

Maintenance Technician Apprenticeship (50-464-1)

Effective 2026/2027

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:

- 1 Communication Competence
- 2 Critical Thinking and Problem Solving
- 3 Professionalism and Career Management
- 4 Teamwork and Collaboration
- 5 Cultural Competence
- 6 Technology Competence

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. The District reserves the right to modify, cancel, or relocate course offerings in response to factors such as low enrollment, resource availability, or other relevant considerations to ensure high-quality educational experiences. Students will be notified in writing and are encouraged to meet with their Academic Advisor to adjust their academic plan.

Get Started as an Apprentice

- 1 You should apply directly to employers, and entry requirements vary by employer.
- 2 If you need assistance finding an employer who will take you on as an apprentice, don't hesitate to get in touch with the local WI DWD-BAS Apprenticeship Training Representative at 414.216.8417 to find an employer who has been approved to train apprentices. You can also find apprenticeship employers at <https://dwd.wisconsin.gov/apprenticeship/ra/applicants.htm>.
- 3 Once your contract is in place with your employer and WI DWD-BAS, Gateway's Apprenticeship department will communicate with you regarding registration, classes and books.
- 4 You can contact Gateway's Apprenticeship department at apprenticeship@gtc.edu or 262.564.2954.

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 capable of performing the activities of the job, including equipment/tool use, for course grading. This may include any of these activities for an extended period: standing, sitting, reaching, bending, finger/hand dexterity, and, the use of head, face, eye, ear, hand and foot protection in various dynamic work environments including cramped/small spaces and hot or cold temperatures.
- 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.
- 4 Textbook, supplies and personal protective equipment requirements and sources will be provided by your instructor as well as outlined in the syllabus.
- 5 Virtual instruction will require the students to participate with the computer camera and microphones on when requested by the instructor.

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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.

All courses should be taken in the order shown to 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.).

More detailed scheduling information for this program can be found at <https://www.gtc.edu/maintenance-technician-apprentice>.

Please see your academic advisor for additional information.

Term	Course Number	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 Apprenticeship	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

(*) Students must achieve a minimum of 2.0 ("C") or above for this major course to meet graduation requirements.

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 at <https://dwd.wisconsin.gov/apprenticeship/occupations/maintenance-technician.htm>

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