

APSM 107: SMQ-7 PARALLEL LINE FITTINGS

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	1.5
Hours:	16 lecture, 24 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 90 degree round tee fitting to acceptable industry standards.
- A successful student will be able to layout and fabricate a round elbow fitting to acceptable industry standards.

Description

Introduction to communicating construction details through drafting of plans. Topics include drafting equipment and materials, use of an architects scale, drawing format, geometric construction, basic views, square and radius elbows, and drawing duct runs.

Course Objectives

The student will be able to:

- Lay out and fabricate the fittings listed using parallel line development to acceptable industry standards
- Apply geometric construction to parallel line lay out

Course Content

- Lay out and fabricate fittings using parallel line development
 - Introduction to parallel lines
 - Round offset
 - Round elbow
 - Unequal size tees (90 and 45 degree)
 - Off-center tees
 - Type C curved gutter miters
- Apply geometric construction to parallel line lay out

Lab Content

- Practicing hand skills to join round elbow gores by sheet metal seams.
- Application of parallel line pattern development to various sheet metal projects.

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:

- 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. [Layout Curriculum for the Sheet Metal Industry](#), [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:

- Read text Unit 2 pages 97-99 introducing steps in applying parallel line techniques.

B. Writing assignment:

- Develop various tee and hole patterns with drafting equipment, including calculations for proper sizes, as part of the round tee pattern development lessons.

Discipline(s)

Sheet Metal