

# SHEET METAL WORKING, 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; roofs; siding; rain gutters; downspouts; skylights; restaurant equipment; outdoor signs; railroad cars; tailgates; customized precision equipment; and many other products made from metal sheets. They also may work with fiberglass and plastic materials. The apprenticeship certificate recognizes student attaining journey level status at the completion of the technical studies. Apprentices may apply technical studies together with general education coursework toward the Associate of Applied Science degree with a concentration in Sheet Metal Working.

**Program contact:** Learn more

Financial Assistance funds cannot be applied towards this program.

**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 enrolled in the union sheet metal apprenticeship in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training.
- departmental approval

## Program Learning Outcomes

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

- 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.
- 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.
- Exhibit pride of craftsmanship and reliability; actively engage in all aspects of the project and take opportunities to upgrade skills.

- Recognize hazardous materials and conditions, wear appropriate personal protective equipment and take preventative measures following federal, state, local laws, policies and procedures.
- Layout and fabricate sheet metal items 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).
- Install sheet metal items safely using hand and power tools, ladders, scaffolds and lifting devices, and apply basic math to meet job specifications in accordance with SMACNA standards.
- Read and interpret blueprints, specifications and shop drawing in order to fabricate and install various sheet metal components.
- Startup HVAC equipment and service accordingly to meet project specification.
- Safely test and balance an installed system to ensure that it is operating to design specifications.
- Be certified in OSHA 10 and OSHA 30 Construction Safety and Health. Be prepared for the following certifications:
  - EPA Section 608 Certification
  - AWSD1.1 and AWSD1.9 Welding Certifications
  - HVAC Firelife Safety Level 1 Technician 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-1050	Fire Life Safety Tech I	1
ATSM-1060	Sheet Metal OSHA 30	2
ATSM-1230	Field Installation	3
ATSM-2540	SMART ICRA	1
ATSM-xxxx	Sheetmetal Working Elective	3
<b>Credit Hours</b>		<b>14</b>
Second Semester		Credit Hours
ATSM-1220	Layout and Fabrication II <sup>1</sup>	2
ATSM-2310	Refrigeration I	1
ATSM-2330	Layout and Fabrication III <sup>1</sup>	3
ATSM-2340	Advanced Field Installation	3
ATSM-2420	Refrigeration II	2
ATSM-2520	Project Management	2
ATSM-2790	Sheet Metal Foreman Training	1
ATSM-xxxx	ATSM Elective	2
<b>Credit Hours</b>		<b>16</b>
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup> Consecutively scheduled courses.

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.