

APSM 101: SMQ-1 TRADE INTRODUCTION

Foothill College Course Outline of Record

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

Student Learning Outcomes

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

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

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

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