APSM 133: SMQ-33 ADVANCED ARCHITECTURAL

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	1.5
Hours:	12 lecture, 28 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 layout and fabricate a louver.
- A successful student will be able to fabricate specialty flashing.

Description

Develop advanced skills to layout architectural custom flashing and cornices. Work with the newest metal roofing material. Work with copper and other materials to lay out and fabricate specialized architectural items.

Course Objectives

The student will be able to:
A. Demonstrate an understanding of common architectural lay out, seams and soldering, as applied to a variety of materials.
B. Lay out, fabricate, and solder specialty architectural items.
C. Lay out and fabricate field miters on complex profiles and various angles.
D. Maintain or improve the integrity of building moisture control systems.

Course Content

A. Demonstrate an understanding of common architectural lay out, seams and soldering, as applied to a variety of materials.
B. Lay out, fabricate, and solder specialty architectural items.
1. Lay out and fabricate an ornamental leader head.
2. Lay out and fabricate a bay window roof/flashing assembly.
C. Lay out and fabricate field miters on complex profiles and various angles.
1. Review mitering techniques.
2. Apply miter techniques and joint make up skills to sample project.
3. Lay out field miters on gutter or flashings on a rake at various angles.
D. Maintain or improve the integrity of building moisture control systems.

1. Consider installation logistics, safety and moisture challenges and solutions.
2. Refer to SMACNA Architectural Standards and manufacturer instructions for proper applications.

Lab Content

Students will work individually and in teams on fabrication of sheet metal products using sheet metal equipment. Safe working practices are reviewed.
A. Equipment safety
B. Fire protection
C. Variations in weather and other field conditions
D. Safe handling practices
E. Safety with soldering chemicals and heat sources

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 assignment

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. Architectural Sheet Metal, International Training Institute for the Sheet Metal and Air Conditioning Industry Vols. 1 and 2. 2006.

International Training Institute. Residential Architectural Sheet Metal and Roofing, International Training Institute for the Sheet Metal and Air Conditioning Industry (student manual). 2010.

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 assignments: Weekly reading assignments from text and outside sources.

Discipline(s)

Sheet Metal