

APPLIED INDUSTRIAL TECHNOLOGY (PILE DRIVING), ASSOCIATE OF APPLIED SCIENCE



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 Pile Driving, as well as an Associate of Applied Science degree in Applied Industrial Technology. A four-year apprenticeship emphasizes the skill set required to be a highly skilled craftsman. Pile Driving is the art of driving down piles with rigs that are large machines that resemble cranes. Work can include driving concrete and metal piling as part of a foundation system, or driving wood and concrete piling to support docks and bridges. Pile Drivers can also be found on offshore oil rigs and as commercial divers in underwater construction.

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.

Program Admission Requirements

- High School Diploma/GED
- Intent-to-hire agreement with participating contractor

Other Information

- Participant must be working in an apprenticeship in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training.

Program Learning Outcomes

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

- Communicate verbally, nonverbally and in writing with the construction team that includes members of other trades, contractor and government agencies.
- Work independently and in a team environment to accomplish the job in a timely and professional manner.
- Recognize, analyze and apply critical thinking to resolve issues as they arise, minimize waste and improve productivity.

- 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.
- Exhibit pride of craftsmanship, reliability, commitment to the organization and take opportunities to upgrade skills.
- 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.
- Be certified in OSHA, CPR/First Aid, Scaffold, fall protection and MSDS.
- Use cranes, vibrating hammers and drilling rigs to drive and secure various types of piling to develop foundations for bridges and commercial buildings.
- Use appropriate equipment, sheeting and lagging in order to build permanent and temporary retaining walls for a variety of construction projects.
- Setup and use crane(s) to support the equipment and drive various types of piling.
- Be certified in rigging and welding.

Suggested Semester Sequence

First Semester		Credit Hours
ATCT-1301	Introduction to Carpentry	2
ATCT-1310	Carpentry Safety	2
ATMW-1340	Introduction to Pile Driving	2
ATPD-1330	Print Reading for Pile Driving	2
CNST-1281	Construction Engineering Orientation	3
Any Approved Ohio Transfer 36 Mathematics course ²		3
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	
Credit Hours		17
Second Semester		Credit Hours
ATMW-1450	Heavy Rigging	2
ATMW-1490	Millwright Pile Driver Weld I	2
ATPD-1310	Technical Measurements, Hand & Power Tool Use in Pile Driving	2
ATPD-1370	Pile Driving on Land and Water	2
CNST-1510	Green Building & Sustainability I	3
Arts & Humanities requirement		3
Select one of the following:		3
IT-1090	Computer Applications	
IT-109H	Honors Computer Applications	
Credit Hours		17
Third Semester		Credit Hours
ATMW-2230	Millwright Pile Driver Weld II	2
ATPD-2020	Pile Driving Technologies	2
CNST-1290	Construction Print Reading	2
Communication requirement ¹		3
Social & Behavioral Science/Natural and Physical Science requirement		3
Credit Hours		12

Fourth Semester

AIT-2990	Contracting in a Diverse World	3
ATMW-2520	Millwright PileDriver Weld III	2
ATPD-2700	Millwright-Pile Driver Weld IV	2
ATPD-2710	Millwright-Pile Driver Weld V	2
CNST-2131	Construction Methods and Materials	3
CNST-2990	Construction Estimating & Cost Analysis	3
Credit Hours		15
Total Credit Hours		61

¹ ENG-2151 Technical Writing highly recommended.

² MATH-1100 Mathematical Explorations or MATH-1240 Contemporary Mathematics taken prior to Fall 2024 will be accepted to meet Mathematics requirement.

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.