# SHEET METAL WORKING, CERTIFICATE OF PROFICIENCY

This program is offered in partnership with the Sheet Metal Workers International Association at various local training centers around the state. 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 in Sheet Metal Working Technology.

**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

## 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 Sheet Metal Working 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 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 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. 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.
7. Read and interpret blueprints, specifications and shop drawing in order to fabricate and install various sheet metal components.
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 in OSHA 10 and OSHA 30 Construction Safety and Health. Be prepared for the following certifications:
    a. EPA Section 608 Certification
    b. AWSD1.1 and AWSD1.9 Welding Certifications
    c. 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 |
| | **Credit Hours** | **14** |
| **Second Semester** | | |
| ATSM-1220 | Layout and Fabrication II [1] | 2 |
| ATSM-2310 | Refrigeration I | 1 |
| ATSM-2330 | Layout and Fabrication III [1] | 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 |
| | **Credit Hours** | **16** |
| | **Total Credit Hours** | **30** |

[1] 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.