MECHATRONICS: CERTIFIED MAINTENANCE TECHNICIAN - CERTIFICATE

Overview

See Department website and program contacts here (https://www.mhcc.edu/education-options/degrees-certificates/mechatronics/certified-maintenance-technician/index/)

The **Mechatronics: Certified Maintenance Technician certificate** is designed for students seeking entry-level careers in industrial maintenance and manufacturing environments. The curriculum introduces foundational mechanical and electrical systems knowledge used in industrial and production settings.

Coursework includes topics such as **industrial safety, troubleshooting, measurement, pneumatics, mechanical systems, and electrical systems**. Students develop practical technical skills used to maintain equipment, solve operational problems, and support industrial maintenance operations.

The Certified Maintenance Technician program is workforce-focused and prepares students for entry-level employment in manufacturing, industrial maintenance, and production facilities.

Students are encouraged to work with an advisor (https://www.mhcc.edu/student-resources/academic-advising/) to ensure appropriate course selection and program planning based on their educational background and career goals.

Refer to the tabs above for additional information about:

- **Education Plan** – provides a sample term-by-term sequence of courses
- **Career Info** – includes information on potential occupations, employment trends, and earnings

Program Learning Objectives

At the completion of this program, students should be able to:

- Demonstrate appropriate industrial safety practices in a manufacturing environment
- Participate effectively in a workplace environment
- Apply a systematic approach to troubleshooting problems
- Read and interpret industrial schematics
- Demonstrate intermediate level knowledge of pneumatic, mechanical, and electrical systems
- Describe and perform basic machining processes on ferrous metals
- Use hand and shop tools effectively to complete common maintenance tasks
- Identify and use appropriate test equipment

Education Plan

This sample Education Plan illustrates one possible course sequence. Students should consult an advisor (https://www.mhcc.edu/student-resources/academic-advising/) to create a personalized plan.

All MEC courses must be completed with a “C” grade or higher.

First Quarter		
Fall		**Credits**
MEC101	Introduction to Mechatronics	1
MEC110	Introduction to Manual Machine Tools	3
MEC112	Measurement Tools	3
MEC121	Mechanical Drives I	4
MEC131	AC/DC Electrical Systems	3
	Credits	**14**
Second Quarter		
Winter		
MEC113	Industrial Safety	2
MEC122	Mechanical Drives II	4
MEC132	Electric Motors	4
MEC141	Pneumatics I	3
	Credits	**13**
Third Quarter		
Spring		
MEC123	Mechanical Drives III	4
MEC142	Pneumatics II	2
	Credits	**6**
Fourth Quarter		
Fall		
MEC133 or MEC231	Motor Controls or Introduction to Programmable Logic Controllers	4-5
*MEC231 is only offered Spring term.		
	Credits	**4-5**
	Total Credits	**37-38**

Awarding Requirements

The following requirement(s) must be fulfilled to be awarded the Mechatronics: Certified Maintenance Technician certificate:

- All core program courses (MEC) must be completed with a grade of "C" or higher.
- All core program courses (MEC) must be completed within five (5) years of starting the program.

Career Information

Explore potential careers related to this program, including typical job roles, employment trends, and projected growth. This information can help you better understand how your education may align with future career opportunities.