

ELECTRICAL TECHNOLOGY – ASSOCIATE IN SCIENCE DEGREE, CERTIFICATE OF ACHIEVEMENT

Top Code:

0952.20

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The curriculum offers technical training to acquire knowledge and skills related to the design and installation of electrical equipment, materials, and devices for the Building Construction Program. Hands-on laboratory experiments will offer the necessary experience for safe use and operation of electrical hand and power tools. Technical training includes National Electrical Codes and standards. The program offers basic concepts and principles of electricity, machinery, and programming programmable logical controllers. Students will be instructed with state of the art technology test and measurement instruments.

This program also meets the standards set by the California Department of Apprenticeship Standards towards the current California Electrician Certification testing. Upon successful completion of the program, that student will be allowed to register to take the Electrician's Certificate Exam (California Division of Apprenticeship Standards approved School: #133).

Employment opportunities may include positions such as electrical assistant, electrical technician, maintenance technician, public utilities and sales representative, engineering technician along with purchasing and project administrator.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

Program Outcomes

- Describe principles of Direct and Alternating current, Ohm's law, and current/voltage/power laws both verbally and in writing.
- Demonstrate an installation of a residential branch circuit for a three-way switch.
- Differentiate and apply the proper selection of materials, tools, and test equipment for residential and commercial electrical installation and repairs.
- Demonstrate knowledge and skills required to perform basic apprentice-level electrician duties required by the National Electrical Code (NEC) for residential wiring.

Requirements for the Certificate of Achievement

Code	Title	Units
ELTY 217	ELECTRICAL INSPECTION AND CODES	2
ELTY 248A	INTRODUCTION TO ELECTRICAL TECHNOLOGY	4
ELTY 248B	ALTERNATING CURRENT CIRCUITS – PRINCIPLES AND APPLICATIONS	4
ELTY 248C	ELECTRICAL POWER DISTRIBUTION SYSTEMS AND MACHINERY	4
ELTY 248D	PROGRAMMABLE LOGIC CONTROLLERS	4
Total Units		18

Recommended Electives

Code	Title	Units
ELTY 250	INTRODUCTION TO PHOTOVOLTAIC SYSTEMS	4
ELTY 251	PHOTOVOLTAIC THEORY AND INSTALLATION TECHNIQUES	4
TECH 107A	TECHNICAL CALCULATIONS	3

Visit the Program Mapper (<https://pasadena-city.programmapper.ws/academics/interest-clusters/7e85bdcc-be06-405f-9845-b8b63e49f8c6/programs/6757b952-7718-ef13-d6e0-cf6363079479/>) for a suggested sequence of courses.

General Education Requirements for the Associate in Science Degree

- General Information (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/>)
- PCC Local Gen Ed (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#pcclocaltext>)
- CSU Breadth (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#csubreadthtext>)
- IGETC (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#igetctext>)