

APPLIED INDUSTRIAL TECHNOLOGY (MILLWRIGHTING), ASSOCIATE OF APPLIED SCIENCE



This program is offered in partnership with the Central Midwest Regional Council of Carpenters – United Brotherhood of Carpenters and Joiners of America at various local training centers around the state. Students must be currently working in a registered apprenticeship program in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training.

The apprenticeship program prepares the student to earn a journey-level status in Millwrighting, as well as earn an Associate of Applied Science in Millwrighting Technology degree. A four year apprenticeship emphasizes the skill set required to be a highly skilled craftsman. Millwrights install, maintain, and troubleshoot industrial equipment such as conveyors, monorails, combustion turbines, and various rotating equipment.

Program contact: Learn more

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree.

Related Degrees and Certificates

- Millwrighting, Certificate of Proficiency

Program Admission Requirements

- High School Diploma/GED
- Intent-to-hire agreement with participating contractor
- Participant must be working in an apprenticeship in conjunction with the U.S. Dept. of Labor, Bureau of Apprenticeship and Training.

Next Steps to Apply

- Individuals interested in this program/certificate must reach out to the training center of your choice listed at the bottom of the Millwrighting program page on the Tri-C website.
- The union must select and admit you into the apprenticeship program first.

- Once accepted into the apprenticeship program, a Tri-C representative will work with you directly to enroll in the credit courses. Each of the classes will be held at your training center.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Communicate verbally, nonverbally and in writing with the construction team that includes members of other trades, contractor and government agencies.
2. Work independently and in a team environment to accomplish the job in a timely and professional manner.
3. Recognize, analyze and apply critical thinking to resolve issues as they arise, minimize waste and improve productivity.
4. Use appropriate personal protective equipment and fall protection to ensure a safe and environmentally sensitive work environment in accordance with OSHA and other federal, state, local and contractor's standards and policies.
5. Exhibit pride of craftsmanship, reliability, commitment to the organization and take opportunities to upgrade skills.
6. Apply basic math concepts and operations and blueprint reading to accurately determine layout in order to fabricate and install various construction tasks that minimize waste.
7. Be certified in OSHA, CPR/First Aid, Scaffold, fall protection and MSDS.
8. Apply knowledge of mechanics, welding, tools and equipment to diagnose, recommend, design, fabricate and install machine and conveyor compressors and tools that efficiently solve a given customer problem(s) within their time frame and budget.
9. Move and install machinery using forklifts, rigging hardware and tools in a safe, effective and efficient manner.
10. Use precision tools to check for tolerances, and perform alignment within .001 of an inch in order to recommend necessary repairs of turbines, pumps and other related power plant equipment.
11. Be certified in forklift, rigging, aerial lift, welding, high torque and turban.

Suggested Semester Sequence

First Semester		Credit Hours
ATCT-1301	Introduction to Carpentry	2
ATMW-1320	Introduction to Millwrighting	2
ATMW-1330	Print Reading for Millwrights	2
ATMW-1350	Hydraulics/Centrifugal Pumps	2
Select one of the following:		3
IT-1090	Computer Applications	
IT-109H	Honors Computer Applications	
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	
Credit Hours		14
Second Semester		
ATMW-1450	Heavy Rigging	2
ATMW-1490	Millwright Pile Driver Weld I	2
ATMW-1720	Machinery Installation	2

ATMW-2120	Shaft Alignment	2
CNST-1290	Construction Print Reading	2
Communication requirement		3
Any Approved Ohio Transfer 36 Mathematics course		3
Credit Hours		16
Third Semester		
ATCT-1310	Carpentry Safety	2
ATMW-2130	Shaft Alignment II	2
ATMW-2230	Millwright Pile Driver Weld II	2
ATMW-2350	Floor Conveyor	2
CNST-2131	Construction Methods and Materials	3
Arts & Humanities requirement		3
Credit Hours		14
Fourth Semester		
AIT-2990	Contracting in a Diverse World	3
ATMW-2520	Millwright PileDriver Weld III ²	2
ATPD-2700	Millwright-Pile Driver Weld IV ²	2
ATXX-xxxx	ATxx Elective Apprenticeship course	2-3
CNST-2631	Construction Management Systems	3
CNST-2990	Construction Estimating & Cost Analysis	3
Soc & Behavioral Science requirement		3
Credit Hours		18-19
Total Credit Hours		62-63

¹ MATH-1100 Mathematical Explorations or MATH-1240 Contemporary Mathematics taken prior to Fall 2024 will be accepted to meet Mathematics requirement.

² Consecutively scheduled course.

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.