**503-117****Health and Wellness for Firefighters****Credits: 3.00**

Students gain an overview of the physical, emotional, intellectual, and social dimensions of health and sustained wellness. They apply physical training techniques developed for the specific occupational demands of the Fire Service. Students will prepare for the Fire Service Candidate Physical Ability Test (CPAT), which is designed to help fire departments measure the physical ability of candidates to perform routine fire fighting tasks.

**503-120****Fire Science Student Internship****Credits: 2.00**

This course allows students to actively participate as a 'working' member of a fire department. Students work the 24-hour shift schedule at a local fire department (excluding class times) and perform the same duties as the firefighters. Evaluation is determined by fire department officials and the course instructor. Instructor approval required to establish class schedule. PREREQUISITES: Course 503-142 - Firefighting Principles I

**503-127****Fire Service Changing Technologies****Credits: 2.00**

This course concentrates on the identification and application of the ever-changing advancement in technology and its impact on the fire service. Students will investigate and use applications and equipment that are reflective of the most recent advancements in fire service technology including; computerized hardware, software, digital media and fire department equipment.

**503-130****Firefighter Health & Wellness****Credits: 2.00**

In this course, students examine fire service health and wellness issues. Through an examination of how, when, where, and why firefighters are injured and killed, students identify risk management strategies. Students develop a plan for personal health and fitness and prepare for the Candidate Physical Ability Test (CPAT). Upon completion of the course, students will be able to identify specific processes, methods, and systems that reduce firefighter injuries and deaths, and they will be able to relate specific behaviors that support personal health and wellness.

**503-139****Principles of Emergency Services****Credits: 3.00**

This course provides an overview of: fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; and fire service nomenclature. This course is equivalent to 503-139 at other WTCS schools.



**503-142****Firefighting Principles I****Credits: 4.00**

This course includes classroom and practical training sessions on the basic fundamentals needed by entry-level firefighters and meets the objectives of the Wisconsin's Firefighter I certification course. Practical training is a major part of the course. Upon completion, students are encouraged to take the certification exam for Firefighter I, State of Wisconsin. This course is equivalent to 503-142 at other WTCS schools.

**503-143****Building Construction****Credits: 3.00**

A survey of building classifications and types discussing structural elements and weaknesses of each type. Emphasizing the additional damage done by fire and how fire hastens ultimate building collapse. This course is equivalent to 503-143 at other WTCS schools.

**503-147****Fire Protection Systems****Credits: 4.00**

This course provides information relating to the features of design and operation of fire detection and suppression systems.

**503-151****Fire Prevention****Credits: 4.00**

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, and identification and correction of fire hazards. It meets all requirements for Fire Inspector I certification with the state of Wisconsin.

**503-152****Hazardous Materials****Credits: 4.00**

This course examines characteristics relating to hazardous materials, including problems of recognition and mitigation. It prepares students to the Hazardous Material Operations and Technician levels. PREREQUISITES: Course 503-142 - Firefighting Principles I

**503-155****Fire Protection Hydraulics****Credits: 4.00**

This course provides a foundation of knowledge in order to understand the principles of the use of water in fire protection. It meets all of the requirements for Driver Operator-Pumper certification with the state of Wisconsin.

**PREREQUISITES:** Course 503-142 - Firefighting Principles I

### **503-156**

#### **Strategies, Tactics & Incident Mgmt**

**Credits: 4.00**

This course provides an in-depth analysis of the principles of emergency response through utilization of an incident management system and prepares students to pursue current national ICS training requirements. **PREREQUISITES:** Courses 503-139 - Principles of Emergency Services, 503-142 - Firefighting Principles I, and 503-143 - Building Construction

### **503-157**

#### **Fire Investigation**

**Credits: 3.00**

This course provides learners with the fundamentals and technical knowledge needed for proper fire scene investigations. **PREREQUISITES:** Courses 503-142 - Firefighting Principles I and 503-143 - Building Construction

### **503-192**

#### **Principles of Em Serv Safety & Survival**

**Credits: 3.00**

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

### **504-117**

#### **Police Administration**

**Credits: 3.00**

Provides an understanding of contemporary police principles and a detailed study of accepted administrative methods. Management problems acquaint the student with the why of methodology issues.

### **504-124**

#### **Forensics Science**

**Credits: 3.00**

This course exposes students to the forensic methods commonly employed in the examination of physical evidence by a forensic scientist used for identification or comparison in civil or criminal crime scene investigation and legal proceedings. The various techniques and procedures used in forensic science investigation and the admissibility standards established by state and federal courts are examined. This survey course is not designed to train individuals in the highly technical field of forensic science research, which requires extensive education in biology, chemistry, and physics. The course serves to familiarize those individuals majoring in criminal justice or related fields with the methods and techniques currently employed by forensic scientists so that students have a working knowledge and understanding

of the technical world of forensic science. PREREQUISITES: Course 504-900 - Criminal Justice, Intro to with a minimum grade of C or TR

### **504-127**

#### **Spanish for Law Enforcement**

**Credits: 3.00**

In this course, students demonstrate vocabulary and language structures to communicate at a basic level in a law enforcement context. Students develop a strong cultural component designed to foster effective communication, trust, mutual respect, and cultural awareness. Upon completion, the students will be able to effectively meet the social, linguistic, and cultural needs of the Hispanic community they serve.

### **504-141**

#### **Interviews/ Interrogations/ Confessions**

**Credits: 3.00**

Topics include purposes and objectives of a proper interview, mechanics of interviews, interrogations and confessions; importance of the fundamentals of report writing, methods and procedures for interviews and the securing of confessions in accordance with the rights of a citizen under the U.S. Constitution.

### **504-148**

#### **Rules of Evidence**

**Credits: 3.00**

Emphasizes rules of admissibility of evidence in court trials involving various kinds and degrees of evidence to assist the police officer in proper performance of investigative duties. PREREQUISITES: Course 801-136 - English Composition 1

### **504-152**

#### **Police Science Internship**

**Credits: 3.00**

The student will work in the environment of a police department or related agency. The student will experience the profession first-hand.

### **504-167**

#### **Phys Fitness for Law Enforcement**

**Credits: 3.00**

This course is designed to introduce students to physical conditioning, aerobic capacity and wellness training as it relates to local and nationwide Law Enforcement entrance examinations. This course will further assist students to understand the need for a Law Enforcement Officer to maintain their physical conditioning, and how an officer needs to perform the basic physical skills and tasks required in the field.

**504-173**  
**Cyber Crime**  
**Credits: 3.00**

Study various criminal investigation techniques related to computer and internet related crime (theft, sex crimes, white collar crime and others). Focus on data recovery and digital forensic techniques utilized by modern law enforcement agencies. Demonstrate courtroom testimony skills related to cyber crimes, and participate in evidence recovery.

**504-174**  
**Security, Intro to**  
**Credits: 3.00**

Discuss historical, philosophical, legal and future trends of security. Define roles of the security professional in modern society. Study public/private security operations, and management concepts focusing on career preparation and opportunities in the field. Examine security challenges of internal theft, embezzlement, drugs and violence in the workplace.

**504-175**  
**Terrorism/Homeland Security**  
**Credits: 3.00**

Examine the history and current trends of terrorism. Discuss governmental responses and the global effect of international terrorism. Define domestic terrorism, active insurgency, and discuss the phenomenon of politically inspired violence. Evaluate statistical and analytical data of individual and state level of terrorism. Study governmental agencies assigned to the Department of Homeland Security.

**504-176**  
**Spanish for Law Enforcement**  
**Credits: 3.00**

Spanish for Law Enforcement is designed to enable Students who know little or no Spanish to communicate effectively with the Spanish speaking individuals. This course has been tailored for Law Enforcement students and professionals, and will teach students basic conversational Spanish to apply in the field. This course covers basic Field Interviews, Traffic Investigations, Medical Emergencies, Identification of subjects and preliminary investigations.

**504-300**  
**Policing in America**  
**Credits: 1.00**

Students will learn the rules of the academy, how the various elements of the criminal justice system relate, the role of law enforcement officers in a democracy, explore belief systems, social pressures, moral problems, decision-making and the consequences of decisions, resources available in their communities to assist law enforcement in their contacts with the community, explore issues involved in policing in a diverse society, identify strategies for working effectively with the community, the requirements under Wisconsin law for law enforcement agency policies and procedures, and why written policies and procedures are important to them in performing their job tasks properly.

**504-301****Relational Skills****Credits: 3.00**

Students will learn how to write a wide variety of law enforcement reports, the role of communication in law enforcement, to apply professional communication skills appropriately, proper law enforcement response to persons with possible mental disorders, alcohol or drug problems, dementia disorders, and/or developmental disabilities, the Wisconsin law for conducting emergency detentions and placements, legal requirements and guidelines for implementing these procedures, basics of effective court testimony, the role of problem solving, and evolving police strategies for effective law enforcement and community relationships, and the use of problem-oriented policing.

**504-302****Patrol Procedures****Credits: 4.00**

Students will become familiar with Wisconsin traffic laws, including how to properly complete Wisconsin Uniform Traffic Citations and how to direct and control traffic effectively. They will learn to manage a complex scene, to investigate traffic accidents, take appropriate enforcement actions, the legal context for law enforcement driving, including basic patrol operation, emergency vehicle response, pursuit driving, the legal bases for making vehicle contacts, how to conduct a threat assessment to help determine the appropriate type of contact, how to conduct different types of vehicle contacts, recognize and interpret evidence of a and to OMOVVI violation, and how to administer and interpret standardized field sobriety tests.

**504-303****Investigations****Credits: 2.00**

Students will learn techniques and procedures necessary to interview or interrogate a variety of individuals, how to recognize, process, and preserve physical evidence; law enforcement's response to a victim of crime including the dynamics of victimization, victims' rights, and enforcement's professional responsibilities to victims. Students will also learn the statutory elements of 'sensitive crimes' and the characteristics, effects, and investigative strategies unique to them.

**504-304****The Legal Context****Credits: 2.00**

Students will learn the legal bases for law enforcement action such as arrest, use of force, and search and seizure, as well as the limits on law enforcement activity, the classifications of crimes and other violations into felonies, misdemeanors, and ordinance violations, and the elements of crimes listed in the criminal code, and the laws and procedures that effect juveniles, including those related to taking a juvenile into custody.

**504-305****Tactical Skills****Credits: 3.00**

Students will learn the basis for and limits to use of force by Wisconsin Officers, specific techniques for intervention included in the Wisconsin System of Defense and Arrest Tactics, and to care for and maintain their primary duty handguns. They will learn to shoot quickly and accurately, including under low-light conditions, while moving and from behind cover, and necessary weapon-handling skills, the basics of room clearing, tactical movement, use of cover and concealment, and their application to emergency situations.

#### **504-306**

##### **Overview of Criminal Justice**

**Credits: 1.00**

Through classroom lecture and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following WI Department of Justice 720 Academy Phase I curriculum framework topics; Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy and Professional Communication.

#### **504-307**

##### **Overview of Investigation**

**Credits: 2.00**

Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Constitutional Law I, Crimes I, Interviews, and Report Writing.

#### **504-308**

##### **Overview of Patrol Response**

**Credits: 2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase I topics: Critical Thinking and Decision Making, Basic Response (RESPOND), Radio Procedures, Introduction to TraCS, Traffic Law Enforcement, and First Aid/CPR/AED. This course will include the WI DOJ 720 Academy Integration Exercises.

#### **504-309**

##### **Overview of Tactics**

**Credits: 1.00**

Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics; Fundamentals of Firearms, Vehicle Contacts I, Officer Wellness, and DAAT. The DOJ Phase I Written Examination will be administered in this course.

#### **504-310**

##### **Princ. of Emergency Vehicle Response**

**Credits: 2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy Phase II topics: Emergency Vehicle Operation and Control (EVOC) and Vehicle Contacts II.

### **504-311**

#### **Principles of Investigations**

**Credits: 2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following phase II topics of the WI Department of Justice 720 Academy curriculum Framework; Constitutional Law II, Crimes II, Domestics, and Report Writing.

### **504-312**

#### **Principles of Patrol Response**

**Credits: 2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase II topics: Professional Communication Skills II, Incident Command Systems and NIMS, Hazardous Materials and WMD, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care.

### **504-313**

#### **Principles of Tactics**

**Credits: 3.00**

Through classroom lecture and on-campus lab students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks; DAAT and Firearms II. The Phase II Written Examination will be administered during this course

### **504-314**

#### **Application of Investigations**

**Credits: 2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the Department of Justice 720 Academy curriculum framework; Ethics II; Moral Reasoning and Professional Responsibility; Cultural Competence II; Fair and Impartial Policing; Victims, Sexual Assault; Child Maltreatment; Interrogations; Testifying in Court and Crimes III.

### **504-315**

#### **Application of Traffic Response**

**Credits: 2.00**

Through classroom lecture, and on campus lab, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum Framework: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations and Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI),

Standardized Field Sobriety Tests (SFST), and Report Writing. A Phase II Written Examination will also be administered in this course.

#### **504-316**

##### **Health and Fitness**

**Credits: 1.00**

Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements.

#### **504-317**

##### **L.E. Academy Scenario Week**

**Credits: 1.00**

This course will consist of one week of practical scenarios demonstrating the student's proper use of force and proper use scenarios will be those authorized by Dept. of Justice for use in police recruit training

#### **504-318**

##### **Principles of Tactics**

**Credits: 5.00**

Through classroom lecture and on-campus lab and integration exercises, students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks including: Professional Communication Skills II, DAAT, Firearms II, Tactical Response, and a Tactical Emergency Casualty Care.

#### **504-319**

##### **Principles of Investigations**

**Credits: 1.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the WI Department of Justice 720 Academy curriculum framework: Constitutional Law II, Physical Evidence Collections, and Crisis Management. The Phase II Written Exam will be given in this course

#### **504-320**

##### **Application of Investigations**

**Credits: 1.00**

Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase III topics of the Department of Justice 720 Academy curriculum framework: Ethics II: Moral Reasoning and Professional Responsibility, Cultural Competence II: Fair and Impartial Policing, Interrogations, Testifying in Court, Crimes III and Physical Evidence.



**504-321****Application of Traffic Response****Credits: 3.00**

Through classroom lecture, and on-campus lab and WI Department of Justice integration exercises, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum framework: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations & Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI), Standardized Field Sobriety Tests (SFST), Hazardous Materials and Weapons of Mass Destruction (WMD), Incident Command Systems and NIMS, and Report Writing.

**504-322****Sensitive Crimes****Credits: 2.00**

Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase III topics: Domestic Violence, Juvenile Law, Victims, Sexual Assault, and Child Maltreatment. The DOJ Phase III Written Examination will be administered in this course.

**504-323****Physical Fitness****Credits: 1.00**

Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements and Officer Wellness Suicide Prevention.

**504-900****Criminal Justice, Intro to****Credits: 3.00**

In this course learners will distinguish between the roles and functions of courts with jurisdiction in Wisconsin; differentiate between the roles and functions of federal, state and local law enforcement agencies; apply professional principles as a law enforcement officer; determine modern police functions and policies from an historical perspective; identify the role of law enforcement officers in American society; utilize a decision-making model; identify the characteristics of a good decision maker; describe how professionalism, ethics, and moral standards relate to a law enforcement career; practice a code of behavior; incorporate ethical decision-making strategies; identify required law enforcement policies; defend the importance of written agency policies; and distinguish between 'ministerial' and 'discretionary' duties; describe how decisions are made; enhance an officer's critical thinking and police problem solving abilities; and apply principles of critical thinking, decision-making, and problem solving.

**504-901****Constitutional Law****Credits: 3.00**

In this course, learners will diagram the structure of the criminal justice system, identify situations where constitutional rules are applicable, identify situations where an officer may use reasonable suspicion to contact a subject, identify the

elements of a lawful arrest, identify search-related activities where the 4th amendment is not applicable, identify the requirements that pertain to search warrants, analyze situations where an officer may conduct a search without a warrant, compare the requirements for conducting routine searches with those for searching disabled persons and strip searches, identify the requirements of the laws governing confessions and statements, and analyze the various requirements that evidence must meet before it can be admitted in court. PREREQUISITES: Course 504-902 - Criminal Law COREQUISITES: Course 504-148 - Rules of Evidence

### **504-902**

#### **Criminal Law**

**Credits: 3.00**

In this course, learners will identify basic concepts of criminal law; analyze facts, circumstances, and situations and determine which crimes against persons have been committed; analyze facts, circumstances, and situations and determine which crimes against property have been committed; and analyze facts, circumstances, and situations and determine which crimes involving drugs, alcohol or other criminal activity have been committed.

### **504-903**

#### **Professional Communications**

**Credits: 3.00**

In this course, the learner will apply knowledge of the communication process, apply communication techniques, integrate verbal and physical intervention skills, develop strategies to obtain information in a variety of situations, differentiate between interview and interrogation, and analyze information for consideration of corroborative evidence.

### **504-904**

#### **Juvenile Law**

**Credits: 3.00**

In this course, the learner will describe the juvenile justice system, describe the handling of cases of children in need of protection or services, describe the handling of cases of juveniles in need of protection or services or alleged to be delinquent, identify constitutional law issues that are relevant to juveniles, analyze the role of law enforcement in responding to child maltreatment, explain the issues involved in investigating incidents of child victimization, intervene and apply appropriate investigative strategies, describe the roles of other agencies in child maltreatment cases, and recognize the unique investigative issues for missing children.

### **504-905**

#### **Report Writing**

**Credits: 3.00**

In this course, the learner will explain the context of report writing, take effective field notes, organize information in reports, write narratives, describe what information should be included in certain types of reports, complete various uniform citations and the paperwork accompanying arrests and other detentions, prepare for court, describe how to be an effective witness, and testify as a witness in court.

**504-906****Criminal Investigation Theory****Credits: 3.00**

In this course, the learner will describe the role evidence plays in criminal investigations and prosecutions; apply the steps for processing crime scenes; apply appropriate strategies to locate, handle, and package evidentiary items; document the crime scene; recognize the unique investigative issues for crimes against life; apply appropriate strategies to secure the scene, collect and preserve evidence, and investigate a death; recognize the dynamics of victimization; apply knowledge of the definitions and responsibilities for law enforcement; apply appropriate interview techniques with adult or child victims; analyze the role of law enforcement in responding to domestic abuse; intervene and apply appropriate investigative strategies; respond to an officer-involved domestic violence incident; analyze the role of law enforcement in responding to sexual abuse; demonstrate investigative techniques in a simulated sexual assault case; and identify other resources that can assist in sexual assault cases. PREREQUISITES: Courses 504-908 - Traffic Theory  
COREQUISITES: Course 504-148 - Rules of Evidence

**504-907****Community Policing Strategies****Credits: 3.00**

In this course, the learner will identify community resources available in your area, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention.

**504-908****Traffic Theory****Credits: 3.00**

In this course, the learner will enforce Wisconsin traffic laws, detect traffic violations, issue traffic citations, direct traffic, identify responsibilities of a first responding officer, manage the response to a scene, take necessary steps to enable effective follow-up as needed, conduct an initial investigation at a crash scene, identify the mechanics of measuring and documenting traffic crash scenes, complete the Wisconsin Motor Vehicle Accident Report, record the crash scene using photography, take appropriate enforcement action based on information gathered, and recognize and interpret indicators of impaired driving. COREQUISITES: Course 804-135 - Quantitative Reasoning

**508-101****Dental Health Safety****Credits: 1.00**

This course prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA standards, and safely manage hazardous materials. Students also take patient vital signs and

collect patient medical/dental histories. Students will be required to show proof of certification before beginning this course.

### **508-103**

#### **Dental Radiography**

**Credits: 2.00**

This course prepares Dental Assistant students to operate x-ray units and expose bitewing, periapical, extra oral, and occusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course, students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient.

### **508-113**

#### **Dental Materials**

**Credits: 2.00**

This course prepares Dental Assistant students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances.

### **508-120**

#### **Dental Office Management**

**Credits: 2.00**

This course prepares Dental Assistant students to manage telephones, appointments, recall systems, and inventory. Students also develop the skills needed to process accounts receivable and payable, collections, and third party reimbursements. PREREQUISITES: Course 508-307 - Dental Assistant Professionalism

### **508-302**

#### **Dental Chairside**

**Credits: 5.00**

This course prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations to and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventative dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology. This course is equivalent to 508-302 at other WTCS schools. COREQUISITES: Courses 508-101 - Dental Health Safety, 508-113 - Dental Materials, and 508-304 - Dental and General Anatomy

### **508-304**

#### **Dental and General Anatomy**

**Credits: 2.00**

This course prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision making and to professional communication with colleagues and patients. This course is equivalent to 508-304 at other WTCS schools.

### **508-306**

#### **Dental Assistant Clinicals**

**Credits: 3.00**

Students apply skills learned in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. This course emphasizes integration of core abilities and basic occupational skills.

### **508-307**

#### **Dental Assistant Professionalism**

**Credits: 1.00**

This course prepares Dental Assistant students for professional success in a dental practice or other dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within ethical guidelines and legal frameworks. In preparation for entering the workforce, students customize or develop their portfolios and lay out an ongoing professional development plan. This course is equivalent to 508-307 at other WTCS schools.

### **508-308**

#### **Dental Chairside - Advanced**

**Credits: 5.00**

This course prepares Dental Assistant students to adapt chairside skills to assisting with dental specialties as they are performed in general practice. It focuses on pediatric dentistry, orthodontics, oral maxillofacial surgery, endodontics, periodontics, and prosthodontics. Students will also develop the ability to assist with sealants, perform coronal polishing, and apply topical fluoride and topical anesthetics. This course is the equivalent to 508-308 at other WTCS schools.

PREREQUISITES: Course 508-302 - Dental Chairside

### **508-309**

#### **Dental Laboratory Procedure**

**Credits: 4.00**

This course prepares Dental Assistant students to produce alginate impressions and fabricate diagnostic models, oral appliances, temporary restorations, and custom trays. Students also polish oral appliances. This course is equivalent to 508-309 in other WTCS schools. PREREQUISITES: Course 508-113 - Dental Materials

### **508-310**

#### **Dental Radiography - Advanced**

**Credits: 1.00**

This course builds on principles and skills developed in Dental Radiography. Dental Assistant students expose full mouth series, extra-oral, and specialized radiographs on adult and child patients. Emphasis is placed on protection against x-ray hazards. Students will also process, mount, and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans to patients. This course is the equivalent of 508-310 at other WTCS schools. PREREQUISITES: Course 508-103 - Dental Radiography

### **508-311**

#### **Dental Assistant Clinical - Adv**

**Credits: 2.00**

Dental Assistant students apply skills developed in Dental Chairside - Advanced, Dental Lab Procedures, Dental Radiography - Advanced, and Dental Office Procedures in a clinical setting with patients that emphasizes integration of core abilities and basic and advanced occupational skills. This course is equivalent to 508-311 at other WTCS schools. PREREQUISITES: Complete course 508-306 - Dental Assistant Clinicals

### **509-301**

#### **Medical Assistant Administrative Procedures**

**Credits: 2.00**

This course introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical care staff, and keep an inventory of supplies. Students apply introductory medical coding skills and managed care terminology. COREQUISITES: Course 501-107 - Digital Literacy for Healthcare

### **509-302**

#### **Human Body in Health & Disease**

**Credits: 3.00**

This course focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases. COREQUISITES: Course 501-101 - Medical Terminology

### **509-303**

#### **Medical Assistant Lab Procedures 1**

**Credits: 2.00**

This course introduces Medical Assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform routine laboratory procedures commonly performed in the ambulatory care setting under the supervision of a physician. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology, and urinalysis testing. This course is equivalent to 509-303 at other WTCS schools. PREREQUISITES: Student must be accepted to program 31-509-1, Medical Assistant, in order to register for this course. COREQUISITES: Complete course 509-304 - Medical Assistant Clinical Procedures 1

**509-304****Medical Assistant Clinical Procedures 1****Credits: 4.00**

This course introduces Medical Assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills, including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory care setting. This course is equivalent to 509-304 at other WTCS schools. PREREQUISITES: Student must be accepted to program 31-509-1, Medical Assistant, in order to register for this course. COREQUISITES: Complete course 509-303 - Medical Assistant Lab Procedures 1

**509-305****Medical Assistant Lab Procedures 2****Credits: 2.00**

This course prepares students to perform laboratory procedures commonly performed by medical assistants in the ambulatory care setting under the supervision of a physician. Students perform phlebotomy, immunology, hematology, and chemistry laboratory procedures. PREREQUISITES: Complete 509-303 - Medical Assistant Lab Procedures 1  
COREQUISITES: Course 509-306 - Medical Assistant Clinical Procedures 2

**509-306****Medical Assistant Clinical Procedures 2****Credits: 3.00**

This course prepares students to perform patient care skills in a medical office setting. Students perform clinical procedures, including administering medications, assisting with minor surgery, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, and maintaining clinical equipment in an ambulatory care setting. PREREQUISITES: Courses 509-303 - Medical Assistant Lab Procedures 1 and 509-304 - Medical Assistant Clinical Procedures 1  
COREQUISITES: Course 509-305 - Medical Assistant Lab Procedures 2

**509-307****Medical Office Insurance and Finance****Credits: 2.00**

This course introduces students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance related duties. PREREQUISITES: Courses 501-107 - Digital Literacy for Healthcare and 509-302 - Human Body in Health & Disease with a minimum grade of C or TR

**509-308****Pharmacology for Allied Health Pharm for Allied Health****Credits: 2.00**

This course introduces students to classifying indications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems. PREREQUISITES: Course 509-302 - Human Body in Health & Disease with a minimum grade of C or TR

**509-309****Medical Law, Ethics, & Professionalism****Credits: 2.00**

This course prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues. COREQUISITES: Course 801-136 - English Composition 1 or 801-301 - Writing Principles

**509-310****Medical Assistant Practicum****Credits: 3.00**

This course requires students to integrate and apply knowledge and skills from all previous medical assistant courses in actual patient care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This AAMA required externship lasts between 160 hours (AAMA minimum) and 216 hours. COREQUISITES: Complete courses 509-305 - Medical Assistant Lab Procedures 2 509-306 - Medical Assistant Clinical Procedures 2 509-307 - Medical Office Insurance and Finance 509-308 - Pharmacology for Allied Health Pharm for Allied Health 509-309 - Medical Law, Ethics, & Professionalism

**510-107****RN Refresher I - Theory/Lab****Credits: 3.00**

This course will review and update the knowledge of the learner in application of the nursing process (assessment, analysis, planning, implementation, evaluation) in caring for clients with acute and chronic health alterations through the lifespan. Attention can be given to medical and surgical nursing care, mental health, pediatrics, obstetrics, and long term care. This course also provides a review of infection control principles, an update on pharmacology, discussion of professional communication practices, documenting and reporting health information, and issues including recent trends in nursing practice, supervision, delegation. The laboratory portion of the course will occur in the Nursing Skills Lab and focuses on review of both basic and advanced nursing skills, electronic health record documentation, technology and equipment updates. PREREQUISITES: Student must be accepted to 90-543-3 RN Refresher I to be eligible to register for this course.

**510-108****RN Refresher II - Clinical****Credits: 2.00**

This course is unique in that it can be matched to a health care setting similar to where the learner anticipates working-in a clinic, hospital, or long-term care facility. With the guidance and indirect supervision of an instructor, and side-by-side with an experienced RN preceptor, hands-on learning will review and update the knowledge and ability of the learner in clinical nursing practice. The course promotes clinical decision making, collaboration, delegation, and reflection. PREREQUISITES: Course 510-107 - RN Refresher I - Theory/Lab Student must be accepted to 90-543-4 RN Refresher II to be eligible to register for this course.



**510-138****The Electronic Health Record****Credits: 3.00**

In this course students will learn all aspects of the electronic health record including aspects such as security, HIPAA requirements, legalities, and interdisciplinary collaboration. Authentic practice and documentation in the EHR will be provided through the use of a virtual program which simulates the clinical environment. PREREQUISITES: Complete courses 806-177 - General Anatomy and Physiology and 806-179 - Anatomy and Physiology, Advanced with a minimum grade of C

**510-151****Nsg: Endocrine & Electrolytes Disorders****Credits: 1.00**

This course is designed to enhance the learning of nursing students in planning care for the client with disorders of the endocrine system, fluids, electrolytes, and acid-base balance. PREREQUISITES: Courses 543-105 - Nursing Health Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, 543-108 - Nursing: Introduction to Clinical Care Management

**510-153****Nsg: Pharmacology Applications****Credits: 1.00**

This course reviews the principles of pharmacology with emphasis on major drug classifications used to treat diseases. The pathophysiology approach will help the learner connect pharmacology and the nursing process to the medical/nursing treatment of a variety of clients. PREREQUISITES: Course 543-103 - Nursing Pharmacology

**510-154****Pathophysiology for Health Professions****Credits: 3.00**

This course prepares the learner to expand and reinforce knowledge as it relates to pathology across the lifespan. The course is designed to support the health care provider in understanding from a cellular level how functional and physiologic changes occur as a result of a disease. A comprehensive understanding of anatomy and physiology is addressed and promoted. Physiological alterations of focus will include: . Neoplasms . Congenital and genetic disorders . Diseases related to the child, adult and elderly . Neurologic, cardiovascular, respiratory, digestive, genitourinary, endocrine, musculoskeletal, skin and reproductive disorders Special emphasis is placed on promoting a climate where the learner is expected to synthesize and apply previous learned concepts to physiologic adaptations because of a defined pathology. PREREQUISITES: Course 806-177 - General Anatomy and Physiology

**510-155****Principles of Gerontological Nursing****Credits: 3.00**

This course is designed to prepare the nurse to care for the complexity of caring for the aged client and family. Content includes physiologic changes in aging, theories of aging, medications and laboratory values specific to the aging client, management of illnesses, diseases and conditions commonly seen in the aging population, and ethical and legal considerations.

### **510-159**

#### **Physical Assessment**

**Credits: 3.00**

In this course students will apply prior theoretical learning about performing a head-to-toe physical assessment to Digital Clinical Experiences a virtual world of patients with a variety of real world health needs. Upon completion of the course students are able to demonstrate and perfect their clinical reasoning skills as they interact with life-like patients; capable of responding to open-ended questions, listen to heart, lung, and bowels sounds with a virtual stethoscope, synthesize labs and assessment findings, and document. PREREQUISITES: Courses 806-177 - General Anatomy and Physiology and 806-179 - Anatomy and Physiology, Advanced with a minimum grade of C required

### **510-160**

#### **Transition: LPN to ADN**

**Credits: 1.00**

In this course, Licensed Practical Nurses (LPN) build on their existing knowledge while performing a variety of skills. Students perform nursing assessments, develop and apply a plan of care, research evidence-based practice, and apply theoretical principles using the human patient simulator. Upon completion of the course, students are ready to enroll in the third semester of the Associate Degree - Nursing (ADN) Program.

### **510-301**

#### **Health Unit Coordinator Procedures I**

**Credits: 3.00**

Health Unit Coordinator Procedures I is an introductory course to the HUC profession. The course will introduce the student to the environment, communication, and managing client information in healthcare.

### **510-302**

#### **Health Unit Coordinator Procedures II**

**Credits: 3.00**

Health Unit Coordinator Procedures II is a more advanced course that introduces the student to the order process, transcription of medication and infusion orders, laboratory and diagnostic orders, interdisciplinary treatment orders, and specialty unit orders. PREREQUISITES: Course 510-301 - Health Unit Coordinator Procedures I

### **510-303**

#### **Health Unit Coordinator Clinical**

**Credits: 3.00**

This course provides opportunities for learners to apply the concepts and skills of a Health Unit Coordinator in a clinical setting. COREQUISITES: Course 510-302 - Health Unit Coordinator Procedures II

### **510-325**

#### **Certified Medication Assistant**

**Credits: 3.00**

Contracted course only. Contact Business & Workforce Solutions. Medication Assistants are Certified Nursing Assistants who have completed an approved training program and have received additional certification to administer medications and perform nonsterile treatments in a Skilled Nursing Facility in Wisconsin, following the policies and procedures of their organization. They perform the delegated function of medication administration under the supervision of a registered nurse. Routes of administration include oral, topical, eye, ear, and nose drops; vaginal; rectal; transdermal; and oral inhalers. PREREQUISITES: Course 543-300 - Nursing Assistant with a minimum grade of C

### **512-125**

#### **Surgical Technology, Intro to**

**Credits: 4.00**

Provides the foundational knowledge of the occupational environment. Principles of sterilization and disinfection are learned. Surgical instruments are introduced. Preoperative patient care concepts are simulated. Lab practice is included. PREREQUISITES: Course 806-177 - General Anatomy and Physiology COREQUISITES: Course 501-101 - Medical Terminology

### **512-126**

#### **Surgical Tech Fundamentals 1**

**Credits: 4.00**

Focuses on preparing the patient and operating room for surgery. Principles of sterile technique are emphasized as the student moves into the scrub role. Lab practice is included. PREREQUISITES: Course 806-177 - General Anatomy and Physiology COREQUISITES: Courses 501-101 - Medical Terminology and 512-125 - Surgical Technology, Intro to

### **512-127**

#### **Exploring Surgical Issues**

**Credits: 2.00**

Explores a variety of issues related to surgical technology. Emphasis is placed on becoming a professional member of the surgical team. COREQUISITES: Courses 512-125 - Surgical Technology, Intro to and 512-126 - Surgical Tech Fundamentals 1

### **512-128**

#### **Surgical Tech Fundamentals 2**

**Credits: 4.00**

Focuses on enhancing surgical technology skills while functioning as a sterile team member. Lab and/or clinical practice is included. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to, 512-126 - Surgical Tech Fundamentals 1,

512-127 - Exploring Surgical Issues, and 501-101 - Medical Terminology COREQUISITES: Courses 806-179 - Anatomy and Physiology, Advanced, 806-197 - Microbiology, and 512-129 - Surgical Pharmacology

### **512-129**

#### **Surgical Pharmacology**

**Credits: 2.00**

Basic study of drug classifications, care, and handling of drugs and solutions, application of mathematical principles in dosage calculations, terminology related to pharmacology, anesthesia, and drugs used in surgery. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to and 512-126 - Surgical Tech Fundamentals 1

### **512-130**

#### **Surgical Skills Application**

**Credits: 2.00**

Provides a transition from the academic to the clinical setting. Learners integrate the surgical technologist skills as they apply to various surgical procedures. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to, 512-126 - Surgical Tech Fundamentals 1, 512-128 - Surgical Tech Fundamentals 2, and 512-127 - Exploring Surgical Issues with a minimum grade of C or TR COREQUISITES: Course 512-129 - Surgical Pharmacology

### **512-131**

#### **Surgical Interventions 1**

**Credits: 4.00**

Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology, diagnostic interventions, health sciences, and surgical techniques for a variety of procedures. PREREQUISITES: Courses 512-128 - Surgical Tech Fundamentals 2 and 512-130 - Surgical Skills Application and 801-136 - English Composition 1

### **512-132**

#### **Surgical Technology Clinical 1**

**Credits: 3.00**

Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. PREREQUISITES: Courses 512-129 - Surgical Pharmacology, 512-128 - Surgical Tech Fundamentals 2, and 512-130 - Surgical Skills Application with a minimum grade of C or TR COREQUISITES: Course 512-131 - Surgical Interventions 1

### **512-133**

#### **Surgical Technology Clinical 2**

**Credits: 3.00**

Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. PREREQUISITES: Courses 512-129 - Surgical Pharmacology, 512-132 - Surgical Technology Clinical 1, and 512-130 - Surgical Skills Application with a minimum grade of C or TR COREQUISITES: Course 512-131 - Surgical Interventions 1

**512-135****Surgical Technology Clinical 3****Credits: 3.00**

Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. PREREQUISITES: Courses 512-131 - Surgical Interventions 1 and 512-133 - Surgical Technology Clinical 2 COREQUISITES: Course 512-142 - Surgical Interventions II

**512-136****Surgical Technology Clinical 4****Credits: 3.00**

During this clinical course the student will function relatively independently. Serves as a transition from a student perspective to an employee by utilizing advanced skills for an entry level Surgical Technologist. PREREQUISITES: Course 512-135 - Surgical Technology Clinical 3 COREQUISITES: Course 512-142 - Surgical Interventions II

**512-142****Surgical Interventions II****Credits: 4.00**

Expands knowledge of core and specialty surgical procedures by incorporating pathophysiology, diagnostic interventions, health sciences, and surgical techniques. PREREQUISITES: Courses 512-131 - Surgical Interventions 1 and 512-133 - Surgical Technology Clinical 2 COREQUISITES: Courses 512-135 - Surgical Technology Clinical 3 and 512-136 - Surgical Technology Clinical 4

**513-110****Lab Skills, Basic****Credits: 1.00**

This course explores health career options and the fundamental principles and procedures performed in the clinical laboratory. You will utilize medical terminology and basic laboratory equipment. You will follow required safety and infection control procedures and perform simple laboratory tests. COREQUISITES: Courses 513-111 - Phlebotomy

**513-111****Phlebotomy****Credits: 2.00**

This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture, and special collection procedures. COREQUISITES: Courses 513-110 - Lab Skills, Basic

**519-324****Facilities Service OSHA****Credits: 1.00**

Prepares students for custodial service employment. Introduces students to safety in the work place, hazard communication and bloodborne pathogen protection. Students will gain knowledge of chemical fundamentals and safe handling of cleaning chemicals.

**519-325**

**Cleaning Fundamentals**

**Credits: 3.00**

Prepares students for custodial services employment. Develops knowledge and experience in general cleaning techniques, chemical usage, tools and equipment usage and identification of maintenance issues encountered by custodial staff. Includes common area, office/classroom, general kitchen, and restroom cleaning.

**519-326**

**Floor Care**

**Credits: 2.00**

Prepares students for custodial services employment. Introduces floor types, floor care chemicals and equipment. Develops knowledge and experience in assessment of current floor care needs and performance of floor care maintenance techniques (including routine, interim and restorative).

**519-327**

**Carpet Care**

**Credits: 2.00**

Prepares students for custodial services employment. Introduces carpet types, carpet care chemicals and equipment. Student will gain knowledge and experience in assessment of current carpet care needs and performance of carpet care maintenance techniques (routine, interim and restorative).

**519-328**

**Green Cleaning**

**Credits: 1.00**

Prepares students for custodial service employment. Introduces students to effective cleaning techniques and chemicals used to protect the public health without harming the environment.

**520-101**

**Human Services/Introduction**

**Credits: 3.00**

An overview of human services, types of agencies and delivery systems and human service as a career field. Emphasis will be on developing the generalist concept and the role of the associate degree human service worker.

**520-102****Crisis Intervention in Human Services****Credits: 3.00**

Students will learn about crisis theory and its application to a variety of clientele and contexts. Students will also learn and practice a variety of verbal and non-verbal approaches to working with the client in crisis, steps in maintaining safety and will demonstrate their learning through direct, hands on approaches. Upon successful completion of the course students will be able to obtain a certificate in Non-Violent Crisis Intervention through the Crisis Prevention Institute. This course does not teach CPI restraint methods.

**520-105****Interviewing Principles & Recordkeeping****Credits: 3.00**

Introduction to interviewing and recordkeeping skills as practiced in human services agencies, including social history, summary recording, case assessment and planning.

**520-110****Community Resources and Services****Credits: 3.00**

This course seeks to expose the student to a wide variety of community agencies, resources, and programs through the use of guest speakers and site visits. The functions, funding, clients served, eligibility requirements, and referral procedures of the agency will be emphasized.

**520-115****Counseling/Introduction to****Credits: 3.00**

This course is designed to provide the student with an overview of the major counseling theories, their techniques and the applications of these to various situations. The student will be able to practice the use of these counseling techniques in initiating, structuring and terminating a counseling session. PREREQUISITES: Courses 520-105 - Interviewing Principles & Recordkeeping

**520-121****Human Service Field Experience II****Credits: 3.00**

The student is given the opportunity to demonstrate understanding of more advanced social work skills and techniques used in the field. This course will meet in a weekly seminar to monitor progress and address concerns. PREREQUISITES: Complete courses 520-124 - Human Service Field Experience and 520-140 - Group Counseling with minimum grade C

**520-124****Human Service Field Experience****Credits: 3.00**

The student is given an opportunity to demonstrate an understanding of social work skills and techniques under supervision in a working situation. The class will meet in a weekly seminar to monitor progress and address concerns. PREREQUISITES: Courses 520-127 - Professional Practices in Human Services 804-135 - Quantitative Reasoning and 801-136 - English Composition 1 COREQUISITES: Courses 520-140 - Group Counseling

### **520-127**

#### **Professional Practices in Human Services**

**Credits: 3.00**

This course prepares students to enter the human services profession and maintain effectiveness as a human service practitioner. Emphasis will be placed on gaining a working knowledge of professional codes of ethics. Students will explore social/ethical issues that impact the profession. Professional credentialing, continuing education, and maintaining vitality within the field will be stressed.

### **520-128**

#### **Child Welfare Policy and Practice**

**Credits: 3.00**

This class helps the student examine the economic, social, and political aspects of children's issues. It also addresses the U.S. welfare system, including proprietary, private, voluntary, and governmental agencies.

### **520-140**

#### **Group Counseling**

**Credits: 3.00**

The focus of this course is on the group dynamics and group process. Various counseling approaches and their application to group work will be explored along with the developmental stages of groups. Individual behaviors and motivations in both task and counseling groups will be identified. Emphasis will be placed on extensive role-play situations for knowledge and skill integration. PREREQUISITES: Courses 520-115 - Counseling/Introduction to

### **520-144**

#### **Human Services Program Orientation**

**Credits: 1.00**

This course is designed to familiarize students with the field of Human Services, the resources available to them at Gateway and the expectations, support and requirements that will be necessary to complete the Human Services degree at Gateway Technical College. Focus on the course will be on how best to utilize one's strengths, navigate technology, identify needs/resources and strategies to become a successful learner.

### **520-150**

#### **Gerontology/Introduction to**

**Credits: 3.00**



Identifies basic theories and facts about the aging process leading toward application of methods and techniques of serving the aged. Student will be encouraged to develop an understanding of the psychological and sociological experience of the older adult population.

### **520-151**

#### **Family Theory and Practice**

**Credits: 3.00**

Provides the student with a broad understanding of family systems theory. The student will apply knowledge of structural family theory and brief strategic family theory in case studies. The student will also analyze case situations involving violence within the family system.

### **520-152**

#### **Aspects of Disabilities**

**Credits: 3.00**

This course is an introduction to the history of services and legislative processes involved in provision of services to people with disabilities. It is a review of medical diseases and disabilities, including etiology, physiology, prognosis, and impact on disabled individuals and their environment.

### **520-160**

#### **Correctional Processes**

**Credits: 3.00**

A study of present correctional policies and processes in the criminal justice field as it affects today's society in terms of deterrents and rehabilitation and a look at future trends.

### **520-161**

#### **Child and Adolescent Mental Health**

**Credits: 3.00**

This course will examine the psychological, social/environmental, cultural and diagnostic aspects of children's mental health and mental illness. It will also address areas of intervention and resilience. Focus will be on identifying symptoms, treatment approaches and current trends affecting practice in this area.

### **522-101**

#### **EDU: Teamwork in School Settings**

**Credits: 3.00**

This course introduces the learner to group dynamics, school and class policies, liability, confidentiality, and safety issues as they relate to the role of the instructional assistant as a member of a team.

**522-102****EDU: Techniques in Reading****Credits: 3.00**

Students learn techniques to support reading development for all learners. Students learn techniques to promote phonological awareness, phonemic awareness, and phonics. Students also learn strategies to promote word analysis, vocabulary, and reading fluency skills. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

**522-103****EDU: Introduction to Educational Practices****Credits: 3.00**

This course addresses the fundamentals of teaching methodologies, learning styles, factors influencing teaching effectiveness, strategies to meet the needs of all learners, questioning techniques, and basic assessment practices.

**522-104****EDU: Technology/Media Rsrces****Credits: 3.00**

This course provides the opportunity for the learner to develop the knowledge and skills in the area of media and computer resources as it relates to the instructional assistant. Students in this course will gain hands-on computer and media experience and will learn how to operate a variety of equipment. A variety of school related documents will be prepared while using selected software. Students incorporate images into documents from a variety of sources, including digital cameras and scanners.

**522-105****EDU: Behavior Management****Credits: 3.00**

Students evaluate models of behavior management, analyze social emotional learning, and explain the importance of proactive management techniques. In addition, students evaluate models of behavior management, analyze behavior and analyze the influence of Adverse Childhood Experiences on behavior in order to focus on developing skills to assist in empowering children to take an active role in self-control and classroom management.

**522-106****EDU:Child and Adolescent Development****Credits: 3.00**

This course provides an overview of growth and development from birth through adolescence. It acquaints the learner with the fundamental tasks of physical, motor, perceptual, cognitive, social/emotional, and language development.

**522-107****EDU:Overview of Special Education****Credits: 3.00**

Students examine a historical overview of special education and special education law including special education disability categories as defined by the Individuals with Disabilities Education Act (IDEA). Students explore state and federal qualification special education criteria and societal responses to students with disabilities. Students examine the impact of a student with disabilities on family dynamics and the role school personnel play in supporting students with disabilities.

### **522-111**

#### **EDU: Guiding and Managing Behavior**

**Credits: 3.00**

This course focuses on guiding children's behavior to keep them safe and healthy. It includes strategies for improving behavior and problems of all levels in the inclusive classroom, on the bus, on the playground, and on field trips.

### **522-112**

#### **EDU: Equity in Education**

**Credits: 3.00**

Students analyze personal culture, explore cultural constructs, evaluate cultural bias in educational materials and analyze strategies to support English Learners. Students examine diversity in the classroom and develop techniques for supporting equity in the learning environment. In addition, students collaborate to identify service needs in the community and demonstrate professional collaboration skills through participating in a service learning project.

### **522-114**

#### **EDU: Techniques in Language Arts**

**Credits: 3.00**

Students explore various genres of children's and young adult literature. Students examine techniques used to support learners in reading and writing and strategies for assessing learners in the process. Students examine techniques to support learners with reading and writing across the curriculum. **PREREQUISITES:** Complete course 522-102 - EDU: Techniques in Reading with a minimum grade of C and complete course 801-136 - English Composition 1

### **522-118**

#### **EDU: Techniques for Math**

**Credits: 3.00**

This course will address techniques for the instructional assistant in assisting the classroom teacher in group and individual tutoring activities in math. Current practice, including manipulatives, problem solving, and assessment, will be covered within the framework of state and national standards. **PREREQUISITES:** Course 804-135 - Quantitative Reasoning with a minimum grade C

### **522-119**

#### **EDU: Techniques for Social Studies**

**Credits: 3.00**

Students analyze current content in social studies education as recommended by the National Council for the Social Studies and design learning opportunities for the five components of social studies: Geography. History. Culture and Society. Civics and Government, and Economics. Students explore factors that influence social studies instruction.

### **522-120**

#### **EDU: Techniques for Science**

**Credits: 3.00**

This course is an introduction to the content and processes of science. Strategies of teaching science will be studied and practiced and will prepare you in assisting the classroom teacher in group and individual activities in science. Current science processes, strategies, procedures, assessment options, and factors affecting science learning will be explored.

### **522-122**

#### **EDU:Advanced Reading and Language Arts**

**Credits: 3.00**

Students will gain the knowledge and skills needed to support and encourage children as independent, strategic readers as well as techniques to support children through the writing process. Children's literature will be integrated throughout the course. PREREQUISITES: Courses 522-102 - EDU: Techniques in Reading and 801-136 - English Composition 1

### **522-124**

#### **EDU:Supporting Students with Disabilities**

**Credits: 3.00**

Students identify research-based interventions for learners in categories defined by the Individuals with Disabilities Education Act (IDEA). Students interpret Individualized Educational Programs and examine special education related services available for learners. Students collect data to document student behavior and academic performance and recommend program adaptations and accommodations for students with disabilities while applying the concepts of least restrictive environment and inclusion.

### **522-129**

#### **EDU: Practicum 1**

**Credits: 3.00**

Practicum I will introduce the student to a diverse classroom setting at an elementary, middle school and/or high school level. The student will observe children and practice techniques under the guidance of a DPI certified teacher.

### **522-131**

#### **EDU: Practicum 2**

**Credits: 3.00**

Apply the skills learned in previous program courses in a school setting while under the supervision of a DPI certified teacher. Students support children with special education needs and programming. Job search skills will be addressed and a professional portfolio will be completed. PREREQUISITES: Course 522-114 - EDU: Techniques in Language Arts 522-118 - EDU: Techniques for Math 522-129 - EDU: Practicum 1 with a minimum grade C

**522-132****EDU: Positive Classroom Mgmt Tech****Credits: 3.00**

This course examines the impact of issues such as divorce, alcoholism, child abuse, youth suicide, stress, violence and gangs on behavior in the classroom. Conflict resolution techniques and de-escalation strategies and with an emphasis on prevention will also be examined. PREREQUISITES: Course 522-111 - EDU:Guiding and Managing Behavior

**524-108****PTA Musculoskeletal Anatomy & Function****Credits: 2.00**

This course is a preparatory and enrichment elective for students who are about to enter first semester PTA program core courses. It provides an in-depth look at musculoskeletal anatomy, including anatomical terms, bony anatomy, cardinal planes and motions, and joint and muscle structure and function. PREREQUISITES: Course 806-177 - General Anatomy and Physiology

**524-138****PTA Kinesiology 1****Credits: 3.00**

This course introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant, in addition to assessing range of motion and strength.

**524-139****PTA Patient Interventions****Credits: 4.00**

This course is an introduction to basic skills and physical therapy interventions performed by the physical therapist assistant.

**524-140****PTA Professional Issues 1****Credits: 2.00**

This course introduces the history and development of the physical therapy program, legal and ethical issues, the interdisciplinary health care team, and professional communication skills. This course is equivalent to 524-140 at other WTCS schools.

**524-141****PTA Kinesiology 2****Credits: 4.00**

This course applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant, including location and identification of muscles, joints, and other landmarks. Students assess range of motion and strength of the axial skeleton and upper quadrant and integrate analysis of posture and gait. This course is equivalent to 524-141 at other WTCS schools. PREREQUISITES: Course 524-138 - PTA Kinesiology 1

### **524-142**

#### **PTA Therapeutic Exercise**

**Credits: 3.00**

This course provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with minimum grade C COREQUISITES: Course 524-156 - PTA Applied Kinesiology 1

### **524-143**

#### **PTA Therapeutic Modalities**

**Credits: 4.00**

This course develops the knowledge and technical skills necessary to perform numerous therapeutic modalities likely to be utilized as a PTA.

### **524-144**

#### **PTA Principles of Neuromuscular Rehabilitation**

**Credits: 4.00**

This course integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-144 at other WTCS schools. PREREQUISITES: Complete courses 524-139 - PTA Patient Interventions 524-142 - PTA Therapeutic Exercise 524-157 - PTA Applied Kinesiology 2 minimum grade C

### **524-145**

#### **PTA Musculoskeletal Rehabilitation**

**Credits: 4.00**

This course integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-145 at other WTCS schools. PREREQUISITES: Course 524-139 - PTA Patient Interventions with minimum grade C COREQUISITES: Courses 524-142 - PTA Therapeutic Exercise and 524-157 - PTA Applied Kinesiology 2

### **524-146**

#### **PTA Management of Cardiopulmonary and Integumentary Conditions**

**Credits: 3.00**

This course integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-146 at other WTCS schools. PREREQUISITES: Complete courses 524-139 - PTA Patient Interventions 524-142 - PTA Therapeutic Exercise 524-157 - PTA Applied Kinesiology 2 minimum grade C

**524-147****PTA Clinical Practice 1****Credits: 2.00**

This course provides a part-time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice. It is the equivalent of 524-147 at other WTCS schools. COREQUISITES: Courses 524-143 - PTA Therapeutic Modalities and 524-157 - PTA Applied Kinesiology 2

**524-148****PTA Clinical Practice 2****Credits: 3.00**

This course provides another part-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings. It is equivalent to 524-148 at other WTCS schools. PREREQUISITES: Course 524-147 - PTA Clinical Practice 1

**524-149****PTA Rehabilitation Across the Lifespan****Credits: 2.00**

This capstone course integrates concepts of pathology, physical therapy interventions, and data collection across the lifespan. In addition, the PTA's role in health, wellness and prevention, reintegration, and physical therapy interventions for special patient populations will be addressed. This course is equivalent to 524-149 at other WTCS schools. PREREQUISITES: Courses 524-144 - PTA Principles of Neuromuscular Rehabilitation, 524-145 - PTA Musculoskeletal Rehabilitation, and 524-148 - PTA Clinical Practice 2 COREQUISITES: Course 524-146 - PTA Management of Cardiopulmonary and Integumentary Conditions

**524-150****PTA Professional Issues 2****Credits: 2.00**

This course incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies. PREREQUISITES: Course 524-140 - PTA Professional Issues 1 COREQUISITES: Course 524-148 - PTA Clinical Practice 2

**524-151****PTA Clinical Practice 3****Credits: 5.00**

This course provides a full-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings. PREREQUISITES: Courses 524-144 - PTA Principles of Neuromuscular Rehabilitation, 524-145 - PTA Musculoskeletal Rehabilitation, 524-146 - PTA Management of Cardiopulmonary and Integumentary Conditions, and 524-148 - PTA Clinical Practice 2

**524-156****PTA Applied Kinesiology 1****Credits: 4.00**

Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength.

PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade D

**524-157****PTA Applied Kinesiology 2****Credits: 3.00**

Applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant including location and identification of muscles, joints and other landmarks. Assess range of motion and strength of the axial skeleton and upper quadrant. Integrate analysis of posture and gait. PREREQUISITES: Course 524-156 - PTA Applied Kinesiology 1 with a minimum grade of C or TR

**527-500****Wastewater Treatment Introduction to****Credits: 1.50**

Provides an overview of the different processes used in wastewater treatment plants, as well as the collection system and sludge disposal procedures. Covers calculations used to determine plant loadings, detention times and percent removal efficiencies. Environmental regulations, preventive maintenance practices and basic safety precautions are covered.

**527-503****Conventional Wastewater Treatment****Credits: 1.50**

Covers the basic biology, chemistry and operational controls of wastewater treatment processes: pre- and primary treatment of wastewater, activated sludge, trickling filters and RBCs (Rotating Biological Contactors). The structure and function of major equipment is explained. Various lab tests and the calculations associated with them are presented.

**527-505****Advanced Wastewater Treatment****Credits: 2.00**

Develops competence in management of wastewater treatment processes including disinfection treatment of wastewater, basic and advanced phosphorus removal, tertiary filtration, mechanical sludge handling, sludge dewatering, and sludge disposal. Students use the Internet to locate resources useful in managing wastewater treatment processes.

**527-511****Water Chemistry****Credits: 2.00**



Explores basic chemical concepts and principles such as elements, compounds, states of matter, and reactions that are applicable to evaluating and regulating water quality and applies them to water and wastewater treatment. Learners also examine laboratory techniques, equipment, quality assurance, and record keeping and reporting.

**527-520**

**Hydraulics of Water & Wastewater**

**Credits: 1.50**

Provides information and procedures necessary to predict and manipulate the hydraulics of water transmission and collection. The primary work assignments involve the reading and use of hydraulic principles and then applying them in a real-life case analysis as a laboratory project.

**527-525**

**Industrial Wastes**

**Credits: 1.50**

Focuses on the control of wastewater resulting from the processing of a variety of industrial materials. Methods of waste initiation, impact, minimization, and the treatment of waste process streams of metal, pulp and paper, and food and beverage industry operations are emphasized and analyzed.

**527-530**

**Groundwater Supply & Distribution**

**Credits: 1.50**

Provides environmental and treatment information necessary to operate a potable groundwater well system. Basic distribution system design and component use will also be detailed. Students examine a groundwater treatment plant and make operational assessments based on established industry criteria.

**527-536**

**Equipment Maintenance & Instrumentation**

**Credits: 2.00**

Develops skills in the identification and application of tools, correcting facility and system mechanical problems, and understanding the complete concept of preventative and predictive maintenance. Students will research preventative and predictive maintenance systems. Skills will be developed using instrumentation for process control. Supervisory Control and Data Acquisition including control diagrams, designs and applications will be studied.

**530-159**

**Healthcare Revenue Management**

**Credits: 3.00**

Prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software. **PREREQUISITES:** Complete course 530-161 - Health Quality Management with a minimum grade C

**530-161****Health Quality Management****Credits: 3.00**

Explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data. PREREQUISITES: Complete course 530-167 - Management of HIM Resources minimum grade C

**530-162****Foundations of HIM****Credits: 3.00**

Introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITES: Complete courses 501-107 - Digital Literacy for Healthcare and 501-101 - Medical Terminology

**530-163****Healthcare Stats & Analytics****Credits: 3.00**

Explores the management of medical data for statistical purposes focusing on descriptive and inferential statistics including definition, collection, calculation and compilation of numerical data. Examines data analytics, retrieval, presentation and research methodologies. PREREQUISITES: Complete courses 530-162 - Foundations of HIM and 804-189 - Statistics, Introductory with a minimum grade of C

**530-164****Health Informatics, Intro to****Credits: 3.00**

Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in enterprise information management and database architecture design and implementation. PREREQUISITES: Complete courses 530-162 - Foundations of HIM and 804-189 - Statistics, Introductory

**530-165****Intermediate Coding****Credits: 3.00**

Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate

physician queries in accordance with compliance guidelines. PREREQUISITES: Complete course 530-199 - ICD Procedure Coding minimum grade C

### **530-166**

#### **HIT Capstone**

**Credits: 1.00**

Prepares the student to enter the workforce. Topics may include resume and cover letter writing, interviewing skills, portfolio preparation, and RHIT examination preparation. COREQUISITES: Complete previous or concurrently with course 530-196 - Professional Practice Professional Practice 1

### **530-167**

#### **Management of HIM Resources**

**Credits: 3.00**

Examines the principles of management to include planning, organizing, human resource management, directing, and controlling as related to the health information department. PREREQUISITES: Complete course 530-178 - Healthcare Legal and Ethical Issues Healthcare Law & Ethics with a minimum grade C

### **530-178**

#### **Healthcare Legal and Ethical Issues Healthcare Law & Ethics**

**Credits: 2.00**

This course examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed. COREQUISITES: Complete course 530-162 - Foundations of HIM

### **530-182**

#### **Human Disease for Health Professions**

**Credits: 3.00**

This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (cause), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease. PREREQUISITES: Complete courses 501-101 - Medical Terminology and 530-162 - Foundations of HIM COREQUISITES: Complete course 806-177 - General Anatomy and Physiology

### **530-184**

#### **CPT Coding**

**Credits: 3.00**

Prepares learners to assign CPT/HCPCS codes, supported by medical documentation, with entry level proficiency. Learners apply instructional notations, conventions, rules, and official coding guidelines when assigning codes to case studies and actual medical record documentation. PREREQUISITES: Complete course 530-197 - ICD Diagnosis Coding

**530-185****Healthcare Reimbursement****Credits: 2.00**

This course prepares students to compare and contrast health care payers and to comply with regulations related to fraud and abuse. Specific topics include inpatient and outpatient payment systems, fraud and abuse issues regarding coding of health care services, and an illustration of the reimbursement cycle. Students assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization Groups (RUGs) with entry-level proficiency, using computerized encoding and grouping software.

**530-196****Professional Practice****Credits: 3.00**

Applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. Student may participate in a supervised clinical experience in healthcare facilities. COREQUISITES: Complete courses 530-159 - Healthcare Revenue Management 530-165 - Intermediate Coding 530-166 - HIT Capstone

**530-197****ICD Diagnosis Coding****Credits: 3.00**

Prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITES: Complete courses 530-182 - Human Disease for Health Professions 501-101 - Medical Terminology and 806-177 - General Anatomy and Physiology

**530-199****ICD Procedure Coding****Credits: 2.00**

Prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation.

**531-312****EMR to EMT I****Credits: 2.00**

In this course, learners build foundational skills and knowledge needed to become an Emergency Medical Technician (EMT) candidate, while also meeting all requirements for Emergency Medical Responder (EMR) candidates. The learner examines lifesaving topics including, basic anatomy and physiology, patient assessment, traumatic injury management, airway management, cardiac management and basic medical care. Upon completion of the course, learners will be eligible to participate in the National Registry of EMT's Emergency Medical Responder exams required for Wisconsin EMR certification.

**531-313****EMR to EMT Part II****Credits: 3.00**

In this course, learners build upon the base knowledge of the EMR/EMT Part 1 course. The learner examines lifesaving topics including: expanded anatomy, physiology, and pathophysiology; disease processes; more complex patient assessment; and; critical thinking skills. In addition, learners may be able to apply additional skills allowed by the Wisconsin Department of Health Services/EMS Section Scope of Practice for EMT's. Upon completion of the course, learners will be eligible to participate in the National Registry of EMT's Emergency Medical Technician exam required for Wisconsin EMT certification. PREREQUISITES: Complete course 531-312 - EMR to EMT I minimum grade C

**531-323****Law Enforcement Emergency Response****Credits: 1.00**

This course is designed to prepare the primary responder to an accident or sudden severe illness in the appropriate lifesaving techniques to be carried out at the scene until regular emergency care and transportation can be obtained.

**531-326****Emergency Medical Technician****Credits: 5.00**

Emergency Medical Technician is a 180 hour entry-level training in emergency medicine. This program provides students the skills and knowledge needed to assess and manage all types of injuries and acute illnesses while providing safe and rapid patient transport to an appropriate medical facility. Components of the course include lecture, practical lab, and hospital clinical experience. Upon program completion, students are prepared to take the National Registry of Emergency Medical Technicians® examination to be licensed as an Emergency Medical Technician in Wisconsin. Students wishing to pursue other levels of EMS licensure, such as Advanced EMT or Paramedic, must first be licensed as an Emergency Medical Technician before being eligible to register in subsequent EMS licensure programs. PREREQUISITES: Student must be accepted to program 30-531-3, Emergency Medical Technician, in order to register for this course.

**531-327****Advanced EMT****Credits: 4.00**

If you currently hold a State of Wisconsin licensure as an Emergency Medical Technician (EMT), you can pursue additional training in intravenous access, fluid and medication administration, clinical decision making skills, and patient assessment at this advanced level. Upon completion of the didactic, lab, and clinical components of this program, the participant will be eligible for testing and credentialing through the National Registry of Emergency Medical Technicians®. PREREQUISITES: Complete course 531-313 - EMR to EMT Part II or 531-326 - Emergency Medical Technician with a minimum grade of C Student must be accepted to program 30-531-6, Advanced Emergency Medical Technician, in order to register for this course.

**531-911****EMS Fundamental****Credits: 2.00**

This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, wellbeing, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students will obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations will foster the development of effective written and oral communications with colleagues and other health care professionals. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or Achieve the required placement test score

**531-912****Paramedic Medical Principles****Credits: 4.00**

This course address the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing the paramedic students to the topics of shock, immunology, and bleeding. COREQUISITES: Course 531-911 - EMS Fundamental

**531-913****Adv. Patient Asses. Principles****Credits: 3.00**

This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patient. COREQUISITES: Course 531-911 - EMS Fundamental

**531-914****Adv. Pre-Hospital Pharmacology****Credits: 3.00**

This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient. COREQUISITES: Course 531-911 - EMS Fundamental

**531-915****Paramedic Respiratory Mgt.****Credits: 2.00**

This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is

also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint. COREQUISITES: Course 531-914 - Adv. Pre-Hospital Pharmacology

### **531-917**

#### **Paramedic Clinical Field I**

**Credits: 3.00**

This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. COREQUISITES: Course 531-912 - Paramedic Medical Principles

### **531-918**

#### **Adv. Emergency Resuscitation**

**Credits: 1.00**

By teaching Advanced Cardiac Life Support ('ACLS') and Pediatric Advanced Life Support ('PALS') methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

### **531-919**

#### **Paramedic Medical Emergencies**

**Credits: 4.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

### **531-920**

#### **Paramedic Trauma**

**Credits: 3.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

### **531-921**

#### **Special Patient Populations**

**Credits: 3.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for

patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

**531-922**  
**EMS Operations**  
**Credits: 1.00**

This course is provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

**531-923**  
**Paramedic Capstone**  
**Credits: 1.00**

This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment for each student will be complied and/or documented within this course as required by the DHS-approved paramedic curriculum. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

**531-924**  
**Paramedic Clinical/Field 2**  
**Credits: 4.00**

This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by DHS. COREQUISITES: Course 531-955 - Paramedic Cardiology 1

**531-925**  
**Paramedic Human Patient Simulation Lab**  
**Credits: 4.00**

This course reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will apply assessment knowledge and demonstrate paramedic level skills in a variety of emergency response scenarios and assessments. COREQUISITES: Take course 531-912 - Paramedic Medical Principles concurrent or previous

**531-926**  
**Paramedic Hospital Field**  
**Credits: 1.00**

This initial course provides the student with the foundation and opportunities to enhance his or her learning through the practice of paramedicine in both prehospital and health care environment with actual patient care experiences under the



supervision of approved preceptors. COREQUISITES: Take course 531-912 - Paramedic Medical Principles current or previous

### **531-927**

#### **Paramedic Hospital Field II**

**Credits: 2.00**

This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in both prehospital and health care environment with actual patient care experiences under the supervision of approved preceptors. COREQUISITES: Course 531-955 - Paramedic Cardiology 1 is required

### **531-955**

#### **Paramedic Cardiology 1**

**Credits: 2.00**

This course will provide the student with the basic knowledge to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment for the patient with cardiovascular disease. COREQUISITES: Course 531-915 - Paramedic Respiratory Mgt.

### **531-956**

#### **Paramedic Cardiology 2**

**Credits: 2.00**

This course teaches the paramedic student knowledge and skills to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a variety of cardiovascular complaints. PREREQUISITES: Course 531-955 - Paramedic Cardiology 1 with a minimum grade of C or TR

### **533-100**

#### **Deafness/Intro to**

**Credits: 2.00**

This course is an overview of topics impacting the Deaf/Hard of Hearing communities. It is designed to assist those interested in learning about this diverse population of people.

### **533-109**

#### **Deaf Culture in America**

**Credits: 3.00**

This course will expose the students to Deaf culture since its beginnings in the United States. It will discuss famous Deaf Americans and how they have impacted the lives of Deaf and hearing people in America.

**533-125****Special Education And, Introduction to Deafness****Credits: 3.00**

This course is an introduction to the educational process involving a deaf/hard of hearing child and a focus on deafness and how it impacts other aspects of disability.

**533-126****American Sign Language 1****Credits: 2.00**

This course is the first in a series of 4 courses. It is designed for students with no or minimal sign language experience. The course will help students develop the skills and knowledge needed to communicate in American Sign Language (ASL). The student will be introduced to the visual language used by the Deaf Community in North America. The student will be exposed to an introduction to receptive and expressive ASL vocabulary, grammatical structures, finger spelling, numbers, conversational behavior and Non-Manual Signals.

**533-127****American Sign Language 2****Credits: 2.00**

This course is the second in a series of 4. The student will develop the skills and knowledge needed to communicate in American Sign Language (ASL). This course is for students who have successfully completed ASL 1. The students will focus on the cultural behaviors and practices distinct to those that approach the world from a visual perspective. Students will further explore receptive and expressive ASL vocabulary, grammatical structures, finger spelling, numbers, conversational behaviors and Non-Manual Signals. PREREQUISITES: Course 533-126 - American Sign Language 1

**533-128****American Sign Language 3****Credits: 2.00**

This course is the third in a series of 4 courses designed to enhance the skills and knowledge needed to communicate in American Sign Language (ASL). This course is for students who have successfully completed ASL 2. The course focuses on the cultural behaviors and practices distinct to those that approach the world from a visual perspective. The course begins to implement the skills acquired in ASL 1 & 2. It will cover more complex grammatical topics including temporal aspects, sequencing, conditionals, an introduction to conversational regulators, complex dialogue, storytelling and multiple meaning English terms with ASL equivalents. PREREQUISITES: Course 533-127 - American Sign Language 2

**533-129****ASL 4****Credits: 2.00**

This course is the last in a series of 4 courses designed to advance the skills and knowledge needed to communicate in American Sign Language (ASL). This course is for students who have successfully completed ASL 3. The course focuses on the cultural behaviors and practices distinct to those that approach the world from a visual perspective. This course will integrate the skills acquired in ASL 1, 2, & 3. It will expand the use of conversational regulators and include an

introduction to English idioms with ASL equivalents. These additional skills will enable students to convey information and ideas about linguistic, cultural and social issues, in dialogues and narratives. PREREQUISITES: Course 533-128 - American Sign Language 3

### **533-130**

#### **Intro to Deaf History**

**Credits: 2.00**

This course will cover various aspects of the deaf community including culture, history, and the technology used within the community. This course is ideal for those planning to work within a service occupation, education, or a health-related field.

### **533-131**

#### **ASL for Native Signers**

**Credits: 2.00**

This course is for individuals who have grown up using sign language to communicate with family members. It will cover several linguistic aspects of ASL, historical influences, and cultural implications of being a hearing member of the deaf community.

### **536-101**

#### **Sterile Techniques for Pharmacy Tech**

**Credits: 3.00**

Prepares the learner to utilize aseptic technique in preparing parenteral products, compare parenteral solutions and routes, identify equipment used to prepare parenteral products, perform parenteral calculations, prevent parenteral incompatibilities, prepare cytotoxic medications, and apply safe disposal of hazardous products. PREREQUISITES: Courses 536-105 - Pharmacy Community Clinical 536-108; minimum grade C

### **536-103**

#### **Pharmacy Hospital Clinical**

**Credits: 2.00**

In this course, students will have the opportunity to experience the daily activities of a pharmacy technician in a hospital pharmacy setting. Students will learn how medication orders are prepared, processed, and delivered along with maintaining medication inventory in several areas, interacting with other medical staff and following policies and procedures of the hospital and pharmacy. PREREQUISITES: Course 536-105 - Pharmacy Community Clinical and 536-108 - Pharmacy Services I COREQUISITES: Courses 536-101 - Sterile Techniques for Pharmacy Tech 536-104 - Pharmacy Benefit Management 536-107 - Pharmacy Distribution Systems 536-122 - Pharmacology for Pharmacy Technicians and 536-109 - Pharmacy Services II

### **536-104**

#### **Pharmacy Benefit Management**

**Credits: 1.00**

This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular formulary systems, calculate the selling price for a prescription based on the Average Wholesale Price (AWP) and the formula required by the Pharmacy Benefit Manager, analyze the role of the Pharmacy Benefits Manager in the health care system, and summarize medical coverage provided by government agencies. PREREQUISITES: Complete 536-108 - Pharmacy Services I minimum grade of C, TR and complete course 536-105 - Pharmacy Community Clinical

### **536-105**

#### **Pharmacy Community Clinical**

**Credits: 2.00**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories and fulfill duties in unique service areas. COREQUISITES: Complete course 536-108 - Pharmacy Services I

### **536-107**

#### **Pharmacy Distribution Systems**

**Credits: 1.00**

Prepares the learner to analyze the changes occurring in institutional health care and the consequences for pharmacists and pharmacy technicians, analyze the unit dose packaging and distribution system, compare various hospital or nursing home pharmacy administrative and physical designs, compare different distribution systems used in hospital or nursing homes. PREREQUISITES: Course 536-108 - Pharmacy Services I with minimum grade C and course 536-105 - Pharmacy Community Clinical

### **536-108**

#### **Pharmacy Services I**

**Credits: 4.00**

In this course, students simulate, in a lab, the daily tasks performed by pharmacy technicians in outpatient and inpatient settings. Students analyze: prescription processing, patient profile information, pharmacy practice, patient safety, market employment skills, pharmacy front-of-store operations, extemporaneous compound preparation, and customer service. Filling and maintaining drug stock in the inpatient environment are investigated. Students practice interpreting prescriber orders, labeling patient specific orders, and reconciling medication in the inpatient environment. Upon completion of the course, student will be able to perform basic pharmacy technician services. COREQUISITES: #take 536-110 - Pharmacy Calculations 536-115 - Pharmacy Law 536-121;

### **536-109**

#### **Pharmacy Services II**

**Credits: 2.00**

In this course, students build on skills developed in Pharmacy Services I. Students simulate tasks in both outpatient and inpatient settings. Upon completion of the course, students will be able to perform the daily tasks of advanced level

pharmacy technicians. PREREQUISITES: Complete courses 536-108 - Pharmacy Services I and 536-105 - Pharmacy Community Clinical

### **536-110**

#### **Pharmacy Calculations**

**Credits: 3.00**

Prepares the learner to convert weights and volumes between the avoirdupois, the apothecary, and the metric systems of measurement; unitize ratios & proportions; reduce and enlarge pharmaceutical formulas; calculate medication quantities from percent w/w, w/v, v/v, ppm, and ratio concentrations; perform dilution calculations; utilize the 'alligation' method; solve problems related to electrolyte solutions; convert temperatures between the Fahrenheit and Celsius scales; convert military and standard time; and calculate individualized patient doses based on body surface area, age, and/or weight of the patient. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of B- or math full College placement

### **536-115**

#### **Pharmacy Law**

**Credits: 2.00**

This course prepares the learner to apply Federal laws to the practice of pharmacy; apply Wisconsin State laws to the practice of pharmacy; select appropriate drug products for substitution in accordance with the law; explain the Investigational New Drug (IND) process; explain pharmacy equipment, license, and floor plan legal requirement; apply controlled substance laws to the procurement, processing, and record keeping of controlled substances; analyze the history of pharmacy law; and summarize drug law enforcement agencies.

### **536-121**

#### **Fundamentals of Reading Prescriptions**

**Credits: 2.00**

This course prepares the learner to match the brand name and generic name of commonly prescribed medications, determine the pharmacologic classes of commonly prescribed medication, determine the appropriate auxiliary labels to be placed on prescription bottles for commonly prescribed medications, determine if a prescribed medication is a controlled substance and to which schedule it belongs, analyze prescriptions for appropriateness of drug and dosing schedule, and interpret Latin abbreviations used in the practice of Pharmacology.

### **536-122**

#### **Pharmacology for Pharmacy Technicians**

**Credits: 3.00**

The purpose of this course is to provide a comprehensive overview of the principles of pharmacology and pharmacokinetics including the understanding of disease states within each body system and the effects of the medications in treating the conditions. Students will learn the cautions involved in adverse drug effects, food and drug interactions, and drug-disease contraindications. Students are expected to learn the brand and generic drug names from the TOP 200 Drugs List as well as their therapeutic classifications, indications, common strengths, and essential terminology needed to become a successful Pharmacy Technician. PREREQUISITES: Courses 536-108 - Pharmacy Services I minimum grade C and 536-105 - Pharmacy Community Clinical

**536-134****Managing Pharmacy Benefits****Credits: 3.00**

This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular formulary systems, calculate the selling price for a prescription based on the Average Wholesale Price (AWP) and the formula required by the Pharmacy Benefit Manger, analyze the role of the Pharmacy Benefits Manger in the health care system, and summarize medical coverage provided by government agencies. PREREQUISITES: Courses 536-112, 536-121 - Fundamentals of Reading Prescriptions, 801-301 - Writing Principles, 536-115 - Pharmacy Law with a minimum grade of C or TR COREQUISITES: Course 536-122 - Pharmacology for Pharmacy Technicians and 536-110 - Pharmacy Calculations

**536-139****Community Pharmacy Clinical****Credits: 3.00**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories, and fulfill duties in unique service areas. PREREQUISITES: Course 501-101 - Medical Terminology, 536-112, 536-115 - Pharmacy Law, 536-121 - Fundamentals of Reading Prescriptions, 536-110 - Pharmacy Calculations, 536-122 - Pharmacology for Pharmacy Technicians and 536-134 - Managing Pharmacy Benefits with a minimum grade of C or TR COREQUISITES: Take course 536-101 - Sterile Techniques for Pharmacy Tech before or with 536-139 - Community Pharmacy Clinical

**543-101****Nursing Fundamentals****Credits: 2.00**

This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/ electrolyte balance. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B- COREQUISITES: Course 801-136 - English Composition 1

**543-102****Nursing Skills****Credits: 3.00**

This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B-

**543-103****Nursing Pharmacology****Credits: 2.00**

This course introduces the principles of pharmacology, including drug classification and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medication. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B-

**543-104****Nsg: Intro Clinical Practice****Credits: 2.00**

This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients. Emphasis is placed on performing basic nursing skills, the formulation of nurse-client relationships, communication, data collection, documentation, and medication administration. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B- COREQUISITES: Complete 543-101 - Nursing Fundamentals Complete 543-102 - Nursing Skills Complete 543-103 - Nursing Pharmacology

**543-105****Nursing Health Alterations****Credits: 3.00**

This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. It will also introduce concepts of leadership, team building, and scope of practice. PREREQUISITES: Complete 543-101 - Nursing Fundamentals Complete 543-102 - Nursing Skills Complete 543-103 - Nursing Pharmacology Complete 543-104 - Nsg: Intro Clinical Practice Course 801-136 - English Composition 1 with a minimum grade D;

**543-106****Nursing Health Promotion****Credits: 3.00**

This course will cover topics related to health promotion in the context of the family. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families, we will discern patterns associated with adaptive and maladaptive behaviors, applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. PREREQUISITES: Complete 809-188 - Psychology, Developmental Complete 543-101 - Nursing Fundamentals Complete 543-102 - Nursing Skills Coimplete 543-103 - Nursing Pharmacology Complete 543-104 - Nsg: Intro Clinical Practice Course 801-136 - English Composition 1 with a minimum grade D

**543-107****Nursing: Clinical Care Across the Lifespan****Credits: 2.00**

This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. PREREQUISITES: Complete 543-101 - Nursing Fundamentals Complete 543-102 - Nursing Skills Complete 543-103 - Nursing Pharmacology Complete 543-104 - Nsg: Intro Clinical Practice COREQUISITES: Complete 543-106 - Nursing Health Promotion

**543-108****Nursing: Introduction to Clinical Care Management****Credits: 2.00**

This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients. It also provides an introduction to leadership, management, and team building. PREREQUISITES: Complete 543-101 - Nursing Fundamentals Complete 543-102 - Nursing Skills Complete 543-103 - Nursing Pharmacology Complete 543-104 - Nsg: Intro Clinical Practice COREQUISITES: Complete 543-105 - Nursing Health Alterations

**543-109****Nursing Complex Health Alterations I****Credits: 3.00**

Complex Health Alterations I prepares the learner to expand knowledge from previous courses in caring for clients with alterations in musculoskeletal, cardiovascular, respiratory, endocrine, and hematologic systems, as well as clients with fluid/electrolyte and acid-base imbalances and alterations in comfort. PREREQUISITES: Complete course 543-105 - Nursing Health Alterations minimum grade C Complete course 543-106 - Nursing Health Promotion minimum grade C Complete course 543-107 - Nursing: Clinical Care Across the Lifespan minimum grade C Complete course 543-108 - Nursing: Introduction to Clinical Care Management minimum grade C Complete course 806-179 - Anatomy and Physiology, Advanced minimum grade B- COREQUISITES: Complete course 806-197 - Microbiology

**543-110****Nursing Mental Health Community Concepts****Credits: 2.00**

This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/ maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups. PREREQUISITES: Complete 543-105 - Nursing Health Alterations minimum grade C Complete 543-106 - Nursing Health Promotion minimum grade C Complete 543-107 - Nursing: Clinical Care Across the Lifespan minimum grade C Complete 543-108 - Nursing: Introduction to Clinical Care Management minimum grade C Complete 806-179 - Anatomy and Physiology, Advanced minimum grade B- COREQUISITES: Complete 809-198 - Psychology, Introduction to



**543-111****Nursing Intermediate Clinical Practice****Credits: 3.00**

This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. PREREQUISITES: Complete 543-105 - Nursing Health Alterations minimum grade C Complete 543-106 - Nursing Health Promotion minimum grade C Complete 543-107 - Nursing: Clinical Care Across the Lifespan minimum grade C Complete 543-108 - Nursing: Introduction to Clinical Care Management minimum grade C COREQUISITES: Complete 543-109 - Nursing Complex Health Alterations I Complete 543-110 - Nursing Mental Health Community Concepts Complete 543-112 - Nursing Advanced Skills

**543-112****Nursing Advanced Skills****Credits: 1.00**

This course focuses on the development of advanced clinical skills. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation, and nasogastric/feeding tube insertion. PREREQUISITES: Complete 543-105 - Nursing Health Alterations minimum grade C Complete 543-106 - Nursing Health Promotion minimum grade C Complete 543-107 - Nursing: Clinical Care Across the Lifespan minimum grade C Complete 543-108 - Nursing: Introduction to Clinical Care Management minimum grade C Complete 806-179 - Anatomy and Physiology, Advanced minimum grade B-

**543-113****Nursing Complex Health Alterations II****Credits: 3.00**

Complex Health Alterations II prepares the learner to expand knowledge and skills from previous courses in caring for clients with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, and reproductive systems. The learn will also focus on management of care for clients with high risk perinatal conditions, high risk newborns, and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical/life threatening situations. PREREQUISITES: Complete 543-109 - Nursing Complex Health Alterations I minimum grade C Complete 543-110 - Nursing Mental Health Community Concepts minimum grade C Complete 543-111 - Nursing Intermediate Clinical Practice minimum grade C Complete 543-112 - Nursing Advanced Skills minimum grade C Complete 806-197 - Microbiology minimum grade C

**543-114****Nursing Management and Professional Concepts****Credits: 2.00**

This course covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice. PREREQUISITES: Complete 543-109 - Nursing Complex Health Alterations I minimum grade C Complete 543-110 - Nursing Mental Health Community Concepts minimum grade C Complete 543-111 - Nursing Intermediate Clinical Practice minimum grade C Complete 543-112 - Nursing Advanced Skills minimum grade C

**543-115****Nursing Advanced Clinical Practice****Credits: 3.00**

This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. PREREQUISITES: Complete course 543-109 - Nursing Complex Health Alterations I minimum grade C Complete course 543-110 - Nursing Mental Health Community Concepts minimum grade C Complete course 543-111 - Nursing Intermediate Clinical Practice minimum grade C Complete course 543-112 - Nursing Advanced Skills minimum grade C COREQUISITES: Complete course 543-113 - Nursing Complex Health Alterations II Complete course 543-114 - Nursing Management and Professional Concepts

**543-116****Nursing Clinical Transition****Credits: 2.00**

This clinical experience prepares the student to assume the role of graduate nurse. The course promotes clinical decision-making, delegation, and collaboration to achieve client and organizational outcomes. Continued professional development is fostered. PREREQUISITES: Complete course 543-109 - Nursing Complex Health Alterations I minimum grade C Complete course 543-110 - Nursing Mental Health Community Concepts minimum grade C Complete course 543-111 - Nursing Intermediate Clinical Practice minimum grade C Complete course 543-112 - Nursing Advanced Skills minimum grade C COREQUISITES: Complete course 543-113 - Nursing Complex Health Alterations II Complete course 543-114; Complete course 543-115 - Nursing Advanced Clinical Practice

**543-122****Simulation for Healthcare Educators****Credits: 3.00**

This course prepares educators to integrate human patient simulation into the classroom. Students will learn about the history, evolution, and educational theories of simulation. They will be introduced to modalities of simulation that can be used in healthcare programs to reinforce critical thinking skills in health occupations students in a safe environment. The course will include creation of high fidelity simulations, standardized patient scenarios, and have the opportunity to implement them. Explore concepts including evaluation, debriefing, and future research in simulation. The goal of the course is to promote excellence in simulation education.

**543-123****Milit Med Fundamental and Pharm Appl****Credits: 2.00**

This course focuses on the integration of basic nursing fundamentals and pharmacology nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Emphasis is on the use of the components of the nursing process when administering medications.

**543-124****Milit Med Skills Theory and Simulation****Credits: 2.00**

This course provides students with the opportunity while using simulation to demonstrate and perform skills commonly delegated to and within the scope of practice of the Licensed Practical Nurse (LPN) including collecting data and reporting patient responses relative to designated skills; skills include but are not limited to; utilization of the nursing process in collaboration with other health care team members and patient/families to address health care needs of individuals/families across the lifespan; communication both verbal and written; the use of information technology; drug calculation and administration of medications within the LPN scope of practice.

**543-125****Trans; Mili Med to Nursing Profession****Credits: 1.00**

This course is designed to facilitate the transition of military health care veterans into the Professional nurse role. Topics include: introduction to the healthcare delivery system, nursing roles within the healthcare delivery system, communication and collaboration with other members of the health care team. In addition to the exploration of the nursing process, documentation, safety, legal, ethical issues and information technology. The patient-needs framework of the curriculum and nursing process will be explored.

**543-126****Application of Complex Nursing Concepts****Credits: 2.00**

This course will prepare the learner, through the application of simulation, to provide care across the lifespan to complex patients with alterations in the cardiovascular, respiratory, endocrine, and hematologic systems, as well as patients with fluid/electrolyte and acid base imbalances, and pain. PREREQUISITES: Complete course 543-109 - Nursing Complex Health Alterations I

**543-127****Paramedic to ADN Theory 1****Credits: 3.00**

This course focuses on nursing concepts necessary to provide evidence-based care to diverse patient populations across the lifespan. The nursing process is implemented to relate care of patients throughout the lifespan with alterations in cognition, elimination, comfort, grief/loss, mobility, skill integrity, and fluid/electrolyte balance and related principles of pharmacology. PREREQUISITES: Complete course 806-177 - General Anatomy and Physiology with a minimum grade of C Student must be accepted to 10-809-0, the Paramedic to ADN Student must be accepted to 10-809-0 Paramedic to ADN Bridge program in order to register for this course.

**543-128****Paramedic to ADN Theory 2****Credits: 3.00**

This course introduces principles of nursing care of the developing family, including reproductive and mental health issues, pregnancy, labor and delivery, post-partum, the newborn, and child. It includes integrated understanding of related pharmacology and study of family dynamics and grief/loss. PREREQUISITES: Complete course 806-177 - General Anatomy and Physiology with a minimum grade C Student must be accepted to 10-809-0 Paramedic to ADN program to register for this course.

### **543-129**

#### **Paramedic to ADN Clinical**

**Credits: 2.00**

This introductory clinical emphasizes basic nursing skills and application of nursing process to clients and families across the lifespan. Emphasis placed on assessment, relationships, communication, data collection, documentation, and medication administration. COREQUISITES: Complete course 543-127 - Paramedic to ADN Theory 1 Complete course 543-128 - Paramedic to ADN Theory 2 Complete course 543-130 - Paramedic to ADN Skills

### **543-130**

#### **Paramedic to ADN Skills**

**Credits: 2.00**

This course prepares the student to perform basic nursing skills and physical assessment across the lifespan. It includes medication calculations, aseptic technique, wound care, tracheotomy care, suctioning, management of enteral tubes, medication administration, enemas, ostomy care, and catheterization. COREQUISITES: Complete 543-127 - Paramedic to ADN Theory 1 Complete 543-128 - Paramedic to ADN Theory 2

### **543-199**

#### **Clinical Reasoning in Nursing**

**Credits: 3.00**

This course introduces basic concepts of critical thinking to the nursing student. Identification of critical thinking skills and common characteristics related to these skills will be applied to the the nursing process. The goal of this course is to enhance clinical reasoning skills through application and practice in human patient simulation. Students will gain skills in critical thinking to use in everyday life as well as their academic and nursing career. PREREQUISITES: Course 543-101 - Nursing Fundamentals with a minimum grade of C or TR

### **543-300**

#### **Nursing Assistant**

**Credits: 3.00**

The Nursing Assistant course is 120 hours in total and is offered numerous times throughout the district. The course prepares students to perform basic nursing skills in caring for clients in various health care settings. A certificate is awarded upon successful completion of this course and graduates are eligible to competency test for placement on the Wisconsin Nursing Assistant/Home Health Aide Registry. PREREQUISITES: Student must be accepted to program 30-543-1, Nursing Assistant, to be eligible to register for this course. Complete course 831-107 - College Reading and Writing 1 or complete course 838-105 - Reading & Study Skills, Intro with a minimum grade of C or meet placement test score

**543-302**

**Acute Care Nursing Assistant**

**Credits: 2.00**

Provides theory and occupational experience in intermediate level nursing assistant skills for employment in hospital and other acute care settings. PREREQUISITES: Course 543-300 - Nursing Assistant

**550-130**

**Alcohol/Drug Abuse Rehabilitation**

**Credits: 3.00**

This course is designed to offer the fundamental knowledge base for the drug and alcoholic field. Emphasis is on pharmacology, dual diagnosis counseling, self-help groups, levels of care, symptom identification and assessments. Through the use of case studies, worksheets and role-play, the student will integrate knowledge and skills in these areas.

**550-150**

**Psychopharmacology**

**Credits: 3.00**

This course is designed to provide an overview of the psychopharmacology of therapeutic drugs, over-the-counter drugs, illicit drugs, alcohol, nicotine and caffeine. Emphasis will be on the nervous system structure, brain function, site of action theory and on comprehending the effects of substances on these systems. Interactions, withdrawal, maternal and fetal effects will be addressed, as well as terminology and drug regulations.

**550-154**

**Family and Chemical Abuse**

**Credits: 3.00**

A comprehensive study of the problems associated with chemical abuse within the family. Course focus is on the psychological and physiological trauma as well as methods of motivation toward recovery.

**550-156**

**Mental Health/Substance Abuse**

**Credits: 3.00**

Diagnose dual disabilities of substance abuse and mental illness disorders. The impact of dual disability on assessment and treatment.

**601-110**

**Air Conditioning Fundamentals**

**Credits: 3.00**

Topics covered include air conditioning principles and terms, physical principles of air movement and humidity, methods of conditioning air for comfort and health, the proper use of psychrometers, dry bulb thermometers, hygrometers, pilot tubes, recorders, manometers and barometers and the reading and interpretation of psychrometric charts and scales.

**601-111****Workplace Fundamentals****Credits: 1.00**

This course will introduce the student to the diverse mechanical skills required in today's workplace environment. The student will demonstrate, through practical hands-on lab exercises, skills in complying with Lock-out/Tag-out procedures and the proper care and use of common hand and power tools. General drilling, tapping, threading, and aligning will all be covered. The student will also be required to use test instruments to gather data on length, volume, area, depth, and dimensions and use electrical meters on power circuits. COREQUISITES: Course 804-370 - Mathematics I/Applied

**601-112****Environmental Systems****Credits: 2.00**

This course will introduce the student to the maintenance and repair of HVAC/R equipment encountered in the workplace. Basic theory of heating, air conditioning, and refrigeration will be covered; emphasis will be placed on preventative maintenance. The student will apply theory in lab exercises demonstrating competency with general repair and the use of temperature and electrical meters, recording data, and performing adjustments to keep equipment at peak efficiency. COREQUISITES: Complete course 801-301 - Writing Principles

**601-113****Facility Operating Engineer LP****Credits: 5.00**

This lecture format course will introduce the student to the fundamentals of obtaining the Facility Operating Engineer 3rd Class certification. Principles of thermodynamics, boiler classification, construction, fuels, rating and efficiency, and firing methods will be covered.

**601-114****Power Plant Operating Engineer****Credits: 4.00**

This lecture/lab format course will introduce the student to the fundamentals of obtaining the Power Plant Operating Engineer 3rd Class certification. Topics will include heat energy transfer, steam generators, boiler construction, and codes and fuel firing. PREREQUISITES: Course 601-117 - Facility Operating Engineer HP

**601-116****Mechanical Fundamentals****Credits: 3.00**

Topics covered include learning the various types of piping and tubing used in air conditioning and refrigeration, types of fittings, bending, brazing and soft soldering tubing, black iron pipe work, sheet metal fundamentals, using hand tools, and the recognition and practice of safety procedures while working on air conditioning and refrigeration systems.

**601-117****Facility Operating Engineer HP****Credits: 3.00**

In this course, advanced boiler operation and maintenance of mechanical heating and cooling systems will be discussed. Students will learn to understand the operations of ventilation system equipment, controls, heat exchangers, air compressors, AC & DC motors, and turbines. PREREQUISITES: Course 601-113 - Facility Operating Engineer LP

**601-121****Heating Systems****Credits: 3.00**

Topics in this course include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases and system controls. PREREQUISITES: Course 601-110 - Air Conditioning Fundamentals

**601-122****Building Performance Instrument Cert****Credits: 3.00**

This course will focus on certification based activities utilizing BPI equipment will provide the participant with the skills needed to correctly analyze HVAC & R equipment, assess indoor air quality and perform correct combustion set up and analysis. PREREQUISITES: Course 601-121 - Heating Systems with a minimum grade of C or TR

**601-128****Electrical Controls and Systems****Credits: 3.00**

Topics in this course include basic electricity review, control circuits, three phase motors, single phase motors, solid state devices, control components and troubleshooting using control schematics and solid state controls. PREREQUISITES: Complete course 601-304 - Electricity and Electronics for HVAC COREQUISITES: Complete course 804-370 - Mathematics I/Applied

**601-129****HVAC Systems****Credits: 3.00**

Topics include the installation and proper startup procedures of residential HVAC systems. Areas covered will be the installation of forced air heating equipment with a focus on the sheet metal, gas piping, venting and electrical hookups necessary to meet all code requirements. Also covered will be the installation of refrigerant lines, evaporator coils, and placement of the condensing unit. Students will leak check, evacuate and perform startup checks verifying superheat, subcooling, airflow and other vital parameters. PREREQUISITES: Courses 601-110 - Air Conditioning Fundamentals and 601-116 - Mechanical Fundamentals

**601-130****HVAC Blueprint Reading****Credits: 2.00**

Topics include blueprint reading, locating, interpreting and utilizing state building codes; understanding, interpreting and utilizing architectural working drawings.

**601-131****Heating Systems Applications****Credits: 3.00**

Topics include installation and service of heating and humidifying systems, including steam and hydronic heat distribution systems, heat pumps and complete air conditioning systems and heat recovery systems. PREREQUISITES: Course 601-121 - Heating Systems

**601-133****Refrigeration Fundamentals****Credits: 3.00**

Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications and refrigeration tools and materials.

**601-143****Refrigeration Applications****Credits: 3.00**

Topics include commercial refrigeration systems, applications, installation, servicing, troubleshooting, heat loads and piping, absorption systems and special refrigeration systems. PREREQUISITES: Courses 601-110 - Air Conditioning Fundamentals, 601-116 - Mechanical Fundamentals, and 601-133 - Refrigeration Fundamentals

**601-145****Electronic Energy Management****Credits: 3.00**

Topics include an introduction to the role of computers in the heating, ventilation and air conditioning industry, microcomputer systems and applications, programming and direct digital control (DDC). COREQUISITES: Complete course 601-147 - Control Circuit Applications

**601-147****Control Circuit Applications****Credits: 3.00**

Topics include an introduction to control circuit terminology, measuring devices and control systems. The principles of self-contained, pneumatic and electronic-electric controls are examined and applied to control systems operation and



design. PREREQUISITES: Complete course 601-128 - Electrical Controls and Systems and complete course 804-370 - Mathematics I/Applied with a minimum grade C

### **601-148**

#### **HVAC Electrical Troubleshooting and Repair**

**Credits: 3.00**

This course is designed for the advanced student who has already completed the theoretical and basic hands-on classes. In this class the student will be responsible for troubleshooting and repairing a variety of HVAC/R equipment in both lab exercises and computer simulated activities. The student will be required to diagnose the faulty equipment, select the proper replacement parts, return the equipment to a working condition and for preparing a detailed work order listing all work performed. PREREQUISITES: Courses 601-147 - Control Circuit Applications and 103-143 - Computers for Professionals

### **601-149**

#### **Heat Load Estimation**

**Credits: 2.00**

This course will teach how to use Manual J from ACCA. Students will develop the skills to do residential heating and cooling heat loads. Students will calculate not only heat loss but also losses or gains due to infiltration, sun loads, etc. Students will do calculations on actual buildings in both long hand and using Right J, the computer software for Manual J. Students will also be responsible for developing recommendations for lowering heat loss by pricing energy upgrades such as insulation, window improvement, etc., and calculating payback and fuel savings.

### **601-156**

#### **Manual D Duct Design**

**Credits: 2.00**

The student will use Manual D from ACCA to design ductwork to meet static and velocity requirements. The student will learn to calculate run lengths, pressure drop through fittings, and system components for supply and return ductwork.

### **601-176**

#### **Codes I**

**Credits: 2.00**

This advanced level course will assist workers in understanding and following the National Fuel Gas Code.

### **601-301**

#### **Basic Electricity & Circuits**

**Credits: 2.00**

This introductory course covers electrical safety, the concepts of ohms, amps and volts as related to appliances. Series parallel and combination circuits are covered. The use of test instruments to properly measure electrical parameters of motors, transformers, control devices and safeties are stressed.

**601-302****Gas Appliance Control Systems****Credits: 2.00**

This advanced course introduces the student to the common operational controls and safeties found on gas appliances in use today in a residential environment. Understanding sequence of operation, common troubleshooting techniques and testing to identify faulty components in practical lab exercises are stressed in this class. PREREQUISITES: Courses 601-301 - Basic Electricity & Circuits and 469-302 - Site Safety with a minimum grade of C or TR

**601-304****Electricity and Electronics for HVAC****Credits: 3.00**

In this course, students explore electrical principles and theory. Using standard testing equipment, students measure and troubleshoot equipment. Students practice wiring and installing a variety of electrical devices and systems. Upon completion of the course, students will be able to install, troubleshoot, and repair electrical components of air-conditioning, heating, and refrigeration systems.

**601-305****Facility Operating Engineer LP****Credits: 3.00**

In this course, students relate the principles of thermodynamics to the function of boilers. They investigate boiler types and classifications. Students examine fuels, rating and efficiency, firing methods, safety, and preventative maintenance. Upon completion of the course, students will be prepared to take the examination for the Facility Operating Engineer 3rd Class license.

**601-503****Steam & Water Boilers****Credits: 1.00**

Students will learn to recognize how various types of boilers are constructed and what operating and safety controls are required for operation.

**602-103****Engine Repair 1****Credits: 2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on in-vehicle repairs including engine cooling and lubrication systems. PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122

**602-104****Brake Systems****Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair vehicle braking systems with an introduction to ABS. (ABS diagnosis, service and repair will be addressed in the Advanced Chassis course.)

PREREQUISITES: Course 602-107 - Auto Service Fundamentals and course 602-130 - Auto Shop Essentials or 602-122

### **602-107**

#### **Auto Service Fundamentals**

**Credits: 2.00**

This automotive course focuses on developing skills in professionalism, safety and the use of basic hand and power tools in accordance with industry standards. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform basic under-hood and under-car services.

PREREQUISITES: Course 602-130 - Auto Shop Essentials or 602-122

### **602-109**

#### **Auto Transmission/Transaxle**

**Credits: 4.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair automatic transmission/transaxles including overhaul procedures. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

### **602-120**

#### **Auto Service Simulation**

**Credits: 2.00**

In this course, students use acquired skills to analyze, diagnose, and repair: engines and engines subsystems; braking systems; steering and suspension systems; electrical/electronic systems; heating, ventilation and air conditioning; and engine performance. Students work in a simulated shop environment under the direction of Gateway's instructors. Upon completion of the course, students will apply diagnostic strategy to repair vehicle systems. PREREQUISITES: Courses 602-104 - Brake Systems 602-124 - Steering & Suspension Systems 602-129 - Auto Scope and Scanner Diagnostics 602-205 - Engine Repair II 602-128 - Electrical & Electronic Systems 3 602-196 - Climate Control Systems and 602-198 - Engine Performance 2

### **602-121**

#### **Auto Instrumentation and Testing**

**Credits: 4.00**

This course will develop the individual and technical skills required to perform advanced automotive diagnostics. Analytical skills will be developed and practiced to enable the technician to develop troubleshooting techniques. The basic theory and operation of diagnostic test equipment such as lab scopes and scan tools, will be covered including their application in the performance of field diagnostics. PREREQUISITES: Course 602-197 - Engine Performance 1

### **602-123**

#### **Engine Repair 2**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. PREREQUISITES: Course 602-103 - Engine Repair 1 COREQUISITES: Course 801-197 - Technical Reporting

### **602-124**

#### **Steering & Suspension Systems**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair steering and suspension systems including wheel alignment procedures. PREREQUISITES: Course 602-107 - Auto Service Fundamentals and course 602-130 - Auto Shop Essentials or 602-122

### **602-125**

#### **Electrical & Electronic Systems 1**

**Credits: 2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis. PREREQUISITES: Course 602-107 - Auto Service Fundamentals and course 602-130 - Auto Shop Essentials or 602-122 COREQUISITES: Course 804-135 - Quantitative Reasoning

### **602-127**

#### **Electrical & Electronic Systems 2**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems, including batteries, starting, charging, and lighting systems, and computer control systems. PREREQUISITES: Course 602-125 - Electrical & Electronic Systems 1

### **602-128**

#### **Electrical & Electronic Systems 3**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems including driver information, horn, wiper/washer, power accessories, cruise control, air bag, anti-theft and radio systems. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

### **602-129**

#### **Auto Scope and Scanner Diagnostics**

**Credits: 3.00**

In this course students will learn the general theory, operation and applications of diagnostic systems. OBD scan tools, graphing multi-meters, Digital Storage Oscilloscopes and Exhaust Gas Analyzers will be used to collect vehicle data and diagnose common system failures in late model vehicles. Upon completion of this course learners will be able to utilize OEM and aftermarket diagnostic equipment to scan, diagnose and repair some of the most complex systems on today's

vehicles. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Complete courses 602-197 - Engine Performance 1 and 801-136 - English Composition 1

### **602-130**

#### **Auto Shop Essentials**

**Credits: 3.00**

In this course, students explore the automotive service environment. Students will examine automated, web-based information systems used by automotive service professionals including: Wisconsin Chapter ATCP 132 Motor Vehicle Repair, computer-generated repair orders, and Electronic Service Information Systems such as ShopKey® and ALLDATAT. Students practice using the automated tool control system, and, through observation of automotive service employers and the Gateway Auto Lab, develop an awareness of how automotive service work is performed. Upon successful completion of the course, students will be able to work safely in an automotive shop environment and navigate automated, web-based information systems, and they will have gained the knowledge to earn industry-recognized torque and precision measuring certifications through NC3.

### **602-131**

#### **Automotive Service**

**Credits: 2.00**

In this course, students use acquired skills to analyze, diagnose, and repair: engines and engine subsystems; braking systems; steering and suspension systems; electrical/electronic systems; heating, ventilation and air conditioning; and engine performance. Students work in a shop environment under the direction of a master technician. Upon completion of the course, students will apply diagnostic strategy to repair vehicle systems.

### **602-149**

#### **Manual Drive Train and Axles**

**Credits: 4.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair clutches, manual transmissions/transaxle, differentials, four wheel drive/all wheel drive, and drive axles. PREREQUISITES: Course 602-107 - Auto Service Fundamentals and course 602-130 - Auto Shop Essentials or 602-122

### **602-195**

#### **Advanced Chassis Systems**

**Credits: 2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair antilock brake, vehicle stability enhancement, and electronic steering and suspension systems. PREREQUISITES: Courses 602-104 - Brake Systems, 602-124 - Steering & Suspension Systems, and 602-127 - Electrical & Electronic Systems 2

### **602-196**

#### **Climate Control Systems**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair climate control systems including heating, cooling, and air distribution. Upon successful completion of the Mobile Refrigerant Handling unit (ATCP-136), a state certificate will be issued. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

### **602-197**

#### **Engine Performance 1**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair powertrain control and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: Courses 602-127 - Electrical & Electronic Systems 2 602-204 - Engine Repair I and 804-135 - Quantitative Reasoning COREQUISITES: Complete course 801-136 - English Composition 1

### **602-198**

#### **Engine Performance 2**

**Credits: 4.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair fuel and emission control systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: Course 602-197 - Engine Performance 1

### **602-204**

#### **Engine Repair I**

**Credits: 3.00**

This automotive course focuses on developing the skills needed to service and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. PREREQUISITES: Course 602-107 - Auto Service Fundamentals and course 602-130 - Auto Shop Essentials or 602-122

### **602-205**

#### **Engine Repair II**

**Credits: 2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on in-vehicle diagnosis and repairs including valve timing, engine cooling and lubrication systems. PREREQUISITES: Course 602-204 - Engine Repair I

### **605-107**

#### **Fundamentals of Electricity/Electronics**

**Credits: 3.00**

This course studies the behavior of electricity in terms of voltage, amperage, resistance, and impedance in various circuits. Lab instruction will include the application and usage of measuring and troubleshooting equipment.

**605-108****Introduction to Electronics and Eng****Credits: 5.00**

The participants will utilize theoretical analysis, supported by practical hands-on experiments to explore the foundational principles of DC, AC, and Digital Electronics. These principles will be used in the analysis of both analog and digital electronic circuits. In addition, a student design project will provide a practical approach to investigate the Engineering Design process. Upon completion of this course, participants will have the background necessary to successfully teach an introductory course in DC, AC and Digital electronics, along with basic Engineering Design Principles.

**605-113****DC/AC I****Credits: 3.00**

This introductory course presents the scientific foundation used throughout electronics technology. Topics include DC/AC forms of current, voltage, resistance, capacitance, inductance, and power. Troubleshooting practices will be emphasized and computer technologies will be used to enhance abstract theory. Students perform laboratory experiments and prepare technical reports.

**605-114****DC/AC II****Credits: 3.00**

An extension of and enhancement to DC/AC I. More advanced topics, such as complex networks, applicable theorems, polyphase systems, and passive filters, will be discussed. Computer simulation software will be used to reinforce theoretical analyses. PREREQUISITES: Complete course 605-113 - DC/AC I COREQUISITES: Course 804-115 - College Technical Math 1

**605-120****Electronic Devices I****Credits: 4.00**

The basic operating principles of diodes, transistors, and linear ICs are presented as they are used in rectifier, amplifier, and oscillator circuits. Lecture theory is reinforced with laboratory assembly, measurements, troubleshooting, and technical report writing. PREREQUISITES: Course 605-113 - DC/AC I

**605-121****Electronic Devices II****Credits: 4.00**

Introduction to unipolar transistors, JFETs, and MOSFETs being used in linear and nonlinear circuits. Students will use high frequency analysis with both bipolar and unipolar transistors. Operational amplifiers are used as linear amplifiers and in nonlinear circuits. Some circuits covered include voltage amplifiers, summing amplifiers, instrumentation amplifiers, active filters and oscillators. PREREQUISITES: Course 605-120 - Electronic Devices I

**605-130****Digital Electronics****Credits: 4.00**

Analysis of digital electronic circuits. Realization of logic gates, using TTL and CMOS devices. Verification of theory is accomplished through laboratory experiments with small and medium scale integrated circuits.

**605-133****Industrial Data Communications****Credits: 3.00**

This course introduces students to the latest technologies in industrial data communications with a focus on digital and analog signaling. Topics include topology, the principles of signaling on physical links, transmission media, data formatting, A-to-D conversion, multiplexing, modulation using digital data, error control, flow control and protocols. Special attention will be given to practical troubleshooting and problem solving of industrial data communications. PREREQUISITES: Course 605-113 - DC/AC I or 605-107 - Fundamentals of Electricity/Electronics with a minimum grade of C or TR

**605-134****Telecommunications Installer Operation****Credits: 4.00**

This course is actual run time in the lab and field for hands-on telecommunication installation work. Students will work in groups and as individuals to gain experience in real and simulated telecommunications installations. Students bring together all of the theories and skills learned in the other classes and apply them to the installation process. COREQUISITES: Courses 605-166 - Telecom Safety & Installation and 605-197 - Telecom Fire Stopping

**605-136****Programmable Controller System Design****Credits: 3.00**

This course introduces the student to the design and implementation of an automated process controlled by a Programmable Logic Controller. PREREQUISITES: Course 605-130 - Digital Electronics with a minimum grade of C or TR

**605-138****Circuit Construction and Repair****Credits: 3.00**

Students will learn and apply the skills for the safe use of hand tools, soldering, desoldering, copper and fiber termination. These skills will be demonstrated in the construction of electronics based projects.

**605-150****Industrial Electronics****Credits: 3.00**



Covers industrial electrical control using motor starters, relays, pushbuttons, as well as variable speed control of DC motors and power distribution for industry. PREREQUISITES: Courses 605-114 - DC/AC II and 605-120 - Electronic Devices I

**605-159**

**Fiber Optics Theory & Testing**

**Credits: 1.00**

The Fiber Optics Theory and Testing class teaches basic concepts of fiber optics installation and service. These skills, abilities, and knowledge are beneficial for a student seeking employment in the telecommunications cabling field. This class meets some of the hands-on requirement for the ETA-1 Certified Fiber Optic Installer (CFOI) test.

**605-166**

**Telecom Safety & Installation**

**Credits: 3.00**

The Safety and Installation class teaches the importance of safety, and safe practices and procedures. The course teaches basic concepts of telecommunications equipment and cabling installation and other skills needed in the telecommunication field. Students will have the opportunity to earn a Fire Stopping and a Copper Certification. This class meets some of the requirements for the ETA-I Residential Electronics Systems Installer (RESI) and Certified Data Cabling Installer Certification (DCIC). It also prepares students for BICSI Installer Level 1 Certification exam. These skills, abilities and knowledge, are beneficial for a student seeking employment in the telecommunications cabling field.

**605-183**

**Electronics/Future Trends in**

**Credits: 3.00**

This course will study the future trends in the electronics field. Topics covered are communications, controls, manufacturing, and newly developed technologies. Students will complete a project.

**605-190**

**Microprocessors**

**Credits: 4.00**

An introduction to microcomputer programming. Digital codes, registers, and register instruction, logic gates and truth tables are covered. The 7400 series of integrated circuit chips are studied. COREQUISITES: Courses 605-114 - DC/AC II 605-121 - Electronic Devices II and 801-197 - Technical Reporting

**605-197**

**Telecom Fire Stopping**

**Credits: 2.00**

The Fire Stopping class teaches the importance of fire stopping and fire safety procedures. This course teaches basic concepts of fire stopping and cabling installation.

**606-102****Mechanical Systems Design****Credits: 3.00**

Students will create mechanical designs and CAD models to develop an efficient and effective manufacturing process. After developing the manufacturing process, students will utilize skills such as statics, strength of materials, and mechanisms to determine loads to evaluate the design and determine if it will function as planned. Using elements of machine design, students will then specify specific machine components to be used to build the manufacturing process system. These components will be incorporated into the design and the students will then mockup and test the manufacturing process system. The students will evaluate the viability of the manufacturing process after building and testing of the manufacturing process system. PREREQUISITES: Course 605-136 - Programmable Controller System Design

**606-103****Material Properties****Credits: 2.00**

Students in this course learn and apply the mechanical strength, chemistry, and material basic characteristic properties, for materials including; metals, plastics, composites, nano-technologies, powdered metals, and non-metals. Students will have a basic understanding of how to select materials that fit the engineering product design requirements.

**606-111****Blueprint Reading****Credits: 2.00**

Blueprint reading covers the interpretation of engineering drawings from a basic level to more complex topics. Topics covered include third-angle orthographic projection, sections, dimensioning, types of lines, auxiliary views, the title block and symbols. Lecture will be supplemented by individual class exercises to provide actual practice for participants.

**606-116****Machine Design/Elements of****Credits: 3.00**

Procedures and consideration in design of simple machine elements such as shafts, bearings, couplings, keys, pins, springs, clutches, brakes, and pressure cylinders. Emphasis on neat, orderly procedure and a thorough consideration of design specifications. PREREQUISITES: Course 606-151 - Statics

**606-118****Mechanisms****Credits: 2.00**

Kinematics of machinery, displacement, velocity and acceleration, analysis of linkages, cams and gears, geometry of involute gears, properties of standard spur, helical, bevel, and planetary gears. Practical problems develop an understanding of principles. PREREQUISITES: Courses 606-151 - Statics and 606-152 - Engineering Graphics w/CAD 1

**606-119****Motor Controls****Credits: 3.00**

This course provides a practical approach to motor control of various machines for non-electrical or electronic technicians. It discusses electrical and mechanical components and how they are connected together to control different types of motors. Many different types of control circuits are discussed.

**606-121****Blueprint/Schematic Interpretation****Credits: 2.00**

This course will focus on providing the knowledge needed by maintenance professionals to extract information from blueprints and schematics. Sketching parts and drawing schematic circuits will also be explored. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications

**606-122****Geometric Dimensioning and Tolerancing****Credits: 2.00**

Stresses the interpretation of geometric tolerances applying the five categories of feature control: form, orientation, runout, profile and position. Various inspection techniques, datum construction, feature control frames and material condition modifiers; least material condition, maximum material condition and regardless of feature size will be studied.

**606-128****CAD - Solidworks****Credits: 2.00**

Students use Solidworks software to create solid models of various machine components. They also convert solid parts into conventional 2-D orthographic drawings which include sections, auxiliary views, and dimensions. Students create assembly drawings and configurations of various parts.

**606-129****CAD/Solids Advanced****Credits: 2.00**

A continuation of the basic solids class that includes assembly drawings, exploded isometric drawings, customization, sheet metal drawings, import/export functions, thin features, and the use of Microsoft Office features to increase productivity. PREREQUISITES: Course 606-128 - CAD - Solidworks

**606-130****SolidEdge, Introduction****Credits: 2.00**

In this course, students learn to use SolidEdge software to create solid models of various machine components, convert solid parts into conventional 2-D orthographic drawings, create section and auxiliary views with applied dimensions of various components, and create assembly drawings of various parts.

### **606-131**

#### **Strength of Materials**

**Credits: 3.00**

Internal stresses and deformation of elastic bodies resulting from external forces. Tables of properties of engineering materials are used. Analysis of simple and combined stresses relative to the properties of the materials to meet functional requirements. PREREQUISITES: Courses 606-151 - Statics and 806-154 - General Physics 1

### **606-137**

#### **Manufacturing Process Applications**

**Credits: 2.00**

Students spend part of the course in the Machine Shop learning basic lathe, mill, drill press, and grinder operations as well as layout. Part of the course is taught in the welding lab where students learn the operations of gas and arc welding. PREREQUISITES: Course 606-159 - Manufacturing Processes with minimum grade D

### **606-138**

#### **Design Problems**

**Credits: 2.00**

In this course, students diagram ideas, gather data, calculate project and process capabilities, and analyze problems in a project-based environment. Students initiate projects using mechanical design and manufacturing technology skills. Upon completion of the course, students will be able to judge the feasibility of a mechanical design or manufacturing process. PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade D

### **606-141**

#### **Autocad Mech Design Technician**

**Credits: 3.00**

This course is an introductory course in the latest version of AutoCAD. No prior CAD or drafting experience is necessary. While it would be helpful to have some knowledge of computers, geometry, and design problems, this too is not necessary. This course is designed for students that have had no or very little exposure to CAD. Upon the successful completion of all assigned work in this course, a student should have an understanding of how to create basic geometric shapes and drawings as well as applying dimensions using AutoCAD software. Students will use advanced CAD dimensioning concepts and edit and modify various types of entities, such as dimensions, hatch patterns, and text and output to paper views and drawings. Use of grips, attributes, and Xrefs, menu customization, and profiles are covered. While drawing will be created in this class, drafting is not taught. This course deals strictly with the basic use of AutoCAD software.

**606-142****Intro to Creo/ProEngineer****Credits: 2.00**

In this course, students use Pro-E software to create solid models of various machine components, convert solid parts into conventional 2-D orthographic drawings, create section and auxiliary views with applied dimensions of various components, and create assembly drawings of various parts.

**606-149****Mechanical Engineering, Introduction to Tech****Credits: 2.00**

This course will instruct the student in manual drafting techniques; however, most of the material may be completed using CAD. It is designed to develop knowledge and basic mechanical drafting skills. Upon completion of this course, the student will have developed skills in the use of drafting tools, lettering, geometric construction, orthographic projection, sketching, visualization, dimensioning, and basic tolerancing. COREQUISITES: Course 606-128 - CAD - Solidworks

**606-151****Statics****Credits: 3.00**

Study of forces in equilibrium; types of forces, couples, vector and scalar quantities, force systems, friction, centroids, centers of gravity, moments of inertia of areas. PREREQUISITES: Course 804-114 or 804-115 - College Technical Math 1

**606-152****Engineering Graphics w/CAD 1****Credits: 2.00**

Advanced concepts of topics from Intro to MET are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include drawing primary and secondary auxiliary views, sections, threads and fasteners, and creating drawings of weldments. PREREQUISITES: Courses 606-128 - CAD - Solidworks 606-149 - Mechanical Engineering, Introduction to Tech

**606-153****Engineering Graphics w/CAD 2****Credits: 2.00**

Advanced concepts from Engineering Graphics 1 are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include creating working drawings of simple and complex assemblies, redesigning existing parts and assemblies, and creating welded assemblies. PREREQUISITES: Course 606-152 - Engineering Graphics w/CAD 1

**606-154****Engineering Graphics w/CAD 3****Credits: 2.00**

Advanced concepts of topics from Engineering Graphics 1 are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include creating gear, sprocket, and pulley drawings and cutting data, understanding the nomenclature associated with gear, sprocket, and pulley drawings, locating information about standard parts from tables and charts, creating cam displacement diagrams and profiles, and using vendor catalogs to select parts. PREREQUISITES: Course 606-153 - Engineering Graphics w/CAD 2

**606-159****Manufacturing Processes****Credits: 2.00**

Basic methods of fabrication used in modern manufacturing, welding, electroforming, casting, metallic coating, anodizing, plating and chip removal, using numerical control, and hydraulic systems. PREREQUISITES: Course 606-103 - Material Properties or 606-136 with a minimum grade C COREQUISITES: Course 801-136;

**606-160****Fluid Power and Design****Credits: 3.00**

This course is designed to give the student a foundation in hydraulics and pneumatics. The units of instruction will cover components, general operating characteristics and principles, fluid power systems, and problem solving techniques required to put these systems together.

**606-199****Internship, Mechanical Tech****Credits: 1.00**

A mechanical tech internship is an opportunity for students to get hands-on experience in the mechanical or electrical field. Students will apply to participating industries for an opportunity to work with their engineers and technicians. If accepted, they will have the opportunity to earn credit (note: some companies may only accept you if you are earning credit).

**606-501****AutoCAD for the Trades****Credits: 1.25**

This course has been added to enhance our existing apprenticeship program. It will also serve to familiarize our apprentices with some of the technological advancements that have already been implemented into the sheet metal field. AutoCAD has all but replaced the hand drafting methods that have been practiced for years. This course will teach the basic functions of the AutoCAD program and allow the students to apply these skills in practical field related applications. Work sheets, drawings and quarterly tests will be used to assess the student's progress.

**607-102****Conflict Resolution in Engineering/Construction****Credits: 2.00**

This course is designed to help students learn how to recognize, approach and defuse various confrontational situations on the construction job site and in the workplace.

**607-103****Civil Engineering And, Introduction to Architecture****Credits: 2.00**

This course is designed to introduce students to the wide variety of career opportunities within the fields of Civil Engineering Architecture, Land Survey, Fresh Water Resources and Construction Management.

**607-104****Building Material & Construction Method****Credits: 3.00**

This course is an introduction to common building materials and construction methods including soils, aggregates, pipes, cement, concrete, asphalt, steel, wood masonry and residential and commercial building materials.

**607-108****Boundary Location and Research****Credits: 3.00**

The principles and practices for boundary location and research are presented in this course. The public land system will be covered in detail along with the principles for performing surveys. PREREQUISITES: Course 607-173 - Land Surveying Fundamentals

**607-117****Geographical Information Systems I****Credits: 2.00**

This is an introductory course into GIS (Geographical Information Systems), GIS terminology, data structure, and data analysis based on spatial parameters. Students learn how to manipulate, parse, combine, and even build basic geographical databases. Applications ranging from land record management to marketing to political science are addressed.

**607-118****Geographical Information Systems II****Credits: 2.00**

This is the second course in the Geographical Information System series (GIS). Students explore the conceptual framework of geographic information systems and spatial modeling and develop GIS database abilities through group and self- selected projects. Emphasis is on independent learning and synthesis of GIS into the student's studies.

PREREQUISITES: Course 607-117 - Geographical Information Systems I

**607-119**

**Civil Technology Internship**

**Credits: 1.00**

Satisfactory completion of at least 80 hours of relevant work experience in the field approved by the head instructor and documented by the employer.

**607-127**

**Civil Engineering Drafting**

**Credits: 3.00**

Using MicroStation, the student will prepare standard drawings typically used in the field of Civil Engineering...including Title Pages, Typical Sections, Plan & Profiles, Cross Sections, Sewer Profiles, Alignment Tie Sheets, etc. PREREQUISITES: Courses 607-187 - 3D Cad: Digital Terrain Modeling and 801-136 - English Composition 1

**607-128**

**Construction Estimating**

**Credits: 3.00**

This course is designed to develop the skills for preparation of cost estimates using materials, labor, and equipment in construction. Time and cost components are also addressed in a unit production and a project scheduling evaluation using the critical path method. PREREQUISITES: Course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1 COREQUISITES: Course 801-136 - English Composition 1

**607-129**

**Future Trends in Civil Engineering/ Architectural Technology**

**Credits: 2.00**

In this course, students will explore an array of emerging technologies, processes, and approaches that provide a framework, present their findings in a formal setting, and model an application of the selected element to a traditional design-build approach. Upon completion of the course, students will be able to relate emerging technologies processes, and approaches to building design and construction practice. PREREQUISITES: Courses 607-104 - Building Material & Construction Method 607-169 - Land Surveying Basics and 607-141 - Construction Basics

**607-132**

**Structural Mechanics - Civil Engineering**

**Credits: 3.00**

This course introduces students to basic principles of structural mechanics (statics and strength of materials), with special emphasis placed upon application of these principles in the design of simple beams used in commercial buildings. PREREQUISITES: Course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1



**607-134****Steel - Design and Detailing****Credits: 2.00**

This course is designed so that students will understand the design and detail of structures using LRFD methods, including simple beams, cantilevers, and axially loaded columns. Design of connections will also be addressed.

PREREQUISITES: Course 607-132 - Structural Mechanics - Civil Engineering

**607-135****Reinforced Concrete - Design & Detailing****Credits: 2.00**

This course is designed so that students will understand the design and detail of structures using reinforced concrete, including simple beams, cantilevers, retaining walls, and axially loaded columns. PREREQUISITES: Course 607-132 - Structural Mechanics - Civil Engineering

**607-136****Construction Project Management****Credits: 2.00**

This course is designed to introduce the concepts of overall construction project management including scheduling, resource allocation, cost and technical constraints.

**607-137****Global Positioning Systems****Credits: 2.00**

This course is designed to introduce students to the concepts of GPS in surveying and the equipment used in acquiring/processing survey grade information. PREREQUISITES: Course 607-169 - Land Surveying Basics

**607-139****Material Testing & Inspection****Credits: 4.00**

Students will conduct and evaluate standardized field and laboratory testing on civil engineering materials as required for inspection certifications. PREREQUISITES: Course 607-104;

**607-141****Construction Basics****Credits: 2.00**

In this course, students develop general skills helpful in construction. Students are exposed to the construction industry, tools and materials typically used in construction, construction health and safety, blueprint reading, and diversity in the construction industry. Upon completion of the course, students will have knowledge and skills to perform basic duties on a job site.

**607-143****Structural Design Concrete and Steel****Credits: 3.00**

This course is designed so that students will understand the design and detail of structures using LRFD methods for steel and reinforced concrete. Simple beams, cantilevers, and axially loaded columns will be covered along with the design of structural connections. PREREQUISITES: Course 607-132 - Structural Mechanics - Civil Engineering with a minimum grade of C or TR

**607-148****Wood Design and Detailing****Credits: 1.00**

This course is designed to teach the students to design and detail basic wood structural components and connections. PREREQUISITES: Course 607-132 - Structural Mechanics - Civil Engineering

**607-150****Survey Construction, Rte and Hwy****Credits: 4.00**

Using Wisconsin Department of Transportation's Facility Design Manuals, students will learn the principles and designs of roadways...including horizontal/vertical curves, superelevations, pavement design, construction considerations, etc. Students will field survey an existing site and develop a preliminary plan set for a proposed roadway. The students will then stake out this proposed roadway. PREREQUISITES: Courses 607-173 - Land Surveying Fundamentals and 801-136 - English Composition 1

**607-152****Elements of Inspections, Contracts, and Specifications****Credits: 3.00**

Using Wisconsin Department of Transportation's Construction Specification Manual and various other project specific specifications, students will learn the principles and basic techniques of highway and municipal inspection.

**607-154****Sewer and Water Systems****Credits: 2.00**

Using the latest hydraulic software along with the Standard Specifications for Sewer and Water in Wisconsin, students will learn the basic applications of hydrology and hydraulics for various applications including run off calculations and design of culverts, storm sewers, detention basins, etc. Students will also be acquainted with the principles and software applications in designing roadway drainage, water and sewer lines. PREREQUISITES: Course 607-104 - Building Material & Construction Method and course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

**607-161****Legal Aspects of Land Surveying****Credits: 2.00**

This course covers the legal concepts and doctrines related to land, land ownership, duties and responsibilities of surveyors, and Wisconsin statutes and local codes. COREQUISITES: Course 607-108 - Boundary Location and Research

**607-162****Materials Testing****Credits: 2.00**

This course introduces students to various material testing methods used in road construction based on Wisconsin Department of Transportation's Highway Technician Certification Program. PREREQUISITES: Course 607-104 - Building Material & Construction Method

**607-166****Capstone: CET Highway Technology****Credits: 1.00**

The Civil Engineering Technician Highway capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Civil Engineering Technology Highway program courses. COREQUISITES: Courses 607-154 - Sewer and Water Systems and 607-150 - Survey Construction, Rte and Hwy

**607-167****Capstone: CET Freshwater Resources****Credits: 1.00**

The Civil Engineering Technician - Fresh Water Resources capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Civil Engineering Technology Fresh Water Resources program courses. COREQUISITES: Courses 607-184 - Environmental Impact Assessments and 607-185 - Waste Water Treatment

**607-169****Land Surveying Basics****Credits: 2.00**

This course is an introduction to the basics of land surveying ranging from pacing/taping and level loops thru the use of a total station to accomplish basic traverses. This course also includes an introduction to drawing deed descriptions, basic surveying terms, and units of measure.

**607-170**

**AutoCAD for Construction Sciences**

**Credits: 2.00**

This course teaches the participant the basics of Computer Aided Drafting (CAD) using AutoCAD and other design software within the various fields of construction sciences and interior design. Students develop their CAD skills while working on various real world construction type projects.

**607-173**

**Land Surveying Fundamentals**

**Credits: 3.00**

This course includes instruction in the use of instruments used in the field of construction surveying, such as the transit, level, and chains, and their application in the solving of typical field problems. The student does the field work and office computations required in the solution of these problems. PREREQUISITES: Courses 607-169 - Land Surveying Basics and 607-187 - 3D Cad: Digital Terrain Modeling and course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

**607-181**

**Watershed Hydrology and Conservation**

**Credits: 2.00**

Distribution and properties of waters on the earth. concept of the hydrologic cycle, and basic principles of meteorology, precipitation, streamflow, and groundwater flow. Introduction to erosion and urban stormwater pollution controls and conservation PREREQUISITES: Course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

**607-182**

**Water Sampling and Testing**

**Credits: 2.00**

Review and application of technology and techniques for gathering data from water resources and water treatment processes. PREREQUISITES: Courses 607-104 - Building Material & Construction Method and 801-136 - English Composition 1

**607-183**

**Fresh Water Treatment**

**Credits: 3.00**

Review of water characteristics, drinking water, receiving water and effluent standards. Basic design methodology and operational features of common physical, chemical and biological processes for the treatment of water. PREREQUISITES: Courses 607-182 - Water Sampling and Testing and 806-127 - Chemistry 1

**607-184**

**Environmental Impact Assessments**

**Credits: 2.00**

Review of process and content of environmental impact assessments including evaluation of environmental impacts and alternatives PREREQUISITES: Course 801-136 - English Composition 1

### **607-185**

#### **Waste Water Treatment**

**Credits: 3.00**

Review of wastewater characteristics, receiving water and effluent standards. Basic design methodology and operational features of common physical, chemical and biological processes for the treatment of wastewater. Introduction to the processing and disposal of sludges and other treatment plant residuals. PREREQUISITES: Course 607-183 - Fresh Water Treatment

### **607-186**

#### **Erosion Control in Construction**

**Credits: 2.00**

This course is designed to introduce students to environmental considerations, environmental rules and regulations pertaining to construction, impacts of construction on the environment, and methods for effective erosion control. Students will review and apply the techniques for developing a stormwater plan including design, installation, inspection and maintenance of erosion and sediment control practices for construction sites. PREREQUISITES: Course 607-104 - Building Material & Construction Method and course 804-135 - Quantitative Reasoning or 804-115 - College Technical Math 1

### **607-187**

#### **3D Cad: Digital Terrain Modeling**

**Credits: 2.00**

This course is an introduction to the concepts and creation of Digital Terrain Models (DTM) including the extrapolation of contours, profiles and cross sections from the DTM using Autodesk Civil3D software.

### **607-188**

#### **Capstone: Geospatial Surveying Tech**

**Credits: 1.00**

The Geospatial Surveying Technician capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Geospatial Surveying Tech program courses.

### **607-189**

#### **Geospatial Data Processing**

**Credits: 2.00**

This course is designed to develop advanced data processing skills required by full time surveyors including data sets from remote sensing technologies. PREREQUISITES: Course 607-169 - Land Surveying Basics

**607-190****Legal Research and Boundary****Credits: 4.00**

This course is an introduction to the legal concepts and doctrines related to land, land ownership, duties and responsibilities of surveyors, Wisconsin statutes and local codes. This includes the principles and practices for boundary location and research. The public land system will be covered in detail along with the principles for performing surveys.

PREREQUISITES: Course 607-169 - Land Surveying Basics

**612-102****Pneumatics/Hydraulics - Introduction****Credits: 3.00**

The fundamental principles and physical laws governing fluid power and pneumatics are studied. The operation of the various control valves and actuators will be explored through a combination of theory and practical lab exercises.

**612-115****Hydraulics/Advanced****Credits: 3.00**

Analysis of the various selection factors for hydraulic components. Design of various components to determine how they meet specific duty requirements. Physical laws will be applied to determine how hydraulics can best be applied for maximum efficiency. Make component selections based on a given set of criteria.

**614-100****Construction Industry Safety & Health****Credits: 1.00**

This course covers safety standards, policies, and procedures in the construction industry. Topics include scope and application of the construction standards, construction safety and health principles, and special emphasis on those areas in construction which are most hazardous.

**614-101****Construction Contract Law****Credits: 2.00**

This course is an introduction to the broad field of construction contracts and law as applied to the built environment.

PREREQUISITES: Complete courses 614-100 - Construction Industry Safety & Health and 607-136 - Construction Project Management

**614-102****Capstone: Construction Proj Management****Credits: 2.00**

The Construction Project Management Capstone course is designed to apply the practice of overall construction project management including scheduling, resource allocation, cost and technical constraints. PREREQUISITES: Course 607-136 - Construction Project Management

### **614-107**

#### **Residential and Commercial Inspection**

**Credits: 3.00**

This course is designed to teach students the skills needed to become a residential and commercial inspector including a focus on Energy Audits. PREREQUISITES: Courses 607-104 - Building Material & Construction Method and 614-108 - Residential Code COREQUISITES: Course 614-114 - Commercial Code

### **614-108**

#### **Residential Code**

**Credits: 1.00**

This course is a study of the Wisconsin Uniform Dwelling Code and its application to residential design. COREQUISITES: Course 801-136 - English Composition 1

### **614-110**

#### **Architectural Drafting/Residential**

**Credits: 3.00**

This course is the capstone application class regarding residential design, including a full design of a residential building using BIM. Students develop set of working drawings and specifications for a residential building using Autodesk Revit. PREREQUISITES: Course 614-150 - 3D CAD:Building information Model COREQUISITES: Course 614-108 - Residential Code

### **614-114**

#### **Commercial Code**

**Credits: 2.00**

This course is a study of the Wisconsin Commercial Building Code (including the International Building Code) and its application to commercial design. PREREQUISITES: Course 801-136 - English Composition 1

### **614-115**

#### **Architectural Drafting/Commercial**

**Credits: 3.00**

This course is the capstone application class regarding commercial design, including a full design of a commercial building using BIM. Students develop a set of drawings and specifications for a commercial building using Autodesk Revit. PREREQUISITES: Course 614-150 - 3D CAD:Building information Model COREQUISITES: Course 614-114 - Commercial Code

**614-123****Capstone: Architectural Structural Tech****Credits: 1.00**

The Architectural-Structural Engineering Technician capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Architectural-Structural Engineering Tech program courses. PREREQUISITES: Course 607-134 - Steel - Design and Detailing or 614-100 - Construction Industry Safety & Health COREQUISITES: Complete course 614-115 - Architectural Drafting/Commercial and course 607-135 - Reinforced Concrete - Design & Detailing or 614-101 - Construction Contract Law

**614-138****3D Modeling and Virtualization****Credits: 1.00**

Using 3D modeling software and hardware, students will create and virtualize their construction project designs for presentations and portfolio development. PREREQUISITES: Courses 614-150 - 3D CAD:Building information Model and 607-187 - 3D Cad: Digital Terrain Modeling

**614-140****Mechanical Systems for Buildings****Credits: 3.00**

This course is an introduction to the broad field of mechanical systems and their implications on architectural form and design. It will provide students with the information and tools required to assess the need for an application of various building systems including mechanical, electrical, plumbing, vertical transportation, fire protection, etc. PREREQUISITES: Course 607-104 - Building Material & Construction Method

**614-150****3D CAD:Building information Model****Credits: 2.00**

This course is an introduction to the concepts and creation of Building Information Modeling (BIM) projects including the extrapolation of schedules, plans, sections and elevations from the BIM using Autodesk Revit software.

**620-101****Variable Speed Drives****Credits: 3.00**

This course covers the theory and operation of DC and AC variable speed drives that run electrical motors. Content will include servos, stepping motors, and control of general purpose motors. Feedback sensing devices in position and velocity control will be covered. Laboratory experiments will be used to help the student in understanding the complex nature of those systems. PREREQUISITES: Course 620-150 - Electromechanical Dr Systems



## **620-102**

### **Process Controls**

**Credits: 3.00**

This course covers the equipment necessary for open and closed loop control of fluids in both flow and level environments. It describes the various production methods used in process industries and provides a background of basic regulating control strategies and controller tuning to accommodate the dynamics of various systems. Strategies include feedback (proportional, integral, derivative), feed forward, ratio, cascade, and adaptive control. Process plan trainers, which are immature versions of real industrial processes, are used to reinforce the theory portion of the course. COREQUISITES: Course 620-111 - Solid State Circuits, Introduction to

## **620-103**

### **Industrial Controls, Introduction to**

**Credits: 4.00**

Industrial electrical hardware such as motors and controls are studied. Industrial electrical control circuits are developed and wired. Troubleshooting techniques are used to correct problems in wiring or controls. Motor starters, industrial control relays, timers, proximity switches, and electric eyes are studied, including proper selection and wiring techniques. Ladder logic and wiring diagrams are examined and drawn. This course is for an individual that already has a basic understanding of electricity. COREQUISITES: Course 605-113 - DC/AC I

## **620-104**

### **Electro Hydraulic/Mechanical Systems**

**Credits: 3.00**

This course brings together the information learned in the previous electrical, mechanical, and hydraulic/pneumatic courses. Circuits containing electrical, mechanical, and hydraulic/ pneumatic devices will be constructed and tested for proper operation. The topic of feedback devices and troubleshooting these complex units will also be explored. PREREQUISITES: Courses 462-103 - Mechanical Power Transmission and 620-103 - Industrial Controls, Introduction to

## **620-110**

### **Robotics Mechanics I**

**Credits: 3.00**

In this course, the basic control elements of electromechanical machines will be studied. The application and simple control of power using pneumatics and electrical methods will be covered. Electrical control includes the use of simple push buttons, solid state power transistors, and thyristors to control electrical power. The use of air as a power transfer medium will be implemented along with the use of electro- pneumatic devices to control a pick and place robot. The operational amplifier will be studied as a control device in proportional, integral, and differential control circuits. PREREQUISITES: Course 605-113 - DC/AC I

## **620-111**

### **Solid State Circuits, Introduction to**

**Credits: 4.00**

This course is an introduction to diode circuits, bipolar transistor circuits, and electronic testing equipment. Topics are semiconductor physics, biasing techniques, lead-line analysis of amplifiers, frequency response, and realization of logic gates using TTL and CMOS devices. Verification of theory is accomplished through laboratory experiments with small and medium scale integrated circuits. PREREQUISITES: Course 605-113 - DC/AC I

### **620-113**

#### **Troubleshooting Electrical/Electronic Systems**

**Credits: 3.00**

This course will teach the student proper troubleshooting techniques in the industrial setting. The student will be required to use electrical schematics and wiring diagrams along with proper troubleshooting equipment, such as meters and oscilloscopes, to locate problems with electrical/electronic systems. Areas of troubleshooting will include motor starters, relays, AC and DC motors, motor drives, lighting circuits, solid state equipment, and programmable controllers. PREREQUISITES: Course 620-102 - Process Controls with a minimum grade of C or TR COREQUISITES: Course 620-145 - Programmable Logic Controllers/Advanced

### **620-120**

#### **Feedback and Control Systems/ Electromechanical**

**Credits: 2.00**

The course in Feedback and Control Systems investigates devices and circuits used in the control of electromechanical systems. The student studies control diagrams and simple control systems and their applications. The student will become familiar with sensors and devices used in feedback circuits as well as accuracy and application of those sensors in control circuits. The course will help the student understand closed loop control systems. This knowledge will help the student to troubleshoot and repair these systems when encountered on the job. PREREQUISITES: Course 605-113 - DC/AC I

### **620-140**

#### **Programmable Controllers**

**Credits: 2.00**

The operation of the Programmable Logic Controller (PLC) is studied for the purpose of various applications. The hardware, including various I/O modules, is studied for applications and capabilities. Electrical ladder logic provides the documentation and programming means. The student will be able to write programs, load them into the PLC, troubleshoot any errors, and document the function and input/output of the control. PREREQUISITES: Course 620-103 - Industrial Controls, Introduction to

### **620-145**

#### **Programmable Logic Controllers/Advanced**

**Credits: 3.00**

The advanced course in programmable logic controllers continues with the study of the programmable logic controller. The student studies the advanced instruction set of commands. The sequencer, file-to-file moves, data arrays, remote I/O, displays, and messages are part of the advanced instruction set. The student applies the old and new commands to an application in the lab. The student becomes familiar with diagnostics and troubleshooting through the lab applications.

The student will learn to interface the PLC to other controls, networks, and devices. PREREQUISITES: Course 620-140 - Programmable Controllers

### **620-150**

#### **Electromechanical Dr Systems**

**Credits: 3.00**

Electromechanical Drive Systems introduces the student to motor drive systems. This includes three phase, single phase, DC, stepper, and servo motors. The student will acquire a thorough understanding of the electrical principles involved with motor analysis. The student will apply this knowledge to hands-on work with motors and controls in the lab. The lab introduces the student to motor set-up, troubleshooting, and parameter measurements. PREREQUISITES: Course 605-113 - DC/AC I

### **620-302**

#### **Electrical Principles and Ind Controls**

**Credits: 3.00**

This class will cover motors used in industrial applications including both single and three-phase motors. Industrial electrical will also be covered such as motor control circuits, timing circuits, counter circuits using ladder logic and electrical drawings. This course will cover electrical safety including lockout tagout, Ohm's law, use of a Multi-meter and oscilloscope. Along with reading, writing, building and troubleshooting ladder diagrams with relays, timers and counters. The concepts of relays, timers and counters will be covered, built and troubleshot.

### **620-303**

#### **Motors and Ind Electrical Systems**

**Credits: 3.00**

This course will cover motors and transformers utilized in industrial applications. Single and 3 phase AC motors, DC Motors, stepper and servo motors will all be wired and troubleshot using ladder diagrams. Variable frequency drives (VFD's) will be programmed and wired to control 3 phase AC motors. All topics will be covered along with failure modes, troubleshooting and replacement of the devices. PREREQUISITES: Course 620-302 - Electrical Principles and Ind Controls or 620-310 - Industrial Controls for Maintenance with minimum grade C

### **620-304**

#### **PLC's and HMI's for Maintenance**

**Credits: 3.00**

In this course the student will learn the basics of how PLC's and HMI's work along with how to replace and download a program to get the machine up and running again. Minor programming changes will be covered. Learning how to communicate to the PLC's and HMI's from a computer will also be covered. PREREQUISITES: Complete course 620-302 - Electrical Principles and Ind Controls with minimum grade C

### **620-305**

#### **Process and System Controls for Maint**

**Credits: 3.00**

Students will study process controls for flow, pressure, temperature and level typically found in industrial applications. Hands-on labs will reinforce the concepts studied. Automation systems will be explored with emphasis on the integration of the various components into a working system. Safety of these systems will be covered through labs and class discussions. PREREQUISITES: Course 620-302 - Electrical Principles and Ind Controls or 620-310 - Industrial Controls for Maintenance and 804-370 - Mathematics I/Applied with minimum grade C

### **620-310**

#### **Industrial Controls for Maintenance**

**Credits: 2.00**

In this course, learners build foundation skills needed in industrial electrical systems such as relay control circuits, timing circuits, counter circuits using ladder logic and electrical drawings. Learners utilize lockout tagout, Ohm's law, multi-meters and oscilloscopes in analyzing and wiring electrical systems. Learners build and troubleshoot relays, timers and counters. Upon completion of this course learners will analyze, develop, build and troubleshoot ladder diagrams with relays, timers and counters.

### **620-311**

#### **PLC's and HMI's I**

**Credits: 2.00**

In this course, learners examine the basic function of Programmable Logic Controllers (PLC) and Human-Machine Interfaces (HMI). They replace and download a program to return a machine to service. Learners analyze programming changes and use a computer to develop communication between PLCs and HMIs. Upon completion of the course, learners will be able to design, edit, test, and document PLC programs. PREREQUISITES: Complete 620-302 - Electrical Principles and Ind Controls or 620-310 - Industrial Controls for Maintenance prior

### **620-508**

#### **Power Transmission Systems**

**Credits: 1.00**

Course learning outcomes include examining mechanical power transmission systems and components. Belts, chain drives, gears & gear drives, couplings, and clutches & brakes will be examined. Apprentices will develop skills inspecting, installing, and maintaining power transmission systems and troubleshooting failures. Apprentices will also learn about safety, documenting work performed, communicating the status of work, and working collaboratively.

### **620-509**

#### **Welding Basics**

**Credits: 1.00**

Course compares common welding processes and develops apprentice skills related to welding, cutting, heating and using oxygas. Welding with arc and MIG will help build skills and develop competency working with metal. Additional course learning outcomes may include common cutting and joining techniques associated with applicable trade work processes.

**620-510****Math Review for Mechatronics****Credits: 1.00**

Course competencies include building apprentice skills working with fractions, decimals, measurement and ratios commonly used by the trade. Measurement, tolerances and interpreting trade related information will help apply math concepts to industrial and manufacturing work processes. Basic algebra, geometry and trigonometry will be applied to mechatronics job duties and tasks. Converting between US and metric units is also included. Course provides a foundation for mechanical and electrical problem solving involving math.

**620-511****Mechatronic Principles****Credits: 2.00**

Course learning outcomes will examine both introductory mechanical & electrical concepts as a foundation for future coursework and on-the-job learning. Troubleshooting principles associated with mechatronics will also be introduced. Apprentices will explore safety, measurement, mechanical principles, electrical principles, mechanisms, metallurgy, and troubleshooting.

**620-512****Motors & Motor Controls****Credits: 2.00**

This course examines the fundamentals of electric motors and motor control. Apprentices will learn to recognize and draw the basic symbols, the language of motor control, and how to apply these symbols, into current industry adopted formats. Apprentices will also learn to draw and read ladder and wiring diagrams, and be introduced to the logic used in motor control. Learners will apply this logic to correctly interpret, install, service, and wire control circuits. Wiring of panels, machines, and systems will also be examined.

**620-513****Machining Concepts****Credits: 2.00**

Course introduces cutting, drilling, lathes, and milling operations to apprentices in mechatronics. Course topics also include work holding devices, measuring tools and measurement, safety, machine guards, tooling, print reading, and speeds & feeds. Math skills will be applied to machining related work practices.

**620-514****DC Electricity for Mechatronic****Credits: 1.00**

This course introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem-solving skills necessary for the maintenance of mechatronic and advanced manufacturing systems. Competencies related to metering and safe use of measuring devices are included.

**620-515****AC Electricity for Mechatronics****Credits: 1.00**

This course is designed to introduce the industrial electrical apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of mechatronic and advanced manufacturing systems.

**620-516****National Electrical Code****Credits: 1.00**

Apprentices will examine the National Electric Code and apply information to work practices involving mechatronic systems.

**620-517****Fluid Power Systems****Credits: 2.00**

Course learning outcomes include inspecting, testing, servicing, and troubleshooting hydraulic, pneumatic, compressed air, and vacuum systems. Apprentices will review safety procedures for various common maintenance tasks.

**620-518****Introduction to Robotic System****Credits: 2.00**

Course introduces the apprentice to the robot teach pendant and methods of robot jogging. Learners will be taught to replace servo motors, remaster the robot, and back up robot software and programs. Maintenance, servicing and safety will be emphasized. Cable management systems will be examined.

**620-519****Introduction to Robotic Integration****Credits: 3.00**

Mechatronic apprentices will explore offsets, vision systems and system integration using robotic simulation and capstone project. The project will tie everything learned during their apprenticeship together - safety, machine integration, vision systems, CNC, machine applications for robotics, troubleshooting, and work documentation.

**620-520****Servos and Drives****Credits: 1.00**

Course introduces concepts, terminology, and safety associated with drives and servos used in industry and manufacturing. Course is designed to give the apprentice the knowledge required by industry to program, service and maintain variable frequency drives and related equipment. Course learning outcomes include setting up and programming drives in a lab, shop or training center setting.

**620-521****Intro to Programmable Logic Controllers****Credits: 2.00**

This course is designed to teach the fundamentals of programmable logic controller and its programming software. The course will introduce terminology, concepts, schematic reading and basic programming. Technologies and PLC use in manufacturing and mechatronic systems will be emphasized.

**620-522****HMI Technologies & PLC Applications.****Credits: 2.00**

Human machine interface devices, software and technologies will be examined for mechatronic systems. Apprentices will work in a lab/shop/training center setting to create touchscreens, setup networks, and configure systems.

**623-146****Introduction to Lean/Six Sigma****Credits: 2.00**

This introductory course will make students aware of all aspects of the manufacturing environment. The class will include overviews in the key aspects of Lean and Six Sigma. Various types of manufacturing and assembly processes will also be covered.

**623-147****Manufacturing Shop Safety****Credits: 1.00**

This class will cover general shop safety for a machining environment. The course will raise the awareness of workers to the hazards around them and explain work safety and how best to protect themselves. Other safety topics will be covered, including MSDS sheets, personal protective equipment, and lockout tag out.

**623-183****Statistical Process Control/CT****Credits: 1.00**

A 20 hour course which introduces the methods and applications of Statistical Process Control (SPC) used in manufacturing operations. The history and objectives of SPC will be discussed to give students an appreciation for quality improvement through the application of statistical techniques. Emphasis will be placed upon the concepts of central tendency, variation and the normal distribution of data. The development/application/interpretation of variable and attribute control charts will be the main focus of this course.

**623-185****Precision Measuring****Credits: 1.00**

This course is an introduction to precision measurement tools and their uses. Included are the micrometer, vernier calipers, gage blocks, and fixed gages.

### **625-121**

#### **MSSC Certification Preparation and Assessment**

**Credits: 2.00**

This class prepares students to earn MSSC production certification. It will emphasize areas required in the certification that are not covered in other AMST coursework. The students will take the four MSSC certification modules as part of the class. Students may retake modules if needed. The Manufacturing Skill Standards Council (MSSC) certification system assesses worker skills and knowledge based on industry-validated skill standards for all manufacturing sectors. Leading to nationally recognized certification as a 'Manufacturing Production Technician', the program includes assessments in four areas: manufacturing processes and production; quality assurance; maintenance awareness; and health, safety, and environmental assurance. Once students pass all four modules, they will receive their 'MSSC Production Technician' certificate.

### **625-125**

#### **Workplace Safety A - MSSC**

**Credits: 1.00**

Introduces you to safety and team building skills with an emphasis on the workers awareness for maintaining a safe, productive environment. Studies safety concepts, hazard controls, developing safety and health programs, and federal and state mandated regulations. The class will also concentrate on the specific content covered in the MSSC Safety module to prepare students for taking the Manufacturing Skill Standards Council (MSSC) Safety Online assessment.

### **625-126**

#### **STEM Guitar Building**

**Credits: 2.00**

Learn about design and manufacturing principles and techniques through the process of designing and building an electric guitar. Topics include body and headstock design, basic woodworking, finishing, fretting, electronics assembly, hardware assembly and guitar setup. Discover the processes that go into creating a consumer product and walk away from the class with a beautiful solid body electric guitar that you designed and built yourself.

### **625-130**

#### **Intro to STEM Guitar Building**

**Credits: 1.00**

Learn about disassembly and assembly techniques using an electric guitar. Topics include part identification, hardware disassembly and assembly, and guitar setup. Learn the process of intonation as you perform the final alignment to restore the guitar to playable condition.

### **625-300**

#### **MSSC and Certification STM**

**Credits: 1.00**



This class prepares students to earn MSSC production certification. It will emphasize areas required in the certification that are not covered in other coursework. The students will take the three remaining MSSC certification modules as part of the class; Quality, Production and Maintenance. Students may retake modules if needed. The Manufacturing Skill Standards Council (MSSC) certification system assesses worker skills and knowledge based on industry-validated skill standards for all manufacturing sectors. Leading to nationally recognized certification as a 'Manufacturing Production Technician'. Once students pass all four modules, they will receive their 'MSSC Production Technician' certificate. Students will also take the 'Standard Timing Model' mechanical skills assessment.

### **628-100**

#### **Automated Manufacturing Concepts/Intro**

**Credits: 2.00**

An introduction to manufacturing processes with emphasis on manual machining to prepare students for further study in the Automated Manufacturing fields. Covers shop safety practices in a machine shop, the use of manual milling machines, lathes and drill presses to manufacture parts to print, and the use of basic metrology instruments to determine if the parts are to print. Calculation and application of correct cutting parameters of selected materials and tools is practiced.

### **628-108**

#### **Auto Manufacturing Systems Technology Field Experience**

**Credits: 2.00**

Provides the student with an opportunity to apply the technologies learned in earlier class work while experiencing actual work assignments. PREREQUISITES: Course 620-110 - Robotics Mechanics I

### **628-109**

#### **Mechanical Skills for Technicians**

**Credits: 3.00**

This course covers the basic mechanical skills needed by a technician. Skills covered include the use and care of hand tools and small power tools, drilling, tapping, removal of broken bolts, studs, and helicoil insertion. Basic measuring tools and techniques are also covered. Other topics include type and use of fasteners, lubricants and adhesives used in repair, and assembly of automated machines.

### **628-110**

#### **CNC/CAM Programming**

**Credits: 3.00**

This course is a study of computer assisted programming for computer numerical control (CNC) machine tools. The student will use a microcomputer CAD/CAM system for program creation, editing, and verification. It is recommended that students have basic computer skills before enrolling in this course.

### **628-111**

#### **Computer Assisted Programming/Robotics and FMS**

**Credits: 3.00**

This course is a study of computer assisted programming for robotics and Flexible Manufacturing Systems (FMS). Students will use microcomputers to program robots and a CAD/CAM system for program creation, editing, verification, and interfacing. The student will interface the CNC program with the program.

### **628-112**

#### **Computer Aided Manufacturing, Advanced**

**Credits: 3.00**

This course is an introduction to computer integrated manufacturing (CIM). The students will use microcomputers to write, edit, and verify programs for conversational controls and a CIM system. PREREQUISITES: Course 628-111 - Computer Assisted Programming/Robotics and FMS with a minimum grade of C or TR COREQUISITES: Course 620-145 - Programmable Logic Controllers/Advanced

### **628-115**

#### **Industrial Robotics and Programming**

**Credits: 3.00**

A study in industrial robotics and programming. Students will learn to program a FANUC industrial robot and earn FANUC CERT Certification. Students will develop frames, learn file manipulation and program the robot to manipulate products, perform different tasks based on I/O conditions, and utilize variables. We will also study robotic power supplies, end of arm tooling and control systems.

### **628-122**

#### **Engineering Design and Development**

**Credits: 4.00**

Engineering Design and Development is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply engineering principles and are guided by a community mentor. They must present progress reports, submit a final written report, and defend their solution to a panel of outside reviewers at the end of the school year.

### **628-123**

#### **Computer Integrated Mfg Part 1 PLTW**

**Credits: 2.00**

The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts: Principles of Manufacturing Manufacturing Processes Elements of Automation Integration of Manufacturing Elements

### **628-124**

#### **Computer Integrated Mfg Part 2 PLTW**

**Credits: 4.00**

The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts: Principles of Manufacturing Manufacturing

Processes Elements of Automation Integration of Manufacturing Elements PREREQUISITES: Course 628-123 - Computer Integrated Mfg Part 1 PLTW

**628-125**

**Quality for Automated Manufacturing**

**Credits: 3.00**

This course will be heavy hands-on lab work using different measuring tools such as scales, calipers, micrometers, bore gauges, gauge blocks and height gauges. Automated gauging concepts will be covered with hands on experience along with theory based information. The major areas of Statistical Process Control will be covered. The symbols and basic understanding of Geometric Dimensioning and Tolerancing will also be covered.

**628-300**

**Machining for Maintenance**

**Credits: 2.00**

A study and practice of manual machining to prepare students for careers in maintenance fields. Covers shop safety practices in a machine shop, the use of manual milling machines, lathes, saws and drill presses to manufacture parts to print. This class also covers the use of basic metrology instruments to determine if the parts are to print. Calculation and application of correct cutting parameters of selected materials and tools is practiced.

**628-310**

**Mechanical Skills I**

**Credits: 2.00**

In this course, learners explore basic mechanical skills and repair techniques common to most industrial maintenance fields. Learners examine common types, components, operating principles, and maintenance procedures for belt drive systems, chain drive systems, clutches, shafts, and gears. Learners investigate the use and care of hand tools and small power tools, drilling, tapping, removal of broken bolts, studs, and helicoil insertion. Learners examine the type and use of fasteners and lubricants used in automated machines. Upon completion of this course, learners will be able to explain the mechanical skills and repair techniques used in industrial maintenance.

**662-101**

**Safety in Healthcare**

**Credits: 1.00**

Safety in the Health Care environment is explored. Safety issues include; electrical, chemical, radiological, biological and fire. National codes and standards set forth by JCAHO, NFPA 99, FDA, and OSHA are examined.

**662-102**

**Medical Devices; Function and Use 1**

**Credits: 3.00**

Medical instrumentation utilized in both monitoring and diagnostic capacities for the respiratory and circulatory systems are examined. The medical terminology associated with these two systems is also covered. The instrumentation for monitoring individual organs is also explored.

### **662-103**

#### **Medical Devices; Function and Use 2**

**Credits: 3.00**

Medical instrumentation utilized in both monitoring and diagnostic capacities for the Gastrointestinal, Nervous, Musculoskeletal, and Endocrine systems are examined. The medical terminology associated with these systems is also covered.

### **662-112**

#### **DC/AC III**

**Credits: 3.00**

This course introduces the student to the fundamental laws in electrical engineering technology and their application in advanced circuit analysis concepts and techniques. Topics include a brief review of Kirchoff's law, induction, capacitance, series-parallel circuits, power factor, impedance, and phasors. Then, superposition, Thevenin's theorem, Norton's theorem, mesh and nodal analysis, sinusoidal steady-state analysis, ideal transformers, and complex power are covered. The student will utilize both the 'hands-on' approach and computer simulation, including swept AC frequency circuit analysis, in the laboratory, as the laboratory experiments are designed to support the topics presented.

**PREREQUISITES:** Course 605-114 - DC/AC II

### **662-124**

#### **Electronic Circuit Analysis**

**Credits: 3.00**

This course introduces the student to the fundamental laws in electrical engineering technology and their application in advanced circuit analysis concepts and techniques. Topics include frequency as a variable in the analysis of circuits with a sinusoidal excitation, Bode plots, and detailed analysis of resonant circuits. The student is introduced to small signal analysis of transistor amplifier circuits and examination of gain and frequency response of the circuit. The student will utilize both the 'hands-on' approach and computer simulation, including swept AC frequency circuit analysis, in the laboratory, as the laboratory experiments are designed to support the topics presented. **PREREQUISITES:** Course 605-120 - Electronic Devices I

### **664-100**

#### **Intro to Industrial Control Systems**

**Credits: 2.00**

In this course, learners are introduced to basic concepts of industrial computer-controlled systems. The learner explores various types of programming using robots and PLC and participates in lab experiments designed to introduce programming principles, electronic inputs and outputs (analog and digital), and communication between system components including Ethernet protocols. Upon completion of the course, learners will be able to explain how the control processes are utilized to automate manufacturing facilities.

**664-101****PLC Industrial Control Sys Applications****Credits: 2.00**

In this course, learners develop machine process automation control systems with temperature, pressure, flow, and level controls. Learners investigate the utilization of PID loops in PLC program design. Learners program a PLC using vision, smart sensors, Servos, motor controls, and analog IO. Learners develop PLC programs including Human Machine Interface (HMI) with displays for machine input and output data. Upon completion of the course, learners will be able to build a PLC motion project for basic machine process automation control systems. PREREQUISITES: Complete courses 605-136 - Programmable Controller System Design and 664-102 - Motor Controls for Adv Manufacturing with a minimum grade of minimum grade C, TR;

**664-102****Motor Controls for Adv Manufacturing****Credits: 3.00**

In this course, learners examine the fundamentals of electrical AC/DC/Servo/Stepper motors and motor controls. Learners will examine electrical safety work practices and apply NFPA 70 and NEC safety codes to various situations. Motor control devices and components (motor drives, relays, timers, counters, motor contactors, overloads) including electromechanical and solid state equipment will be presented. Learners will operate motors using PLC's. Upon completion of the course, learners will apply ladder logic, wiring diagrams, and PLC's to advanced manufacturing machines. PREREQUISITES: Complete course 664-100 - Intro to Industrial Control Systems with a minimum grade of C COREQUISITES: Course 801-136 - English Composition 1

**664-103****Motor Controls for Manufacturing****Credits: 3.00**

In this course, learners examine the fundamentals of electrical AC/DC/Servo/Stepper motors and motor controls. Learners will examine electrical safety work practices and apply NFPA 70 and NEC safety codes to various situations. Motor control devices and components (motor drives, relays, timers, counters, motor contactors, overloads) including electromechanical and solid state equipment will be presented. Learners will operate motors using PLCs. Upon completion of the course, learners will apply ladder logic, wiring diagrams, and PLCs to advanced manufacturing machines.

**664-104****Industrial Control System Applications****Credits: 2.00**

In this course, learners develop machine process automation control systems with temperature, pressure, flow, and level controls. Learners investigate the utilization of PID loops in PLC program design. Learners program a PLC using vision, smart sensors, Servos, motor controls, and analog IO. Learners develop PLC programs including Human Machine Interface (HMI) with displays for machine input and output data. Upon completion of the course, learners will be able to build a PLC motion project for basic machine process automation control systems.

**664-105****Introduction to Industrial Robotics****Credits: 2.00**

In this course, learners are introduced to programming techniques for industrial robots. The learner examines teach pendant programming including I/O, routines, decision making, six frames of positional operation, and robot communication. Upon completion of the course, learners will be able to operate and program industrial robots commonly used in Industry 4.0.

**664-110****Intro to Mechatronics****Credits: 2.00**

In this course, learners are introduced to microprocessor controlled electromechanical systems. The learner examines how individual components work, and how they are integrated into simple systems. Upon completion of the course, learners will understand what technicians do in the workplace and how industry utilizes Mechatronics in advanced manufacturing.

**664-111****Machine Mechanisms****Credits: 3.00**

In this course, learners apply input forces and movement to mechanisms and determine the output forces and movement of the mechanisms. Applied mechanisms will be presented including: levers, bearings, gears, cams, couplings, brakes and clutches, belt and chain drives through splines, pins, and keys. Learners explore mechanisms that are supported by structural components such as a frame, fasteners, bearings, springs, and other machine elements. Upon completion of the course, learners will analyze the combination of force and movement within machine elements to determine if system requirements are met and machine functions safely. PREREQUISITES: Complete courses 664-100 - Intro to Industrial Control Systems 664-110 - Intro to Mechatronics and 804-115 - College Technical Math 1

**664-112****Fundamentals of Machining Processes****Credits: 3.00**

In this course, learners examine the fundamental skills of machining processes for a career in Advanced Manufacturing Technology. Lathes, mills, and grinders will be the primary machines explored. An overview of machining processes is presented. Setup and operation, manual lathes and mills, CNC lathes and mills, basic programming using G and M codes, and tooling required for lathes and mills will be presented. Upon completion of the course, students will be able to develop a machining process plan.

**664-113****Leadership for Advanced Manufacturing****Credits: 3.00**

In this course, students explore how members of a team contribute to the success of project execution. They investigate work measurement analysis tools and the planning and layout of a manufacturing operation. Upon successful completion of the course, students will be able to recommend improvements to the manufacturing process.

### **664-115**

#### **Interpret Engineering Drawings**

**Credits: 2.00**

In this course, learners build foundation skills needed to read and interpret industrial prints. These skills, used to interpret industrial prints, are presented in a logical order: title blocks, change blocks, shop notes, symbols, lines, orthographic views, section views, auxiliary views, pictorial views, and assembly views. Learners interpret part geometric dimensions and tolerances using basic math skills. Upon completion of the course, learners will be able to read, interpret, and apply drawing content to advanced industrial equipment.

### **664-116**

#### **Intro to Mfg Quality Control Systems**

**Credits: 2.00**

In this course, learners explore skills and tools necessary to fully participate in a lean, continuous improvement manufacturing environment. These include standardized work instructions, Total Productive Maintenance (TPM), mistake-proofing, changeover reduction, ergonomics, root cause analysis, Six Sigma, and quality management. Learners are introduced to basic statistical tools and fundamental concepts needed to improve and control industrial processes. Upon completion of the course, learners will be able to use statistical tools to improve processes, define problems, set priorities, predict outcomes, and identify causes of quality problems. **PREREQUISITES:** Complete course 664-115 - Interpret Engineering Drawings with a minimum grade of C

### **664-117**

#### **Materials and Processes**

**Credits: 2.00**

In this course, learners examine the relationship between the properties and processes of various materials used in advanced industrial equipment. The properties include: mechanical strength, chemistry, and basic material characteristic. The processes include: modern manufacturing techniques, fabricating, casting, metallic finishes, plating and chip removal. Upon completion of the course, learners will be able to match materials and processes used in the manufacture of equipment. **PREREQUISITES:** Complete course 664-100 - Intro to Industrial Control Systems and 664-110 - Intro to Mechatronics with a minimum grade of C complete course 801-136 - English Composition 1 with minimum grade of D

### **664-118**

#### **PLC and HMI Programming**

**Credits: 3.00**

In this course, students develop programming skills for PLCs (Programmable Logic Controllers) and HMI (Human Machine Interfaces). Students create PLC programs in various languages such as Ladder Diagram (LD), Structured Text (ST), Function Block Diagram (FBD), Sequential Function Chart (SFC). Students create visual HMI programs for manufacturing systems. Upon completion of this course, students will be able to create PLC and HMI applications for the manufacturing environment.

**664-119****Advanced Manufacturing Network Systems****Credits: 3.00**

In this course, students examine networks and protocols used in advanced manufacturing systems. They investigate hardware components, data transmission systems, communication lines, data sets, and interface protocols. Upon completion of the course, students will be able to analyze networking systems for advanced manufacturing.

**664-120****Intro to Industrial Internet of Things****Credits: 2.00**

In this course, learners are introduced to theoretical and practical topics of the Industrial Internet of Things (IIoT). The learner investigates the range of sensor and actuator devices available, ways in which they communicate and compute, methods for getting information to and from IIoT-enabled devices, and ways of visualizing and processing data acquired from the IIoT. Upon completion, learners will utilize hardware and software to construct a sensor network within an existing system and utilize industry standard tools to visual the acquired data.

**664-121****Vision and Smart Sensors****Credits: 2.00**

In this course, learners will utilize 2D cameras, lighting systems and smart sensors in machine applications to provide imaging-based automatic inspection and analysis for such applications as automatic inspection, process control, and robot guidance. Learners will use vision systems to: sort good and bad parts; identify, position and orient objects images for robot guidance and orientation using edge detection; blob detection; pattern recognition; image acquisition; and bar code and QR code recognition. Learners will integrate smart sensors into PLC machine applications. Upon completion of this course learners will apply camera and smart sensors into a machine process application. PREREQUISITES: Complete courses 605-130 - Digital Electronics and 664-102 - Motor Controls for Adv Manufacturing with a minimum grade of C

**664-122****Engineering Project Mgmt****Credits: 2.00**

In this course, learners explore a systematic approach to manufacturing project management. Learners examine project scope and its relationship to project success by considering coordinated schedules, activities, people, and resources. Upon completion of the course, learners will be able to apply Work Breakdown Structures, Activity Diagrams, and Gantt Charts to short-term and long-term manufacturing projects. PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade D

**699-110****Communication Document Design****Credits: 3.00**



This course gives students skills and practice needed to design and lay out communication products using Adobe InDesign software. Students explore and apply graphic design, technical communication, and usability theories to produce print and electronic communication products. COREQUISITES: Course 103-143 - Computers for Professionals

### **699-111**

#### **Communication Project Management**

**Credits: 3.00**

This course gives students skills and practice needed to analyze, design, develop, implement, and evaluate communication products. Students use strategies for researching requirements, planning projects, tracking progress, testing usability, and revising communication products. In addition, they review methods to collaborate effectively with clients, coworkers, and vendors. The ethical practices of professional communications are also reviewed.

PREREQUISITES: Course 804-135 - Quantitative Reasoning minimum grade D-

### **699-112**

#### **Editing**

**Credits: 3.00**

This course gives students skills and practice needed to conduct various levels of edits, including comprehensive edits, copyedits, and proofs. Students edit communication products for correct usage in capitalization, grammar, punctuation, spelling and style. They apply theories and strategies to ensure communication products conform to style guides, to develop editor-writer relationships and to provide audiences with clear ethical content. COREQUISITES: Complete course 801-136 - English Composition 1

### **699-113**

#### **Information Design**

**Credits: 3.00**

This course gives students skills and practice needed to design and manage communication products using professional communications strategies. Students explore and apply strategies to structure communication products so that users can access information easily, understand it, and feel comfortable with its presentation. XML is also introduced.

PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

### **699-114**

#### **Professional and Technical Writing**

**Credits: 3.00**

This course gives students skills and practice needed to develop communication products for business, government, and not-for-profit organizations. Students are introduced to the professional communications field and career options. They use a professional process to develop and publish a variety of communication products. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-115****Professional Communications Internship****Credits: 3.00**

This course provides students an opportunity to apply professional communications skills and training in a professional setting. Students spend a minimum of 144 hours performing professional communications tasks and up to one hour per week in consultation with the instructor. Students work with a sponsor at an employer and the instructor to set up and complete the internship. PREREQUISITES: Courses 699-111 - Communication Project Management and 699-112 - Editing with a minimum grade of C

**699-116****Professional Communications Portfolio****Credits: 1.00**

This course provides students skills and practice needed to enter the professional communications profession or advanced education. Students review their progress throughout the program and prepare for careers. They develop portfolios of their work and explore career preparation, job hunting strategies, potential employers, and professional expectations in the workplace. They also review future education opportunities. PREREQUISITES: Complete courses 699-111 - Communication Project Management and 699-112 - Editing with a minimum grade of C

**699-117****Research Fundamentals****Credits: 3.00**

This course gives students skills and practice needed to conduct user and product research for a variety of professional communications projects. Students interview sources and perform usability tests as well as use traditional and Internet sources to locate information. They interpret and incorporate research findings into plans and communication products.

**699-130****Writing and Publishing****Credits: 3.00**

This course gives students skills and practice needed to publish communication products through print and electronic media. Students learn their responsibilities, publishing techniques, and publishing software, such as Adobe Acrobat software, for preparing communication products for distribution using epublications, print, PDF, and the web.

**699-131****Writing Copy for Sales****Credits: 3.00**

This course gives students skills and practice needed to develop sales promotion materials for print media, audiovisual media, the Internet, and the specialty media. Students plan a marketing strategy and create communication products for sales and marketing. They incorporate persuasive strategies in communication products for long and short-term. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-132****Writing for Organizations****Credits: 3.00**

This course gives students skills and practice needed to develop various types of communication products for new or existing organizations. Students develop internal documentation to articulate an organization's strategies, define the organization's workings, recruit employees, attract customers, and address common issues. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-133****Writing for Social Media****Credits: 3.00**

This course gives students skills and practice needed to use social media for organizational purposes. Students explore techniques for effective writing in social media, including the elements of design, interaction, and usability. They investigate an array of social media options, including Facebook, LinkedIn, Tumblr, and Twitter. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-134****Writing for the Media****Credits: 3.00**

This course gives students skills and practice needed to develop various types of communication products for media outlets. Students use journalism strategies to create various types of communication products, including advertisements, articles, audiovisual scripts, newsletters, and press releases. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-135****Writing for the Web****Credits: 3.00**

This course provides students skills and practice needed to develop web content using website development tools and content management systems. Students plan, write, develop graphics for, revise, and publish websites. They apply theories and strategies to design, create, and measure accessible, ethical, and usable websites. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-136****Writing Grant Proposals****Credits: 3.00**

This course gives students skills and practice needed to write grant proposals and related documents. Students explore government, corporate, and private funding sources and locate Requests for Proposals (RFPs). They use audience analysis, research methods, rhetorical strategies, and revision techniques to write competitive grant proposals. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-137**

**Writing Product Documentation**

**Credits: 3.00**

This course gives students skills and practice needed to develop various types of manuals and related communication products for a variety of products. Students plan, write, illustrate, revise, and publish manuals. They apply theories and strategies to design and create accessible, ethical, and usable communication products. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

**699-138**

**Writing Software User Assistance**

**Credits: 3.00**

This course gives students skills and practice needed to develop user assistance and related documentation for software products using MadCap Flare software. Students plan, write, illustrate, revise, and publish user assistance and print documentation. They apply theories and strategies to design and create accessible, ethical, and usable communication products. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR

**801-107**

**Technical Writing/Audio Visual**

**Credits: 2.00**

Students are provided the skills and practice to write for audio visual production. Emphasis is on the preparation of the time, audio, and video sections of storyboards for the production of industrial, commercial, and educational film, videotape, and CD programming.

**801-111**

**Technical Writing/ Electronic Publishing For Windows**

**Credits: 2.00**

Students are provided the skills and practice in the conceptual, artistic, and psychological techniques of layout and design with the flexibility offered by Adobe InDesign on the Windows platform. Emphasis is on the creation of production-ready page layout.

**801-120**

**Technical Writing/Grant and Proposal Writing**

**Credits: 2.00**

Familiarization and practice in writing program and funding proposals for grants. Emphasis will be on following the Request for Proposals (RFP) guidelines that enhance successful funding and program initiation from federal, state and local government, as well as private foundations.

**801-123**

**Technical Writing/Procedural Writing**

**Credits: 2.00**

Analyze and apply the skills required to prepare the various internal operational writings such as mission statements, job descriptions, job ads, standard operating procedures, employee evaluations, department reports, and marketing plans.

### **801-125**

#### **Technical Writing/ Vendor Management/ Ethics**

**Credits: 1.00**

Understand the technical communicator's management responsibilities towards the various vendors that are used in the production of audiovisual, online, printed, and specialty products. It emphasizes the creation of documents. Emphasis will be on bidding, controlling costs, monitoring project progress, monitoring legal obligations of purchase order, and maintaining public relations with vendors. In addition, the ethics of the technical communication profession will be reviewed.

### **801-128**

#### **Technical Writing/ Forms Design**

**Credits: 1.00**

Students are provided the skills and practice to create effective and user-friendly forms. Emphasis is on identifying and meeting the needs for the form by all users. Using computer software, students produce both paper and electronic forms.

### **801-131**

#### **Technical Writing/ Newsletter Writing**

**Credits: 1.00**

Students are provided the skills and practice in publishing newsletters to publication specifications. Emphasis will be on the production of newsletters from conception through research, writing, illustrating, layout, editing, approval, and production.

### **801-133**

#### **Technical Writing/Introduction**

**Credits: 2.00**

Analysis and application of the technical writing skills needed by technical communicators. Emphasizes the research, writing, and electronic publishing of technical manuals, promotional publications, and technical journalism.

PREREQUISITES: Course 801-136 - English Composition 1

### **801-136**

#### **English Composition 1**

**Credits: 3.00**

This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. PREREQUISITES: Course 831-103 - College Writing, Intro or 831-107 - College Reading and Writing 1 with a minimum grade of C or TR or achieve the required placement test score

**801-150****English Composition II****Credits: 3.00**

In this advanced writing course, students develop critical reading and writing skills and produce original compositions demonstrating critical thinking ability. Students also produce a documented research project using primary and secondary sources. PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade of C or TR

**801-177****Creative Writing****Credits: 3.00**

This course focuses on the study and production of written work in three genres: fiction, nonfiction, and poetry. Through the workshop method of instruction, students will complete writing exercises and other projects designed to enhance creativity. Students will also develop an awareness of their audience, build collaborative discussion skills, offer and use constructive feedback, analyze others writers' creative and critical thinking processes, and learn other skills transferable to their academic and professional lives. PREREQUISITES: Course 831-103 - College Writing, Intro or 831-107 - College Reading and Writing 1 with a minimum grade of C or TR or achieve the required placement test score

**801-196****Oral/Interpersonal Communication****Credits: 3.00**

This course focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects.

**801-197****Technical Reporting****Credits: 3.00**

The student will prepare and present oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports, and case studies. This course is designed as an advanced communication course for students who have completed at least the prerequisite introductory writing course. PREREQUISITES: Course 801-136 - English Composition 1

**801-198****Speech****Credits: 3.00**

This course explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course.

**801-301****Writing Principles****Credits: 1.00**

Reviews the fundamentals of grammar. Emphasizes practical application of English in business correspondence.

PREREQUISITES: Course 851-760 or 851-756 - Foundations of Writing with a minimum grade of C or TR or achieve the required placement test score

**801-302****Speaking Principles****Credits: 1.00**

Covers techniques of verbal and non-verbal communication. Presentation techniques in informative, demonstrative, persuasive and impromptu situations are stressed.

**801-500****Apprentice Communications****Credits: 1.00**

Discusses basic communications concepts relating to the workplace. Skills covered are giving instructions explaining technical processes.

**801-991****Communication General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

**801-992****Communication General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

**801-993****Communication General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

**801-994****Communication General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

**801-999****Communication Elective Credit****Credits: 3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

**802-114****Chinese 1 (elementary level 1)****Credits: 3.00**

Chinese 1 presents listening, speaking, reading, and writing activities associated with everyday communication. Conversation skills are enhanced through in-class discussion. Students develop chinese character formation and interpretation. Chinese culture is explored.

**802-115****Chinese 2 (elementary level 2)****Credits: 3.00**

Chinese 2 presents listening, speaking, reading, and writing activities associated with everyday communication. Students build on the skills developed in Chinese 1. Conversation skills are enhanced through in-class discussion. Students continue development of chinese character formation and interpretation. Chinese culture is explored. PREREQUISITES: Course 802-114 - Chinese 1 (elementary level 1) or 802-113 with a minimum grade of C or TR

**802-117****Chinese 4****Credits: 3.00**

Chinese 4 will help students build on the skills developed in Chinese 3. Their vocabulary and knowledge of grammar of the Chinese language will grow by learning more new words, expressions and sentence patterns needed for everyday communication and by consolidating their knowledge through oral and written practice in and out of class. In this course, students will participate in classroom discussions in Mandarin. Aspects of Chinese Culture will be further explored. PREREQUISITES: Course 802-116 with a minimum grade of C or TR

**802-118****SPA IV: Fourth Semester Spanish****Credits: 4.00**



Spanish IV is a continuation of Spanish III and further develops all basic language skills: listening comprehension, speaking, reading, and writing. Spanish IV is the fourth semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish III at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of intermediate vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 802-119 - SPA III: Third Semester Spanish with a minimum grade of C or TR

### **802-119**

#### **SPA III: Third Semester Spanish**

**Credits: 4.00**

Spanish III reviews the material taught in Spanish I and Spanish II and further develops all basic language skills: listening comprehension, speaking, reading, and writing. Spanish III is the third semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish II at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of intermediate vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 802-112 or 802-125 - SPA II: Second Semester Spanish with a minimum grade of C or TR

### **802-124**

#### **SPA I: First Semester Spanish**

**Credits: 4.00**

Spanish I will develop and emphasize all basic language skills: listening comprehension, speaking, reading, and writing. Spanish I is the first semester Spanish course at Gateway Technical College and is designed for those students with little or no previous knowledge of the Spanish language and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of basic vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

### **802-125**

#### **SPA II: Second Semester Spanish**

**Credits: 4.00**

Spanish II is a continuation of Spanish I and will continue to emphasize the development of all basic language skills: listening comprehension, speaking, reading, and writing. Spanish II is the second semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish I at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of basic vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Complete course 802-111 or 802-124 - SPA I: First Semester Spanish with a minimum grade of C

**802-126****Spanish for Healthcare Providers****Credits: 3.00**

In this course, students examine language that helps them become culturally-competent healthcare workers. A variety of cultural competencies are presented. Rudimentary grammar and basic vocabulary related to the healthcare environment are practiced. The course is taught primarily in English and is designed for health care students, but all students of the Spanish language will benefit from the content. Upon completion of the course students will be able to deliver basic healthcare service that meets the social, cultural, and linguistic needs of Hispanics.

**804-107****College Mathematics****Credits: 3.00**

THIS COURSE HAS BEEN REPLACED. IF IT IS A REQUIREMENT FOR YOUR PROGRAM, REGISTER FOR 804-135 QUANTITATIVE REASONING INSTEAD. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR ADVISOR. This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score

**804-113****College Technical Math 1A****Credits: 3.00**

THIS COURSE HAS BEEN REPLACED. IF IT IS A REQUIREMENT FOR YOUR PROGRAM, REGISTER FOR 804-135 QUANTITATIVE REASONING INSTEAD. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR ADVISOR. In this course, topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percents; proportions; and operations on polynomials. Emphasis will be placed on the application of skills to technical problems. Successful completion of College Technical Math 1-A and College Technical Math 1-B is the equivalent of College Technical Math 1. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications or achieve the required placement test score

**804-115****College Technical Math 1****Credits: 5.00**

Topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. Emphasis will be on the application of skills to technical problems. This course is the equivalent to College Technical Math 1A and College Technical Math 1B.

PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or TR or achieve the required placement test score

### **804-123**

#### **Math with Business Applications**

**Credits: 3.00**

THIS COURSE HAS BEEN REPLACED. IF IT IS A REQUIREMENT FOR YOUR PROGRAM, REGISTER FOR 804-135 QUANTITATIVE REASONING INSTEAD. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR ADVISOR. This course covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, and basic statistics with business/ consumer applications. Students learn to apply math concepts to the purchasing/buying and selling processes. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score

### **804-133**

#### **Mathematics and Logic**

**Credits: 3.00**

Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or meet the required placement test score

### **804-135**

#### **Quantitative Reasoning**

**Credits: 3.00**

This course is intended to develop analytic reasoning and the ability to solve quantitative problems. Topics to be covered may include: construction & interpretation of graphs; descriptive statistics; geometry & spatial visualizations; math of finance; functions and modeling; probability; and logic. Appropriate use of units and dimensions, estimates, mathematical notation, and available technology will be emphasized throughout the course. PREREQUISITES: Complete course 834-109 - Pre-Algebra with a minimum grade C or TR or meet required placement test score

### **804-163**

#### **Intro to Mathematics**

**Credits: 2.00**

In this course, students examine general mathematical concepts. Students investigate applications for the English and metric systems, direct measurement, algebra, and plane geometry. Upon completion of the course, students will be able to apply general mathematical concepts in a practical, industrial work environment.

### **804-181**

#### **Calculus 2**

**Credits: 4.00**

Students will develop techniques for differentiation and integration of transcendental functions and use the derivative and the integral to solve certain applied problems. They will also extend calculus techniques to curves in polar coordinates and three-dimensional surfaces and form a basic understanding of infinite series and associated applications.  
PREREQUISITES: Complete course 804-198 - Calculus 1 with a minimum grade C

**804-182**  
**Calculus 3**  
**Credits: 4.00**

Students will parameterize curves and polar coordinates, vectors in the plane and in space, vectors and analytical geometry in space, vector valued functions and motion in space, multivariable functions and their partial derivatives, evaluate multiple integrals. PREREQUISITES: Course 804-181 - Calculus 2 with a minimum grade of C or TR

**804-189**  
**Statistics, Introductory**  
**Credits: 3.00**

Students taking Introductory Statistics display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications or 804-107 - College Mathematics 804-123 - Math with Business Applications or 804-135 - Quantitative Reasoning with a minimum grade of C or TR

**804-197**  
**College Algebra and Trigonometry with Applications**  
**Credits: 5.00**

This course covers those skills needed for success in Calculus and many application areas on a baccalaureate level. Topics include the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities (linear and nonlinear), relations and functions, systems of equations and inequalities (linear and nonlinear), matrices, graphing, conic sections, sequences and series, combinatorial and the binomial theorem. PREREQUISITES: Complete course 804-114 or 804-115 - College Technical Math 1 with a minimum grade of C

**804-198**  
**Calculus 1**  
**Credits: 4.00**

Students analyze and graph algebraic expressions, especially conic sections, develop an intuitive understanding of limits, derivatives, and integrals, and apply the derivative and integral to certain physical problems. PREREQUISITES: Complete course 804-197 - College Algebra and Trigonometry with Applications with a minimum grade of C

**804-370**  
**Mathematics I/Applied**  
**Credits: 2.00**

Reviews the four basic mathematical operations on whole numbers, fractions and decimals. Also covers basic algebra and trigonometry related to technical fields. PREREQUISITES: Course 854-760 - Mathematics/Pre Technical with a minimum grade of C or meet placement test

### **804-371**

#### **Mathematics II/Applied**

**Credits: 1.00**

Covers geometric principles along with calculations of linear, area and volume measurements. Includes interpreting and sketching graphs, the metric system, a method to solve technical conversions problems, and an introduction to statistics. PREREQUISITES: Complete course 804-370 - Mathematics I/Applied with a minimum grade of C or meet placement test score

### **804-502**

#### **Math 1 for Apprentice**

**Credits: 1.00**

This course will cover fractions, decimal fractions, linear measurements (English and metric).

### **804-507**

#### **Intro to Math Apprenticeship**

**Credits: 1.00**

This course will provide a foundation in the fundamentals of the application of mathematics. Emphasis is placed on achieving an understanding of general mathematical concepts, applications for the English and metric systems, direct measurement, algebra, and plane geometry. Each section will provide the student with the opportunity to apply mathematics to a practical shop situation.

### **804-509**

#### **Algebra Apprenticeship**

**Credits: 1.00**

This beginning course covers basic mathematical operations applied to signed numbers and algebraic functions. Factoring linear and quadratic equations are included. Verbal problems, formulas, and formula manipulation are stressed.

### **804-999**

#### **Math Elective Credit**

**Credits: 3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

**806-102****Environmental Chemistry****Credits: 4.00**

This course is intended to provide students with a basic understanding of the chemical reactions and interactions that occur in the environment and the effect these chemicals have on the environment. Specifically, this course will examine atmospheric, water, and soil chemistry principles. Students will develop skills for sampling, quantitative detection and data analysis. Students will gain an understanding of biogeochemical cycles and human impact on these cycles.

PREREQUISITES: Course 804-107 - College Mathematics with a minimum grade of C or TR

**806-105****Principles of Animal Biology****Credits: 4.00**

Introductory course focusing on general biological principles, cell structure and function, genetics, comparative anatomy and physiology, evolution, and ecosystems. Includes dissection of various fresh and preserved materials. This course is appropriate for OTA, AODA and other allied health students.

**806-112****Principles of Sustainability****Credits: 3.00**

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**806-114****General Biology****Credits: 4.00**

This course introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution, and taxonomical relationships. Consideration is also given to diversity among the various kingdoms.

**806-127****Chemistry 1****Credits: 4.00**

Fundamental concepts of inorganic chemistry. Emphasizes learning the basic principles and quantitative measurements used in chemistry. Consists of three hours of lecture and one, two-hour laboratory period per week. PREREQUISITES: Complete course 804-197 - College Algebra and Trigonometry with Applications or course 804-135 - Quantitative Reasoning Quantitative Reasoning

**806-129**

**Chemistry 2**

**Credits: 4.00**

Further study of basic chemical principles (e.g. atomic and molecular structure, reactions, stoichiometry, thermochemistry, and acid/base chemistry) and the application of these principles, including chemical equilibria and kinetics. Introduces properties, structures, and reactions of organic compounds. Elementary aspects of biochemistry are considered. PREREQUISITES: Complete 806-127 - Chemistry 1 Chemistry 1 with a minimum grade of C

**806-134**

**General Chemistry**

**Credits: 4.00**

This course covers the fundamentals of chemistry. Topics covered include the metric system, problem solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water, acids, bases, and salts, and gas laws.

**806-154**

**General Physics 1**

**Credits: 4.00**

This course presents the applications and theory of basic physics principles. It emphasizes problem solving, laboratory investigation, and applications. Topics include unit conversion and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves.

PREREQUISITES: Course 804-114 or 804-115 - College Technical Math 1

**806-172**

**Basic Nutritional Science**

**Credits: 3.00**

This course provides an introduction into the science of nutrition. Basics concepts related to digestion and metabolism are presented. The significance of carbohydrates, lipids, proteins and vitamins to the human organism are discussed. The relationship of proper nutrition to selected pathological conditions throughout the human lifecycle is presented. The concept of sustainability and environmentally - conscious food production introduced.

**806-177**

**General Anatomy and Physiology**

**Credits: 4.00**

This course examines the basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision making and professional communication with colleagues and patients.

**806-179****Anatomy and Physiology, Advanced****Credits: 4.00**

Advanced Anatomy and Physiology is the second semester in a two semester sequence in which normal human anatomy and physiology are studied, using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instruction is delivered both within a classroom and in a laboratory setting. Experimentation within a science lab includes analysis of cellular metabolism and the individual components of body systems, such as the nervous, neuro-muscular, cardiovascular, and urinary systems. Students examine homeostatic mechanisms and their relationship to fluids, electrolytes, acid-base balance, and blood. Integration of genetics to human reproduction and development are also included in this course. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of C or TR

**806-184****Plant Biology****Credits: 3.00**

The lecture/laboratory course provides students with an indepth study of the plant kingdom. The content includes, but is not limited to, plant cell anatomy and physiology, plant genetics, plant classification, plant anatomy and physiology, plant resources, plant life cycles, and ecology. A survey of viruses, prokaryotes, protista, and fungi as they pertain to plants is presented.

**806-186****Biochemistry/Introduction****Credits: 4.00**

This introductory course is designed for students in health sciences. Selected topics of inorganic and organic chemistry are applied to fundamental areas of biochemistry. Units of study include carbohydrates, lipids and proteins, enzymes, nucleic acids, bioenergetics, metabolic pathways, and body fluids. PREREQUISITES: Complete course 806-134 - General Chemistry or 806-127 - Chemistry 1

**806-195****Anatomy and Physiology I****Credits: 4.00**

The first semester in a two-semester series that studies human anatomy and physiology according to the body systems approach, but with consideration of functional interrelationships of the various systems. Fundamental concepts and principles of cell biology, tissues, and the integumentary, skeletal, muscular, nervous, and endocrine systems are studied.

**806-196****Anatomy and Physiology II****Credits: 4.00**

Anatomy and Physiology II studies human anatomy and physiology according to the body's system approach, but with consideration of functional interrelationships of the various systems. Emphasis is on the normal structure and function of



the cardiovascular system, lymphatic system, immune system, respiratory system, digestive system, metabolism, the urinary system, fluid and electrolyte balance, acid base balance and the reproductive system. PREREQUISITES: Course 806-195 - Anatomy and Physiology I minimum grade C

### **806-197**

#### **Microbiology**

**Credits: 4.00**

Topics include structure and functions of microorganisms, microbial control, infectious diseases, immunity and resistance to disease, problems of sanitation and control in relation to microbiology of air, water, food and sewage. This course is equivalent to 806-197 at other WTCS schools. PREREQUISITES: Course 806-177 - General Anatomy and Physiology or 806-105 - Principles of Animal Biology with a minimum grade of C or TR

### **806-992**

#### **Science Gen Ed Credit**

**Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

### **806-993**

#### **Science Gen Ed Credit**

**Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

### **806-994**

#### **Science Gen Ed Credit**

**Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

### **806-999**

#### **Science Elective Credit**

**Credits: 3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

**809-112****Principles of Sustainability****Credits: 3.00**

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-128****Marriage and Family****Credits: 3.00**

This course introduces the student to the sociological aspects of marriage and family life in contemporary American society. Emphasis is on the study of cognitive, emotional, and behavioral patterns associated with courtship, love, mate selection, sexuality, and marriage. Moreover, it discusses the life span development in the family life cycle, balancing work and family, and parenting. This course is based on the premise that human attitudes, feelings, and behaviors are largely shaped and influenced by philosophy, gender, communication, and personal beliefs. Therefore, success in the institutions of marriage and family require knowledge and skills in the roles of spouse and parent and ways to apply concepts to daily life. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-143****Microeconomics****Credits: 3.00**

This course examines the behavior of individual decision makers, primarily consumers and firms. Topics include choices of how much to consume and to produce, the functioning of perfectly and imperfectly competitive markets, the conditions under which markets may fail, and arguments for and against government intervention. The student applies the fundamental tools of economics to real world problems. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-144****Macroeconomics****Credits: 3.00**

Macroeconomics is an introductory course. Basic social choices regarding economic systems, basic economic aggregates, fiscal policy, the banking system, monetary policy, and international trade are the principle topics discussed in the course. Balance is drawn between theory, analysis, and a critique of the institutions that characterize modern mixed-capitalist economies. Conflicting social goals, economic constraints, and environmental concerns provide the framework through which macroeconomy is analyzed. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

**809-159****Psychology, Abnormal****Credits: 3.00**

This course in abnormal psychology surveys the essential features, possible causes, and assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology. PREREQUISITES: Course 809-198 - Psychology, Introduction to

**809-166****Ethics: Theory & Applications, Intro to****Credits: 3.00**

This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social, and/or professional standards of behavior and apply a systematic decision-making process to these situations. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-172****Diversity Studies, Introduction to****Credits: 3.00**

Race, Ethnic, and Diversity Studies is a course that draws from several disciplines to reaffirm the basic American values of justice and equality by teaching a basic vocabulary, a basic history of immigration and conquest, principles of transcultural communication, legal liability, and the value of aesthetic production to increase the probability of respectful encounters among people. In addition to an analysis of majority/minority relations in a multicultural context, the topics of ageism, sexism, gender differences, sexual orientation, people with disabilities, and the Americans with Disabilities Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 with a minimum grade of C or TR or achieve the required placement test score

**809-188****Psychology, Developmental****Credits: 3.00**

Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-195****Economics****Credits: 3.00**

An introductory course which describes, analyzes, and critiques factors which influence the overall performance of the economic system. Topics include supply-demand analysis, national income determination models, fiscal and monetary policy, money, financial institutions, the federal reserve system, unemployment, poverty, international trade, economic growth, inflation, and environmental deterioration. The links between economic problems, theory, and public policy are emphasized. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-196****Sociology, Introduction to****Credits: 3.00**

This course examines interpersonal relationships of humans and groups and the consequent structure of society. It details the various social processes and concepts which shape human behavior, analyzing such phenomena as organizations, deviance, race and ethnic relations, population, urbanization, social change, and social movements. Religion, education, and the family are studied. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-198****Psychology, Introduction to****Credits: 3.00**

This course introduces students to some of the major theories and topics of psychology, including the physiological basis of behavior, personality and learning theories, memory, states of consciousness, stress, research methods, intelligence, human development, psychopathology, and social behavior. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or 831-107 - College Reading and Writing 1 or achieve the required placement test score

**809-991****Social Science General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

**809-992****Social Science General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

**809-993****Social Science General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

**809-994****Social Science General Education Credit****Credits: 3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

**809-999****Social Science Elective Credit****Credits: 3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

**831-103****College Writing, Intro****Credits: 3.00**

Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents. PREREQUISITES: Course 851-769 or 851-756 - Foundations of Writing with a minimum grade of C or TR or achieve the required placement test score

**831-107****College Reading and Writing 1****Credits: 5.00**

In this course, students examine the relationship between writer, reader, text, and purpose. Students apply reading comprehension strategies as they use a text's features and content to determine the writer's message and purpose. Students apply writing conventions as they analyze their purpose for writing and design texts with features and content that makes their ideas clear to the reader. Upon completion of this course, students will be able to explain the ideas expressed in readings, and they will be able to express their own ideas in written texts. PREREQUISITES: Meet placement test exams for Reading and Writing

**834-109****Pre-Algebra****Credits: 3.00**

Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra related courses. PREREQUISITES: Course 854-768 - Foundations of Prealgebra or 854-760 - Mathematics/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

### **834-110**

#### **Elementary Algebra with Applications**

**Credits: 3.00**

This course offers traditional algebra topics with applications. Learners develop algebraic problem solving techniques needed for technical problem solving and for more advanced algebraic studies. Topics include linear equations, exponents, polynomials, rational expressions, and roots and radicals. Successful completion of this course prepares learners to succeed in technical mathematics courses. COREQUISITES: Course 834-109 - Pre-Algebra or achieve the required placement test score

### **835-104**

#### **College Success**

**Credits: 2.00**

This course provides learners with strategies to develop skills for success in college. Learners will apply self management techniques, explore resource management strategies, and learn about ways to improve personal effectiveness.

### **836-133**

#### **Prep for Basic Chemistry**

**Credits: 2.00**

Introduces basic principles of chemistry including the properties of matter, atomic structure, and the classification of chemical reactions. Students learn to characterize solutions, acids, and bases, and differentiate between elements and compounds.

### **838-105**

#### **Reading & Study Skills, Intro**

**Credits: 3.00**

This course provides learners with opportunities to develop study skills and expand reading skills including comprehension, fluency, and vocabulary skills. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources. PREREQUISITES: Course 858-760 or achieve the required placement test score

### **851-756**

#### **Foundations of Writing**

**Credits: 1.00**

In this course, students will develop the writing skills needed in Intro to College Writing. Students will learn to structure effective sentences and compose unified, coherent paragraphs using the writing process. PREREQUISITES: Course 851-760 or achieve the required placement test score

**851-760A**

**Communications Skills/Pre Technical 1CR**

**Credits: 1.00**

**851-761**

**Pre-Tech Vocational Communications**

**Credits: 2.00**

In this class, you will learn to use English to achieve academically in Gateway vocational programs. Advanced ESL students will learn to: use English to interact in the college classroom, provide subject matter information in spoken and written form, and use learning strategies to better understand academic knowledge taught at Gateway vocational classrooms. Your English language skills will grow as you gain the self-confidence to succeed in college courses.

**851-764**

**Communication Skills Review**

**Credits: 1.00**

**854-760**

**Mathematics/Pre Technical**

**Credits: 2.00**

Pre-Technical Mathematics is a course designed to enable students to improve and enhance their mathematical skills in order to deal more effectively with mathematics in a future program. Material to be covered includes basic operations with fractions, decimals, and percents. Also included will be work with pre-geometry (measurement involving perimeter, circumference, area and volume). PREREQUISITES: Course 854-750 - Mathematics 200 with a minimum grade of C or TR or achieve the required placement test score

**854-761**

**Algebra/Pre Technical**

**Credits: 2.00**

A basic algebra course which covers algebraic expressions, polynomials, factoring, operations with integers, solving equations, and word problems. PREREQUISITES: Course 854-760 - Mathematics/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

**854-763**

**Mathematics Review**

**Credits: 1.00**

**854-765**

**Mathematics Review for the Sciences**

**Credits: 1.00**

**854-766**

**Algebra Review**

**Credits: 1.00**

**854-769**

**Algebra Pre-College**

**Credits: 2.00**

Pre College Algebra is a beginning and/or review course which prepares the student for college level mathematics. The course covers basic mathematical operations applied to signed numbers and algebraic functions and also includes operations with polynomials. Factoring, linear and quadratic equations, formulas, and formula manipulation are also included. PREREQUISITES: Course 854-761 - Algebra/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

**856-760**

**Science/PreTechnical**

**Credits: 2.00**

**856-760A**

**Science/Pretechnical Review- Animal Biology**

**Credits: 1.00**

This course is a review of basic scientific concepts and scientific method in the areas of animal biology, to prepare students for postsecondary science courses.

**856-760B**

**Science/Pretechnical Review- Plant Biology**

**Credits: 1.00**

This course is a review of basic scientific concepts and scientific method in the field of plant biology, to prepare students for postsecondary science courses.

**861-131**

**Beginning Reading and Vocabulary**

**Credits: 4.00**

In this course, students will use beginning reading strategies, such as activating prior knowledge, pre-learning vocabulary, skimming and scanning, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will explain beginning graphs, tables and diagrams. Students will increase beginning vocabulary, develop word



comprehension strategies and use multimedia resources, such as dictionaries and glossaries. Upon completion of the course, students will be able to read and summarize short beginning academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use basic reading and vocabulary strategies, along with memory techniques, to study and prepare for exams.

### **861-132**

#### **Beginning Grammar and Writing**

**Credits: 4.00**

In this course, students will learn to use several basic sentence structures to compose paragraphs using the standard American rhetorical style. Students will acquire beginning grammar, punctuation and spelling skills to write for some academic and professional settings. Upon completion of the course, students will be able to write single paragraphs using the writing process. They will edit their writing, and produce grammatically correct sentences, combined into well-structured paragraphs. They will demonstrate knowledge of some standard punctuation and spelling rules. Students will be able to write beginning paragraphs both in and out of class.

### **861-133**

#### **Beginning Speaking / Pronunciation**

**Credits: 4.00**

In this course, students will learn and practice conversational skills with partners, in small groups, and will begin to speak in front of the class. Students will acquire skills to give short academic presentations. Students will develop beginning level pronunciation knowledge, awareness and skills for clear communication. Students will clarify understanding using beginning communication strategies. They will ask and answer questions about themselves and their opinions. Upon completion of the course, students will be able to speak clearly with one or more conversational partners in some academic and professional settings. They will be able to prepare and deliver a beginning level presentation.

### **861-134**

#### **Beginning Listening and Note Taking**

**Credits: 4.00**

In this course, students will learn and practice beginning active listening skills with a partner, in a small group and in front of the class. Students will distinguish elements of beginning communication situations. Students will acquire beginning skills to listen and respond in real time with some prior knowledge and preparation. Students will use a variety of note-taking techniques to practice basic organization and main points in listening comprehension. They will demonstrate beginning listening comprehension by creating graphic formats relevant to lecture topics. Upon completion of the course, students will be able to listen and demonstrate beginning comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for beginning academic and professional situations. Students will restate understanding orally and in writing and clarify comprehension gaps.

### **861-135**

#### **Beginning American College Culture**

**Credits: 4.00**

In this course, students will integrate their beginning skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire basic knowledge of the American College Culture and improve study skills. They will explore beginning higher education vocabulary and college student roles. They will be introduced to American societal rules and perceptions about personal responsibility, especially in the higher education context. Students will interact with the American College Culture in real time in person. Upon completion of the course, students will be able to successfully navigate college interactions in person. With preparation and support, students will be able to basic ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate beginning personal effectiveness in the American College Culture through the use of several study techniques for learning, memory and test preparation.

### **861-141**

#### **Intermediate Reading/Vocabulary**

**Credits: 4.00**

In this course, students will use reading strategies, such as skimming and scanning, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will acquire skills to draw inferences and conclusions, and to distinguish fact from opinion. Students will interpret graphs, tables and diagrams. Students will increase vocabulary, develop word comprehension strategies and use multimedia resources, such as dictionaries and glossaries, independently. Upon completion of the course, students will be able to read and summarize academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use reading and vocabulary strategies, along with memory techniques, to study and prepare for exams.

### **861-142**

#### **Intermediate Grammar and Writing**

**Credits: 4.00**

In this course, students will learn to use a variety of effective sentence structures to compose unified, coherent paragraphs using the standard American rhetorical style and will write multi-paragraph documents. Students will acquire intermediate grammar, punctuation and spelling skills to write clearly and effectively in academic or professional settings. Students will be introduced to American academic standards of intellectual property. Upon completion of the course, students will be able to write multiple drafts using the writing process, edit writing, and produce grammatically correct sentences, well-structured paragraphs and 5-paragraph essays utilizing standard punctuation and spelling rules. Students will be able to write paragraphs and essays both in and out of class. Students will be able to define American concepts of intellectual property, including citations, and plagiarism.

### **861-143**

#### **Intermediate Speak/Pronunciation**

**Credits: 4.00**

In this course, students will learn and practice conversational skills with a partner, in a small group and will speak in front of the class. Students will acquire skills to speak extemporaneously and with preparation, including multimedia presentation tools. Students will develop intermediate level pronunciation knowledge, awareness and skills for clear communication. Expanding idiomatic language, students will develop paraphrasing techniques and the ability to express both facts and opinions. They will explore speaking strategies that show awareness of culture and bias. Upon completion of the course, students will be able to speak clearly and confidently with one or more conversational partners in academic

and professional settings. they will be able to speak extemporaneously and prepare and give an intermediate level presentation.

### **861-144**

#### **Intermediate Listen/Note-Taking**

**Credits: 4.00**

In this course, students will learn and practice active listening skills with a partner, in a small group and in front of the class. Students will analyze elements of communication situations, including nonverbals, gender and cultural differences. Students will acquire skills to listen and respond in real time with and without prior knowledge and preparation. Students will develop a variety of note-taking techniques to increase speed and accuracy in listening comprehension. They will demonstrate listening comprehension by paraphrasing in speaking and writing. Upon completion of the course, students will be able to listen and demonstrate comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for academic and professional situations. Students will be able to distinguish between facts and opinions and interpret nonverbal communication and body language.

### **861-145**

#### **Intermediate American College Culture**

**Credits: 4.00**

In this course, students will integrate their skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire knowledge of the American College Culture and improve study skills. They will explore higher education vocabulary and college student roles. They will learn American societal rules and perceptions about personal responsibility, dependence, independence, interdependence, passivity, aggression and assertiveness. Students will interact with the American College Culture in realtime in person, by phone and online. Students will be able to ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate personal effectiveness in the American College Culture through the use of a variety of study techniques for learning, memory and test preparation.

### **861-151**

#### **Advanced Reading and Vocabulary**

**Credits: 4.00**

In this course, students will use advanced reading strategies, such as connecting prior knowledge and context, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will make inferences and conclusions, and distinguish fact from opinion. Students will interpret graphs, tables and diagrams. Students will increase vocabulary, use word comprehension strategies and multimedia resources, such as dictionaries and glossaries, independently. Upon completion of the course, students will be able to read and summarize academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use advanced reading and vocabulary strategies along with memory techniques to student and prepare for exams.

**861-152****Advanced Grammar and Writing****Credits: 4.00**

In this course, students will learn to use a variety of effective sentence structures to compose unified, coherent paragraphs using the standard American rhetorical style and will write multi-paragraph documents and essays. Students will acquire advanced grammar, punctuation and spelling skills to write clearly and effectively in academic or professional settings. Students will practice American academic standards of intellectual property. Upon completion of the course, students will be able to write multiple drafts using the writing process, edit writing, and produce grammatically correct sentences, well-structure paragraphs and 5-paragraph essays utilizing standard punctuation and spelling rules. Students will be able to write paragraphs and essays both in and out of class. Students will be able to define American concepts of intellectual property, including citations and plagiarism.

**861-153****Advanced Speaking and Pronunciation****Credits: 4.00**

In this course, students will learn and practice advanced conversational skills with partners, in small groups, and will speak in front of the class. Students will acquire skills to speak extemporaneously and with preparation, including using multimedia presentation tools. Students will develop advanced level pronunciation knowledge, awareness and skills for clear communication. Expanding idiomatic language, students will develop paraphrasing techniques and the ability to express both facts and opinions. They will explore speaking strategies that show awareness of culture and bias. Upon completion of the course, students will be able to speak clearly and confidently with one or more conversational partners in academic and professional settings. They will be able to speak extemporaneously and prepare and give an advanced level presentation.

**861-154****Advanced Listening and Note-Taking****Credits: 4.00**

In this course, students will learn and practice advanced active listening skills with a partner, in a small group and in front of the class. Students will analyze elements of communication situations, including nonverbals, gender and cultural differences. Students will acquire skills to listen and respond in real time with and without prior knowledge and preparation. Students will develop a variety of note-taking techniques to increase speed and accuracy in listening comprehension. They will demonstrate listening comprehension by paraphrasing in speaking and writing. Upon completion of the course, students will be able to listen and demonstrate comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for academic and professional situations. Students will be able to distinguish between facts and opinions and interpret communication and body language.

**861-155****Advanced American College Culture****Credits: 4.00**

In this course, students will integrate their advanced skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire knowledge of the American college culture and improve study skills. They will explore higher education vocabulary and college student roles. They will learn American societal rules and perceptions about personal

responsibility, dependence, independence, interdependence, passivity aggression and assertiveness. Students will interact independently with the American college culture in real time in person, by phone and online. Upon completion of the course, students will be able to successfully navigate college interactions in person, by phone and online. Students will be able to ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate personal effectiveness in the American college culture through the use of a variety of study techniques for learning, memory and test preparation.

### **863-110**

#### **Intensive English Program Support**

**Credits: 3.00**

This course provides support to students who are enrolled in the Intensive English Program (IEP). Students will enhance their academic skills needed to complete the IEP program successfully. Through their participation in this course, students develop skills they will use in their further IEP study.

### **863-131**

#### **Beginning Reading and Vocabulary**

**Credits: 4.00**

In this course, students will use beginning reading strategies, such as activating prior knowledge, pre-learning vocabulary, skimming and scanning, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will explain beginning graphs, tables and diagrams. Students will increase beginning vocabulary, develop word comprehension strategies and use multimedia resources, such as dictionaries and glossaries. Upon completion of the course, students will be able to read and summarize short beginning academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use basic reading and vocabulary strategies, along with memory techniques, to study and prepare for exams.

### **863-132**

#### **Beginning Grammar and Writing**

**Credits: 4.00**

In this course, students will learn to use several basic sentence structures to compose paragraphs using the standard American rhetorical style. Students will acquire beginning grammar, punctuation and spelling skills to write for some academic and professional settings. Upon completion of the course, students will be able to write single paragraphs using the writing process. They will edit their writing, and produce grammatically correct sentences, combined into well-structured paragraphs. They will demonstrate knowledge of some standard punctuation and spelling rules. Students will be able to write beginning paragraphs both in and out of class.

### **863-133**

#### **Beginning Speaking / Pronunciation**

**Credits: 4.00**

In this course, students will learn and practice conversational skills with partners, in small groups, and will begin to speak in front of the class. Students will acquire skills to give short academic presentations. Students will develop beginning level pronunciation knowledge, awareness and skills for clear communication. Students will clarify understanding using

beginning communication strategies. They will ask and answer questions about themselves and their opinions. Upon completion of the course, students will be able to speak clearly with one or more conversational partners in some academic and professional settings. They will be able to prepare and deliver a beginning level presentation.

### **863-134**

#### **Beginning Listening and Note Taking**

**Credits: 4.00**

In this course, students will learn and practice beginning active listening skills with a partner, in a small group and in front of the class. Students will distinguish elements of beginning communication situations. Students will acquire beginning skills to listen and respond in real time with some prior knowledge and preparation. Students will use a variety of note-taking techniques to practice basic organization and main points in listening comprehension. They will demonstrate beginning listening comprehension by creating graphic formats relevant to lecture topics. Upon completion of the course, students will be able to listen and demonstrate beginning comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for beginning academic and professional situations. Students will restate understanding orally and in writing and clarify comprehension gaps.

### **863-135**

#### **Beginning American College Culture**

**Credits: 4.00**

In this course, students will integrate their beginning skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire basic knowledge of the American College Culture and improve study skills. They will explore beginning higher education vocabulary and college student roles. They will be introduced to American societal rules and perceptions about personal responsibility, especially in the higher education context. Students will interact with the American College Culture in real time in person. Upon completion of the course, students will be able to successfully navigate college interactions in person. With preparation and support, students will be able to basic ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate beginning personal effectiveness in the American College Culture through the use of several study techniques for learning, memory and test preparation.

### **863-141**

#### **Intermediate Reading/Vocabulary**

**Credits: 4.00**

In this course, students will use reading strategies, such as skimming and scanning, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will acquire skills to draw inferences and conclusions, and to distinguish fact from opinion. Students will interpret graphs, tables and diagrams. Students will increase vocabulary, develop word comprehension strategies and use multimedia resources, such as dictionaries and glossaries, independently. Upon completion of the course, students will be able to read and summarize academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use reading and vocabulary strategies, along with memory techniques, to study and prepare for exams.

**863-142****Intermediate Grammar and Writing****Credits: 4.00**

In this course, students will learn to use a variety of effective sentence structures to compose unified, coherent paragraphs using the standard American rhetorical style and will write multi-paragraph documents. Students will acquire intermediate grammar, punctuation and spelling skills to write clearly and effectively in academic or professional settings. Students will be introduced to American academic standards of intellectual property. Upon completion of the course, students will be able to write multiple drafts using the writing process, edit writing, and produce grammatically correct sentences, well-structured paragraphs and 5-paragraph essays utilizing standard punctuation and spelling rules. Students will be able to write paragraphs and essays both in and out of class. Students will be able to define American concepts of intellectual property, including citations, and plagiarism.

**863-143****Intermediate Speak/Pronunciation****Credits: 4.00**

In this course, students will learn and practice conversational skills with a partner, in a small group and will speak in front of the class. Students will acquire skills to speak extemporaneously and with preparation, including multimedia presentation tools. Students will develop intermediate level pronunciation knowledge, awareness and skills for clear communication. Expanding idiomatic language, students will develop paraphrasing techniques and the ability to express both facts and opinions. They will explore speaking strategies that show awareness of culture and bias. Upon completion of the course, students will be able to speak clearly and confidently with one or more conversational partners in academic and professional settings. They will be able to speak extemporaneously and prepare and give an intermediate level presentation.

**863-144****Intermediate Listen/Note-Taking****Credits: 4.00**

In this course, students will learn and practice active listening skills with a partner, in a small group and in front of the class. Students will analyze elements of communication situations, including nonverbals, gender and cultural differences. Students will acquire skills to listen and respond in real time with and without prior knowledge and preparation. Students will develop a variety of note-taking techniques to increase speed and accuracy in listening comprehension. They will demonstrate listening comprehension by paraphrasing in speaking and writing. Upon completion of the course, students will be able to listen and demonstrate comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for academic and professional situations. Students will be able to distinguish between facts and opinions and interpret nonverbal communication and body language.

**863-145****Intermediate American College Culture****Credits: 4.00**

In this course, students will integrate their skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire knowledge of the American College Culture and improve study skills. They will explore higher education vocabulary and college student roles. They will learn American societal rules and perceptions about personal

responsibility, dependence, independence, interdependence, passivity, aggression and assertiveness. Students will interact with the American College Culture in realtime in person, by phone and online. Students will be able to ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate personal effectiveness in the American College Culture through the use of a variety of study techniques for learning, memory and test preparation.

### **863-151**

#### **Advanced Reading and Vocabulary**

**Credits: 4.00**

In this course, students will use advanced reading strategies, such as connecting prior knowledge and context, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will make inferences and conclusions, and distinguish fact from opinion. Students will interpret graphs, tables and diagrams. Students will increase vocabulary, use word comprehension strategies and multimedia resources, such as dictionaries and glossaries, independently. Upon completion of the course, students will be able to read and summarize academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use advanced reading and vocabulary strategies along with memory techniques to student and prepare for exams.

### **863-152**

#### **Advanced Grammar and Writing**

**Credits: 4.00**

In this course, students will learn to use a variety of effective sentence structures to compose unified, coherent paragraphs using the standard American rhetorical style and will write multi-paragraph documents and essays. Students will acquire advanced grammar, punctuation and spelling skills to write clearly and effectively in academic or professional settings. Students will practice American academic standards of intellectual property. Upon completion of the course, students will be able to write multiple drafts using the writing process, edit writing, and produce grammatically correct sentences, well-structure paragraphs and 5-paragraph essays utilizing standard punctuation and spelling rules. Students will be able to write paragraphs and essays both in and out of class. Students will be able to define American concepts of intellectual property, including citations and plagiarism.

### **863-153**

#### **Advanced Speaking and Pronunciation**

**Credits: 4.00**

In this course, students will learn and practice advanced conversational skills with partners, in small groups, and will speak in front of the class. Students will acquire skills to speak extemporaneously and with preparation, including using multimedia presentation tools. Students will develop advanced level pronunciation knowledge, awareness and skills for clear communication. Expanding idiomatic language, students will develop paraphrasing techniques and the ability to express both facts and opinions. They will explore speaking strategies that show awareness of culture and bias. Upon completion of the course, students will be able to speak clearly and confidently with one or more conversational partners in academic and professional settings. They will be able to speak extemporaneously and prepare and give an advanced level presentation.



**863-154****Advanced Listening and Note-Taking****Credits: 4.00**

In this course, students will learn and practice advanced active listening skills with a partner, in a small group and in front of the class. Students will analyze elements of communication situations, including nonverbals, gender and cultural differences. Students will acquire skills to listen and respond in real time with and without prior knowledge and preparation. Students will develop a variety of note-taking techniques to increase speed and accuracy in listening comprehension. They will demonstrate listening comprehension by paraphrasing in speaking and writing. Upon completion of the course, students will be able to listen and demonstrate comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for academic and professional situations. Students will be able to distinguish between facts and opinions and interpret communication and body language.

**863-155****Advanced American College Culture****Credits: 4.00**

In this course, students will integrate their advanced skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire knowledge of the American college culture and improve study skills. They will explore higher education vocabulary and college student roles. They will learn American societal rules and perceptions about personal responsibility, dependence, independence, interdependence, passivity aggression and assertiveness. Students will interact independently with the American college culture in real time in person, by phone and online. Upon completion of the course, students will be able to successfully navigate college interactions in person, by phone and online. Students will be able to ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate personal effectiveness in the American college culture through the use of a variety of study techniques for learning, memory and test preparation.

**890-100****College Success Skills****Credits: 1.00**

Designed to promote student academic success. Through a variety of awareness activities, students are introduced to study skills, time management techniques, health-related and relationship-building skills, as well as to programs, services, policies and procedures offered by Gateway.

**890-103****Employability Skills****Credits: 2.00**

After completion of course, students will demonstrate positive personal image, exhibit positive work attitude, practice good work habits and ethical behavior, accept responsibility, and cooperate with others in the workplace.

**890-105****Serving to Learn Locally****Credits: 2.00**

Students will collaborate with a community partner to design and perform a service project to address a community need. Students will gain an awareness of themselves and their community and develop an understanding of community diversity and civic engagement.

### **890-106**

#### **Serving to Learn Globally**

**Credits: 2.00**

Through immersion in a global community, students will collaborate to identify a need, plan a service, perform the service and/or evaluate the result. They will apply principles of professionalism, team work, and critical thinking, as well as their chosen career's technical knowledge, attitude and skill. Through reflection and dissemination, students will integrate an increased sensitivity to the diversity of the community, global connectivity, civic engagement and their own professional career path.

### **890-154**

#### **Alternative Learning Portfolio**

**Credits: 3.00**

Learner will document proficiency in relevant knowledge and skills to substitute for designated course requirement from sources such as educational experience, work experience, and other personal activities. Course may be substituted for a program requirement at the recommendation of Disability Support Services faculty and approval of the dean and the provost's office.

### **890-155**

#### **Gateway to Success**

**Credits: 1.00**

In this course, students explore the Gateway Technical College community. They examine college resources and services, investigate skills that lead to academic success, and identify strategies for achieving educational and personal goals.

### **890-156**

#### **Personal/Professional Success**

**Credits: 1.00**

Learners in this interactive course will develop practical strategies for success to enhance personal and professional effectiveness. Topics will include problem solving, interpersonal skills, self-advocacy, adapting to workplace culture, personal responsibility, and managing transitions. This course can be counted as an elective credit towards your degree requirements at Gateway.