APED 260F Course Outline as of Fall 2020

CATALOG INFORMATION

Dept and Nbr: APED 260F 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	2	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 265

Catalog Description:
Introductory course for training related to electrician indentured apprentices. This is the sixth semester of a ten semester program.

Prerequisites/Corequisites:
Course Completion of APED 260E

Recommended Preparation:

Limits on Enrollment:
Indentured apprentice - apply and be accepted by the Redwood Empire Joint Apprenticeship & Training Committee (REJATC)

Schedule of Classes Information:
Description: Introductory course for training related to electrician indentured apprentices. This is the sixth semester of a ten semester program. (Grade Only)
Prerequisites/Corequisites: Course Completion of APED 260E
Recommended:
Limits on Enrollment: Indentured apprentice - apply and be accepted by the Redwood Empire Joint Apprenticeship & Training Committee (REJATC)

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

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Describe and demonstrate electrical principles and regulations related to electricians' trade.
2. Apply best practices in practical environment related to electricians' trade.

Objectives:
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 - AC Motor Starters
VI. Overcurrent Protection
   A. Fuses
   B. Circuit breakers
VII. American Labor History

All topics are covered in the lecture and lab portions of the course

Assignment:

Lecture-Related Assignments:
1. Homework assignments (1 to 2 sets per week)
2. Quizzes and examinations (4 to 6 per semester)
3. Hands-on Craft Certification skills exam (students must pass in order to complete the course)
4. Written final exam (students must pass in order to complete the course)

Lab-Related Assignments:
1. 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 5 - 10%

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

Class performances; field work	Skill Demonstrations 40 - 45%

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

Quizzes and examinations, Craft Certification skills exam, final exam	Exams 40 - 45%

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:
Rigging and Lifting Principals. American Technical Publishers. 2010 (classic)
Electrical Safety-Related Work Practices. 2nd ed. Jones and Bartlett Publishers. 2009 (classic)
Soares Book on Grounding. 10th ed. International Association of Electrical Inspectors. 2008 (classic)
Semiconductors. 2nd ed. Smith, Robert. DELMAR/Cengage Learning. 2008 (classic)