

# APSM 101: SMQ-1 TRADE INTRODUCTION

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Summer 2021
<b>Units:</b>	3
<b>Hours:</b>	36 lecture, 4 laboratory per quarter (40 total per quarter)
<b>Prerequisite:</b>	Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	None
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- A successful student will be able to identify roles of principal trade organizations.
- A successful student will demonstrate safe material handling and ladder use.

## Description

Introduction to Sheet Metal as a skilled construction trade including: general overview, trade history and related issues, material handling and safety, sheet metal materials, hardware, and HVAC careers. Includes First Aid and CPR training and certifications.

## Course Objectives

The student will be able to:

- Identify class rules and expectations applying to this course and the apprenticeship program
- Explain principal organizations and complete required paperwork
- List and give examples of career opportunities for sheet metal workers
- Describe past and future industry concerns and expectations
- Demonstrate competency in the practice of safe material handling and proper ladder use
- Properly tie common knots found in the trade
- Identify common hand tools and materials used in Sheet Metal trade including proper handling, safety, and maintenance
- Obtain first aid and CPR certifications
- Demonstrate good work and study habits

## Course Content

- Orientation to apprenticeship classes
- Principal organizations
  - Trade history and overview
  - Roles and responsibilities
  - Construction trade sexual harassment issues
- Career opportunities

- Types of careers
- Career development
- Past and future industry concerns
  - Job market
  - HVAC opportunities
- Practice of safe material handling
  - Material handling safety
  - Ladder and job site safety issues
- Tying common knots
  - Knots used in industry
- Common hand tools and materials
  - Hand tools
  - Sheet metal materials
  - Hardware
  - Review and testing
- First Aid and CPR certification training

## Lab Content

Students will work individually and in teams on fabrication of sheet metal products using sheet metal equipment. Safe working practices are taught and reviewed.

- Equipment safety: operation of common tools
- Fire protection
- Electrostatic Discharge (ESD): high-voltage precautions and arc-flash awareness
- Practice handling sheet metal and equipment safely
- Awareness of hazardous situations in a typical sheet-metal shop

## Special Facilities and/or Equipment

- Laboratory with sheet metal tools
- Personal protective equipment

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Demonstrated mastery of course topics as measured by the results of written quizzes, tests, and lab practicals
- Demonstrate appropriate mechanical skills through shop participation
- Comprehensive written final examination
- Comprehensive final project
- Maintenance of a detailed workbook of students' daily work activities on core competencies

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

- Discussion
- Laboratory instruction
- Demonstration

## Representative Text(s) and Other Materials

International Training Institute. [Core Sheet Metal Curriculum](#), [International Training Institute for the Sheet Metal and Air Conditioning Industry \(student manual and workbook\)](#). 2010.

This is the standard Sheet Metal textbook/workbook used for this course. Although it may not be within 5 years of the required published date, it is the most current book used when teaching this course.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

A. Reading assignment, from the textbook:

1. Read a 10-page assignment in Lesson 3 regarding organizations, roles and responsibilities of the sheet metal industry

B. Writing assignment:

1. Students will research local officials and industry representatives and report their findings on a survey worksheet

## **Discipline(s)**

Sheet Metal