APED 361 Course Outline as of Fall 2013

CATALOG INFORMATION

Dept and Nbr: APED 361 Title: APP PLUMBERS, HVAC, 2ND
Full Title: Apprentice Plumbers, HVAC/Refrigeration, Second Semester
Last Reviewed: 5/14/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 210.00

Title 5 Category:	AA Degree Non-Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Related supplemental instruction of heating, ventilation, air conditioning, and refrigeration for apprentice plumbers and pipefitters.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:
Indentured apprentice

Schedule of Classes Information:
Description: Related supplemental instruction of heating, ventilation, air conditioning, and refrigeration for apprentice plumbers and pipefitters. (Grade Only)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment: Indentured apprentice
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of the course, students will be able to:
1. Explain and utilize computer aided design (CAD) drawing
2. Describe and demonstrate the general principals of refrigeration as applied to HVAC systems
3. Relate the history and contemporary issues of the pipe trades unions
4. Demonstrate best practices in customer service

Topics and Scope:

1. Computer components and functions related to Computer Aided Design (CAD) design
   A. Computer specifications needed for CAD design
   B. Types and uses of various computer software applications for HVAC design
2. Computer Aided Design software in HVAC system design
   A. Basic prinicpals of using CAD-designed plans for HVAC installation
3. Electronic engineering architectural drawing for refrigeration installation in HVAC system design
4. Conservation and safe handling of refrigeration fluids
   A. Signage, containment practices, disposal
   B. First aid for exposure to irritants.
5. Pipe trades heritage and organization
6. Techniques to monitor and improve customer service skills

Assignment:

1. Written homework assignments (1 to 2 sets per week)
2. Project homework assignments (1 to 2 sets per week)
3. Weekly reading 10-15 pages
4. Quizzes and examinations (4 to 6 per semester)
5. Class performances and field work (on-the-job demonstrations) of skill development, safety practices, equipment, and material handling.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework assignments; field work	Problem solving 10 - 25%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances; field work	Skill Demonstrations 50 - 65%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and examinations to include multiple choice, true/false, matching items, and completion	Exams 10 - 20%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation	Other Category 5 - 10%

Representative Textbooks and Materials:
Refrigerant Controls, International Pipe Trades Joint Training Committee. 2009
Your Heritage & Future in the Pipe Trades, International Pipe Trades Joint Training Committee. 2010
Auto CAD Perpetual Software, 2009