

APED 260H Course Outline as of Fall 2020**CATALOG INFORMATION**

Dept and Nbr: APED 260H Title: APP ELECTRICIANS 8TH SEM

Full Title: Apprentice Electricians, Eighth 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 267

Catalog Description:

Introductory course for training related to electrician indentured apprentices. This is the eighth semester of a ten semester program.

Prerequisites/Corequisites:

Course Completion of APED 260G

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 eighth semester of a ten semester program. (Grade Only)

Prerequisites/Corequisites: Course Completion of APED 260G

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:
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CSU Transfer:	Effective:	Inactive:
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UC Transfer:	Effective:	Inactive:
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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 components of optoelectronic devices and explain their function.
2. Demonstrate the ability to operate programmable controllers.
3. Describe the components for swimming pools and fountains and electrical safety code requirements.

Topics and Scope:

- I. AC motor Variable Speed Control
- II. Conduit Bending
- III. Electric heating
 - A. Panel installation
 - B. Conduit installation
- IV. Digital Logic
 - A. Switching circuits
 - B. Controls
 - C. Panels and conduit
- V. Fiber Optics
 - A. Optoelectronic devices
 - B. Electronic applications
- VI. Process Control
 - A. Principals
 - B. Time lags
- VII. Knots and Riggings

VIII. Swimming Pools and Foundations

IX. Safety Review

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:

Lighting Design Basics. 3rd ed. Karlen, Mark and Spangler, Christina and Benya, James. John Wiley and Sons. 2017

Programmable Logic Controllers. Lin, Jonathon. Industrial Press, Inc. Pearson Custom Publishing. 2016

Fundamentals of Motor Control. Pearson Learning Solutions. 2010 (classic)

Building Automation: Control Devices and Applications. NJATC. American Technical Publishers. 2008 (classic)

Motors. NJATC. American Technical Publishers. 2008 (classic)

Hazardous Locations. NJATC. National Joint Apprenticeship Training Committee. 2006 (classic)