



# Mechatronics Technician Apprentice (50-620-1)

## Effective 2022/2023

### Program Description

This occupation requires combined knowledge of electrical, electronic and mechanical systems used in industrial plants. Workers frequently support automation and robotic technologies. Work processes include installing, repairing, and maintaining equipment/devices. Troubleshooting systems involved in manufacturing and process control are critical requirements for workers in these occupations. Workers typically operate and debug, industrial computer and communication systems including PLC's, PCs, and HMI technologies. Workers machine metal and other materials; fabricate parts and weld/join components. Documenting work performed, maintaining accurate records, and working in a collaborative environment are critical interpersonal skills. Employees in some, but not all plants, support facilities, utilities and grounds.

### Program Learning Outcomes

Graduates will be able to:

1. Perform work safely.
2. Install mechanical equipment.
3. Install electrical equipment.
4. Maintain mechanical equipment.
5. Troubleshoot mechatronic systems.
6. Operate machine shop tools and machines.
7. Produce precision fabricated parts.
8. Maintain automated mechatronic systems.
9. Modify devices and systems.
10. Maintain documents and records.

### 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

### 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 Apprentice 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	*620-510	Math Review for Mechatronics	1.00	36
1	*620-511	Mechatronic Principles	2.00	72
1	*620-514	DC Electricity for Mechatronic	1.00	36
2	*620-515	AC Electricity for Mechatronics	1.00	36
2	*620-512	Motors & Motor Controls	2.00	72
2	*620-516	National Electrical Code	1.00	36
3	*620-517	Fluid Power Systems	2.00	72
3	*620-520	Servos and Drives	1.00	36
3	*620-508	Power Transmission Systems	1.00	36
4	*620-513	Machining Concepts	2.00	72
4	*620-521	Intro to Programmable Logic Controllers	2.00	72
5	*620-522	HMI Technologies & PLC Applications	2.00	72
5	*620-518	Introduction to Robotic System	2.00	72
6	*620-519	Introduction to Robotic Integration	3.00	108
6	*620-509	Welding Basics	1.00	36

### Training at a Glance

- Time to complete – Approximately 5 years
- On the job time – 9136 Hours
- Related Instruction Time – 864 Hours
- Additional training – 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](mailto: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.