MECHATRONICS TECHNICIAN APPRENTICESHIP

Overview

Mechatronics Technician Apprenticeship

Program Code: 50-620-1

For more information: wctc.edu/mechatronics-technician *(*https://www.wctc.edu/academics/programs-courses/programs/mechatronics-technician/*)*

Automated systems have become standard in many industries to provide reliable ways to program and control machine movements. Explore robotics and programmable logic controllers, and discover how automation principles apply to business/industry. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C
Program GPA = 2.0

Build your degree along a career pathway. Start with a couple of courses or an entry-level credential to enter the job market in your area of interest, then continue with higher credentials on your educational path for job advancement and higher wages.

Career Pathway

1. Mechatronics Technician Apprenticeship
2. Technical Studies - Journeyworker

Additional details regarding apprenticeship:

- Obtain further information about apprenticeship programs by visiting the State's Department of Workforce Development website: https://dwd.wisconsin.gov/apprenticeship (https://dwd.wisconsin.gov/apprenticeship/)
- Secure employment as a State of Wisconsin Indentured Apprentice.
- WCTC will send the schedule to the student; application to WCTC is not necessary by the student.

Learning Outcomes

Program Outcomes

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. Weld and fabricate parts.
8. Maintain automation systems.
9. Modify devices and systems.
10. Maintain documents and records.
11. Local options and work processes.

Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multi-cultural, and collaborative,** all students are given opportunities to develop and demonstrate Critical Life Skills, both in and out of the classroom. The following Critical Life Skills are learning outcomes for WCTC students.

- **Communication:** Demonstrate appropriate communication.
- **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.
- **Relationships:** Demonstrate effective interpersonal skills.
- **Self-management:** Demonstrate responsible and respectful behavior.

Required Courses

Code	Title	Credits
Core Courses		
442-505	Welding for Apprentices	1
Approved Substitute: 606-162		
620-702	Mechatronic Principles	2
620-703	DC Electricity	1
620-704	AC Electricity	1
620-705	Motors & Motor Control	2
620-706	Electrical Code	1
Approved Substitute: 413-309		
620-708	Fluid Power Systems	2
Approved Substitute: (462-151 AND 462-353)		
620-709	Servos and Drives	1
620-710	Power Transmission Systems	1
Approved Substitute: (462-151 AND 462-353)		
620-711	Machining Concept Mechatronics	2
Approved Substitute: 420-160		
620-712	Introduction to PLCs	2
620-714	HMI Technologies & PLC Apps	2
620-715	Intro to Robotic Systems	2
620-716	Intro to Robotic Integration	3
General Studies		
804-504	Industrial Math I	1
Approved Substitutes: 804-304 OR 804-107 OR 804-113 OR 804-114 OR 804-115		
Total Credits		**24**

Full-time Plan

First Year		
Fall Term 1		**Credits**
442-505	Welding for Apprentices	1
620-711	Machining Concept Mechatronics	2
804-504	Industrial Math I	1
	Credits	**4**
Spring Term 1		
620-702	Mechatronic Principles	2

620-703	DC Electricity	1
620-704	AC Electricity	1
	Credits	**4**
Second Year		
Fall Term 1		
620-705	Motors & Motor Control	2
620-709	Servos and Drives	1
620-710	Power Transmission Systems	1
	Credits	**4**
Spring Term 1		
620-708	Fluid Power Systems	2
620-712	Introduction to PLCs	2
	Credits	**4**
Third Year		
Fall Term 1		
620-714	HMI Technologies & PLC Apps	2
620-715	Intro to Robotic Systems	2
	Credits	**4**
Spring Term 1		
620-706	Electrical Code	1
620-716	Intro to Robotic Integration	3
	Credits	**4**
	Total Credits	**24**