



Maintenance Technician Apprentice (50-464-1) Effective 2024/2025

Program Description

The Maintenance Technician works on mechanical and electrical equipment and machines in paper mills, foundries, production mills, food processing, schools and hospitals. The mechanical would include installing equipment, repair and replace units, maintaining equipment and using machines such as lathes, drill presses and various hand tools. The electrical would include working with electrical drawings, troubleshooting electrical motors, AC and DC drives, PLC's (programmable logic controllers), and solid-state devices.

Program Learning Outcomes

Graduates will be able to:

1. Apply AC and DC theory to an industrial setting.
2. Apply the National Electric Code requirements to industrial equipment and facilities.
3. Apply operational principles to transformers.
4. Maintain electric motors and motor controls.
5. Apply operational and troubleshooting principles to variable speed drives.
6. Apply operational and troubleshooting principles to programmable logic controllers and automation equipment.
7. Communicate trade and occupational related information effectively.
8. Demonstrate proper rigging techniques.
9. Select an appropriate power transmission system for a given application.
10. Identify suitable pumps for given applications.
11. Recommend bearings for given applications.
12. Apply operational and troubleshooting principles to fluid power systems.
13. Plan maintenance schedules for a given system.

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

Get Started as an Apprentice

1. To begin identifying or planning your apprenticeship, contact the local Apprenticeship Training Representative at 262.564.3210
2. If an employer wishes to hire you, they will submit an [apprentice application](#) to the Wisconsin Department of Workforce Development (DWD). If the DWD determines that you meet the Bureau of Apprentices Standards qualifications, you will be given a credential notice.
3. Once your permit is in place, Gateway's Apprenticeship department will communicate with you regarding registration, classes and books.

Graduation Requirements

- *Minimum of 2.0 ("C") or above for all required courses.
- Meet minimum hourly paid related instruction requirements per WI Registered Apprenticeship Contract.

Notes

1. Students must be physically able to perform the job.
2. Students must be 18 years of age and submit official high school, GED, or HSED transcript including a graduation or passing date.
3. Students must complete all courses with a grade of "C" or better.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for one year 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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The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.
Taking courses in the order shown will help you stay on track and graduate according to your academic plan.
Courses in this program may be offered in a variety or combination of formats (for example: in-person, video conferencing, online, etc.).

Pathway to Success

Term	Course	Course Name	Credits	Hours
1	*804-502	Math 1 for Apprentice	1.0	36
1	*421-515	Blueprint Reading I/Metal Trades	1.0	36
1	*462-503	Industrial Mechanic Fundamentals I	1.0	36
1	*462-504	Industrial Mechanic Fundamentals II	1.0	36
2	*442-510	Welding Fundamentals	1.0	36
2	*419-567	Basic Hydraulics Beginning	1.0	36
2	*419-551	Pneumatics Apprentice	1.0	36
2	*419-511	Hydraulic Pumps Apprenticeship	.75	24
2	*420-520	Precision Measurement	.50	12
3	*423-730	Bearings	.75	24
3	*423-565	Principles of Rigging	.50	18
3	*423-731	Couplings & Alignment	1.0	36
3	*423-716	Metallurgy	1.0	36
3	*423-724	Preventative & Predictive Maintenance	1.0	36
4	*423-501	Equipment Installation	.75	24
4	*413-701	Elect. Safety & Print Reading	1.0	36
4	*413-528	Direct Current Fundamentals	1.0	36
4	*413-538	Alternating Current Fundamentals	1.0	36
5	*413-705	Codes for Industrial Electricians	2.25	78
5	*413-602	AC & DC Motors	1.0	36
5	*413-548	Programmable Logic Controllers I	1.0	36
6	*413-577	Motor Controls 1	1.0	36
6	*413-589	Transformers	1.0	36
6	*413-603	Solid State Electronics Basics	1.0	36
6	*413-604	Variable Speed Drives	1.0	36

Training at a Glance

- Time to complete – Approximately 5 years
- On the job time – 9280 Hours
- Related Instruction Time – 864 Hours
- Additional training – First Aid and CPR certifications; Transition to Trainer
- Consult the Wisconsin Bureau of Apprenticeship Standards website for more information

If you need assistance getting started, Gateway's Apprenticeship Department is happy to help.

QUESTIONS?

PLEASE CONTACT:

Gateway Technical College
Apprenticeship Department
262-564-2954

apprenticeship@gtc.edu

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the front of the sheet.
(*) indicates students must achieve a minimum of 2.0 ("C") or above for these major courses to meet graduation requirements.