

SHEET METAL SERVICE, CERTIFICATE OF PROFICIENCY



Students must be working in a registered apprenticeship program in conjunction with the U. S. Department of Labor, Bureau of Apprenticeship and Training. The 5 year apprenticeship program provides training toward journey level certification. Sheet Metal Workers make, install, and maintain heating, ventilation, and air-conditioning duct systems. The apprenticeship certificate recognizes student attaining journey level status at the completion of the technical studies. Coursework completed for the Sheet Metal Service Certificate of Proficiency may be applied toward the Associate of Applied Science degree.

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, 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.
- High School Diploma/GED

Program Learning Outcomes

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

1. Communicate verbally, nonverbally and in writing using appropriate technology with co-workers, other trades, design professionals, suppliers and end users in order to complete projects in a timely fashion in accordance with local codes and job specifications.
2. Working independently or as part of a team in a respectful and professional manner, resolving conflicts when needed, in order to complete a project in a timely fashion.
3. Exhibit pride of craftsmanship and reliability; actively engage in all aspects of the project and take opportunities to upgrade skills.
4. Recognize hazardous materials and conditions, wear appropriate personal protective equipment and take preventative measures following federal, state, local laws, policies and procedures.
5. Layout and fabricate sheet metal items used in residential and light commercial application safely using shop equipment, hand and power tools, computerized equipment and apply basic math to meet job specifications in accordance with Sheet Metal Air Condition Contractors National Association (SMACNA).

6. Service HVAC equipment safely using hand and power tools, ladders, scaffolds and lifting devices, and apply basic math to meet job specifications in accordance with SMACNA standards.
7. Read and interpret blueprints, electrical schematics, and shop drawing in order to service and maintain various HVAC equipment.
8. Startup HVAC equipment and service accordingly to meet project specification.
9. Safely test and balance an installed system to ensure that it is operating to design specifications.
10. Be certified OSHA 30 Construction Safety and Health. Be prepared for the following certifications:
 - a. EPA Section 608 Certification
 - b. HVAC Firelife Safety Level 1 Technician Certification
 - c. North American Technicians Excellence Certification
 - d. ICRA Certification

Suggested Semester Sequence

First Semester		Credit Hours
ATSM-1010	Benefits Management	1
ATSM-1020	Trade History	1
ATSM-1030	Layout and Fabrication I	2
ATSM-1060	Sheet Metal OSHA 30	2
ATSM-1080	New EPA 608	1
ATSM-1070	Sheet Metal Electricity	3
ATSM-1090	HVAC Cleaning	1
ATSM-1220	Layout and Fabrication II	2
ATSM-1230	Field Installation	3
Credit Hours		16
Second Semester		Credit Hours
ATSM-2310	Refrigeration I	1
ATSM-2350	Duct Design and Testing	2
ATSM-2360	Load Calculations	1
ATSM-2410	Residential Heating	3
ATSM-2420	Refrigeration II	2
ATSM-2530	Direct Digital Controls	2
ATSM-2540	SMART ICRA	1
ATSM-2780	NATE Certification	2
ATSM-2790	Sheet Metal Foreman Training	1
Credit Hours		15
Total Credit Hours		31

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.