MAINTENANCE TECHNICIAN APPRENTICESHIP

Overview

Maintenance Technician Apprenticeship, 3-years

Program Code: 50-464-1

For more information: wctc.edu/maint-tech (http://www.wctc.edu/maint-tech/)

Maintenance technicians perform tasks involving the maintenance, modification and repair of electrical and mechanical systems. Learn safety practices, machine operation and repair, metallurgy, electricity, hydraulics, pneumatics, blueprint reading, motor and logic controls, transformers, electrical codes and how to interpret schematics. 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. Maintenance 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

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.

Required Courses

Code	Title	Credits
Core Courses		
413-524	IE DC Circuit Analysis	1.5
413-525	IE AC Circuit Analysis	1.5
413-526	NEC Overview	1
413-527	IE Transformers	1.5
413-528	IE Motors and Generators	1.5
413-529	NEC In Depth	1
413-536	IE Electromechanical Control 1	2
413-538	IE Variable Speed Drives 1	2
413-542	Ind Elec PLC 1	2
413-551	IE Raceways & Ctrl Drawings	1
413-552	Ind Elec Electronics	1
419-501	Apprentice Hydraulics	1
Approved Substitute: 612-310		
419-502	Pneumatics for Apprentices	1
Approved Substitutes: 612-315 OR 419-104		
423-502	Apprentice Maintenance Fund	1
423-508	Apprentice Machine Repair	1
423-513	Equipment Install Apprentices	1
423-514	Apprentice Pump Piping Systems	1
423-520	Maint Mill IV	2
Total Credits		**24**

Full-time Plan

First Year		
Fall Term 1		**Credits**
413-524	IE DC Circuit Analysis	1.5
413-525	IE AC Circuit Analysis	1.5
413-526	NEC Overview	1
	Credits	**4**
Spring Term 1		
413-527	IE Transformers	1.5
413-528	IE Motors and Generators	1.5
413-529	NEC In Depth	1
	Credits	**4**
Second Year		
Fall Term 1		
413-536	IE Electromechanical Control 1	2
413-551	IE Raceways & Ctrl Drawings	1
413-552	Ind Elec Electronics	1
	Credits	**4**
Spring Term 1		
413-542	Ind Elec PLC 1	2

413-538	IE Variable Speed Drives 1	2
	Credits	**4**
Third Year		
Fall Term 1		
419-502	Pneumatics for Apprentices	1
423-502	Apprentice Maintenance Fund	1
423-513	Equipment Install Apprentices	1
423-514	Apprentice Pump Piping Systems	1
	Credits	**4**
Spring Term 1		
419-501	Apprentice Hydraulics	1
423-508	Apprentice Machine Repair	1
423-520	Maint Mill IV	2
	Credits	**4**
	Total Credits	**24**