APSM 151A: SERVICE INTRODUCTION & SAFETY

Foothill College Course Outline of Record

Heading	Value
Units:	2.5
Hours:	30 lecture, 10 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 achieve EPA 608 certification
- A successful student will be able to apply safe and respectful work practices

Description

Students receive an introduction to their building trade service apprenticeship and the union HVAC industry with an emphasis on safety.

Course Objectives

The student will be able to:
A. Understand construction safety to work safely
B. Achieve EPA 608 Certification
C. Understand the Sheet Metal Trade overview (history and organization)
D. Explain the industry roles and responsibilities (code of excellence, labor, management, and customer relations)
E. Receive and understand harassment training
F. Understand the importance of basic record keeping
G. Receive First Aid and CPR 2-year certification
H. Achieve OHSA 10 certification

Course Content

A. Understand construction safety to work safely (Lec and Lab)
B. Achieve EPA 608 certification
1. Stratospheric ozone depletion (Lec)
2. Rules and regulations of the Clean Air Act (Lec)
3. Montreal Protocol (Lec)
4. Refrigerant recovery, recycling, and reclamation (Lec)
5. Recovery equipment and use (Lec)
6. Regulations regarding small appliances (Lec)
7. Regulations regarding high pressure appliances (Lec)
8. Regulations regarding low pressure appliances (Lec)
C. Understand the Sheet Metal Trade overview (history and organization)
1. History of the Sheet Metal Trade (Lec)
2. Organization of the trade (Lec)
3. Job classification in the Sheet Metal Trade (Lec)
4. SMWIA (Lec)
5. SMACNA (Lec)
D. Explain the industry roles and responsibilities (code of excellence, labor, management, and customer relations)
1. Bay Area Training Trust and the JATC (Lec and Lab)
2. SMWIA code of excellence (Lec and Lab)
3. Customer relations (Lec and Lab)
4. Getting along with coworkers (Lec and Lab)
E. Receive and understand harassment training
1. Understand what sexual harassment is (Lec)
2. Understand what obvious and subtle harassment is (Lec)
3. How to deal with situations regarding biases and stereotypes (Lec)
4. Understand the difference between ignorance and malice (Lec)
5. The effects of not having respect for fellow workers (Lec)
F. Understand the importance of basic record keeping (Lec)
G. Receive First Aid and CPR 2-year certification (Lec and Lab)
H. Achieve OHSA 10 certification
1. Introduction to OSHA (Lec and Lab)
2. Focus four hazards (Lec and Lab)
3. Types and use of Personal Protective Equipment (Lec and Lab)
4. Identifying health hazards in construction (Lec and Lab)
5. OSHA hand and power tool use (Lec and Lab)
6. Stairway and ladder safety (Lec and Lab)

Lab Content

A. Observe and practice safety methods in laboratory.

Special Facilities and/or Equipment

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

Method(s) of Evaluation

A. Results of written quizzes and tests
B. Responses in class discussions
C. Comprehensive written final examination
D. Comprehensive final project
E. Demonstration of assigned skills to acceptable level per instructor

Method(s) of Instruction

A. Lecture
B. Discussion
C. Demonstration
D. Lab assignments followed by discussion

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). Gainesville, VA: IDI Multimedia, 2010.

ESCO Institute. EPA Certification Exam Preparatory Manual for Air Conditioning & Refrigeration Technicians Federal Clean Air Act - Section 608. 7th ed. Mount Prospect, IL: ESCO Press, 2006.

Whitman, B., B. Johnson, J. Tomczyk, and E. Silberstein. Refrigeration and Air Conditioning Technology. 8th ed. Boston, MA: Cengage Learning, 2016.

NOTE: 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. Read assigned sections of the ESCO EPA 608 text.

B. Complete written exam to achieve EPA 608 refrigerant handling certification.

Discipline(s)

Sheet Metal, Air Conditioning, Refrigeration, Heating