

APED 220.6 Course Outline as of Fall 2013**CATALOG INFORMATION**

Dept and Nbr: APED 220.6 Title: APP ELECTRICIANS 6TH SEM

Full Title: Apprentice Electricians, Sixth Semester

Last Reviewed: 3/28/2022

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 Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: APED 320.6

Catalog Description:

Related supplemental instruction for apprentice electricians.

Prerequisites/Corequisites:**Recommended Preparation:****Limits on Enrollment:**

Indentured apprentice

Schedule of Classes Information:

Description: Related supplemental instruction for apprentice electricians. (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
CSU GE: Transfer Area

Effective: Inactive:
Effective: Inactive:

IGETC: Transfer Area

Effective: Inactive:

CSU Transfer: Effective:

Inactive:

UC Transfer: Effective:

Inactive:

CID:

Certificate/Major Applicable:
Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:

Upon completion of this course, the students will be able to:

1. Describe the function of transformers and the theory of three phase connections.
2. Describe the function of manual and magnetic starters.
3. Identify control devices from symbols on blueprints.
4. Demonstrate the ability to connect direct and alternating current motor controls.
5. Describe the function of fuses and circuit breakers.
6. Complete CPR review training.

Topics and Scope:

- I. General lighting
 - A. Transformers - three phase connections
 - B. Manual starters and magnetic coils
 - C. Overload protection
- II. Control devices and symbols
 - A. Wire control
 - B. Feeders-outside branch circuits
 - C. Wiring diagrams
 - D. Reversing and sequential motor control
- III. Jogging and plugging
 - A. Refrigerants
 - B. Piping
- IV. DC motor controls
 - A. Solid state control
 - B. Wiring methods
 - C. Stepped motors
- V. AC motor controls
 - A. AC motor starters
- VI. Overcurrent protection
 - A. Fuses
 - B. Circuit breakers
- VII. American labor history

Assignment:

1. Homework assignments (1 to 2 sets per week)
2. Quizzes and examinations (4 to 6 per semester)
3. 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, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

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:

Soares Book on Grounding, 10th Edition. International Association of Electrical Inspectors, 2008.

Semiconductors, 2nd Edition. DELMAR/Cengage Learning, 2008.

Electrical Safety-Related Work Practices, 2nd Edition. Jones and Bartlett Publishers, 2009.

Rigging and Lifting Principals, 1st Edition. American Technical Publishers, 2010.