APSM 122: SMQ-22 CODES & STANDARDS

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	3
Hours:	38 lecture, 2 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 be able to demonstrate efficient use of the Uniform Building Code, Uniform Mechanical Code, and National Fire Code.
- A successful student will be able to demonstrate efficient use of AWS, (American Welding Society) and SMACNA (Sheet Metal Air Conditioning Contractors National Association) standards.

Description

Students are introduced to the organization and interpretation of building codes and standards in the sheet metal industry. The restrictions and limitations these codes place on the construction industry are covered in detail. Students work with codes common to the industry and use SMACNA standards to research information.

Course Objectives

The student will be able to:
A. Explain the importance of codes and standards
B. Explain the difference between codes and standards
C. Use the Uniform Building Code, Uniform Mechanical Code, and National Fire Code
D. Apply the use of SMACNA standards

Course Content

A. Importance of codes and standards
1. Discuss history and applications
B. Difference between codes and standards
1. Building, mechanical, and welding codes
2. SMACNA standards
C. Code usage
1. Uniform building codes
2. National fire codes
3. Welding codes
D. Use of SMACNA standards

Lab Content

Students will work individually and in teams. Lab content includes:
A. Observation of examples of both code violations and correct installations
B. Students will learn to research and apply appropriate codes or standards to common sheet metal installations
C. Students will learn how to determine which has preference in the case of any conflicts

Special Facilities and/or Equipment

A. Laboratory with sheet metal tools
B. Personal protective equipment

Method(s) of Evaluation

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

Results of written quizzes and tests
Shop participation
Comprehensive written final examination
Comprehensive final project
Evaluation of progress by weekly assignments

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

California Building Standards Commission. 2010 California Mechanical Code. 2009.

Sheet Metal and Air Conditioning Contractors' Association, Inc.. HVAC Duct Construction Standards, Metal and Flexible. 2005.

Sheet Metal and Air Conditioning Contractors' Association, Inc.. Architectural Sheet Metal Manual. 2012.

These are the standard Sheet Metal textbooks/workbooks used for this course. Although one or more may not be within 5 years of the required published date, they are the most current books used when teaching this course.

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

A. Reading assignment:
1. Research minimum combustion air requirements for a particular gas burning appliance, as assigned
B. Writing assignment:
1. Calculate hanger requirements for specified ducts

Discipline(s)

Sheet Metal