APPLIED INDUSTRIAL TECHNOLOGY (PIPEFITTING), 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, and the United Association (UA).

The apprenticeship program prepares the student to earn a journey-level status in Pipefitting; as well as earn an Associate of Applied Science Degree in Applied Industrial Technology. A five-year apprenticeship emphasizes the skill set required to be a highly skilled craftsman. A pipefitter apprentice will learn to layout, fabricate, assemble, install, maintain, and repair piping systems that transport fluids, slurries and gas in the residential, commercial and industrial sectors. They specialize in planning, design, and installation of low- and high-pressure steam systems. Their work is in fields such as refineries, paper mills, nuclear power plants, manufacturing plants, and in the automotive industry. The systems that the pipefitter may work on are some of the highest pressure and temperature applications and require a thorough knowledge of scientific principles to complete this work safely.

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

- Participant must be currently working in a registered apprenticeship program in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training, and the United Association (UA).
- High School Diploma/GED

Program Learning Outcomes

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

a. Communicate verbally, non-verbally and in writing with the construction team that include members of other trades, contractors, customers, and public officials and agencies.

b. Work independently and in a team setting to accomplish work in a timely, professional, and cost effective manner.

c. Act according to the United Association of Plumbers and Pipe Fitters Code of Excellence and continually upgrade knowledge and skills.

d. Recognize, analyze and apply critical thinking to resolve issues as they arise while minimizing waste and improving productivity.

e. 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, policies, and regulations.

f. Apply basic and advanced math concepts and operations and blueprint reading to accurately determine layout in order to fabricate and complete various pipe trade tasks that minimize waste.

g. Apply knowledge of math, pipe hydraulic theory, blueprints, and tools to install, repair and test basic piping systems that meet industry codes and standards.

h. Apply knowledge of advance math to install, repair and test hydronic heating and cooling systems, steam systems, process piping, fire protection sprinkler systems, and refrigeration systems according to national, state, local and other applicable industry codes and standards.

i. Obtain all required certifications in the pipe fitting industry.

Suggested Semester Sequence

First Semester		Credit Hours
ATPF-1210	Rigging	2
ATPL-1000	Care and Use of Tools	2
ATCM-1341	OSHA Standards for Construction	2
MATH-1xxx	1000-level MATH course or higher	3
Select one of the following:		3
BADM-xxxx	Business Elective	
CNST-xxxx	CNST Elective	
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	
	Credit Hours	**15**
Second Semester		
ATPF-1220	Basic Pipefitting Layout	1
ATPF-xxxx	Pipefitter Elective	2
ATPF-xxxx	Pipefitter Elective	2
Communication requirements		3
Select one of the following:		3
IT-1090	Computer Applications	
IT-109H	Honors Computer Applications	
Select one of the following:		3
BADM-xxxx	Business Elective	
CNST-xxxx	CNST Elective	
FIN-1061	Personal Finance	
	Credit Hours	**14**
Third Semester		
ATPF-1360	Hydronic Heating and Cooling	2
ATPF-xxxx	Elective	1
ATPL-2510	Pumps	2
Natural Science requirement		3
Arts & Humanities/Social & Behavioral Science requirement		3

Code	Title	Credit Hours
Select one of the following:		3
BADM-xxxx	Business Elective	
CNST-1731	Construction Print Reading	
	Credit Hours	**14**
Fourth Semester		
ATPF-2340	Steam Systems	2
ATPF-xxxx	Elective	1
ATPF-xxxx	Pipefitter Elective	2
Select one of the following:		3
BADM-2xxx	2000 level Business Elective	
CNST-2131	Construction Methods and Materials	
	Credit Hours	**8**
Summer Completion		
AIT-2990	Contracting in a Diverse World	3
ATPF-xxxx	Pipefitter Elective	2
ATPF-xxxx	Pipefitter Elective	2
ATPL-2560	Foreman Certification	2
	Credit Hours	**9**
	Total Credit Hours	**60**

Electives

Electives

Recommended courses to select from to fulfill elective requirements.

Code	Title	Credit Hours
BADM-1020	Introduction to Business	3
BADM-1210	Labor-Management Relations	3
BADM-1122	Principles of Management and Organizational Behavior	3
BADM-1301	Small Business Management	3
BADM-2151	Business Law	3
BADM-2450	New Business Development	5
CNST-1281	Construction Engineering Orientation	3
CNST-1510	Green Building & Sustainability I	3
CNST-1731	Construction Print Reading	3
CNST-2131	Construction Methods and Materials	3
FIN-1061	Personal Finance	3

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.