

Resource: PDCCC College Catalog and Student Handbook 2017-18
Update #: 11
Title: **Energy Technology Career Studies Certificate**
Type: Correction to Credit Hours in catalog associated with ENE 104 and ELE 177. These courses were listed as 3 credit hours, but the VCCS master course file lists them as 4 credit hours. This change is made to ensure compliance with the VCCS master course file.
Effective: January (spring) 2018

ENERGY TECHNOLOGY

Program: Industrial Technology
Award: Career Studies Certificate
Plan Code: 221-820-07
Length: 23 credit hours, 3 semesters
Lead Faculty: David Lorenz

Purpose: The Career Studies Certificate in Energy Technology is designed for a student who wishes to obtain the skills necessary to work in the electric and energy industries as an entry level technician. The curriculum encompasses subjects that are needed for energy industry technicians including blueprint/schematic reading, safety, basic hand and power tools, basic electricity, basic instrumentation, and mathematics.

Occupational Objectives: Upon completion of the Career Studies Certificate in Energy Technology graduates will possess the knowledge and skills required for entry into the fields of industrial or residential entry level maintenance technicians, apprentice electricians, or solar panel installers.

Transfer Options: N/A

Student Learning Outcomes: Upon successful completion of the Career Studies Certificate in Energy Technology, graduates will be able to:

- Demonstrate an understanding of federal, state, and local safety legal requirements, including OSHA, VOSSA, and EPA when wiring electrical circuits.
- Identify a variety of schematic symbols and how to interpret schematic drawings.
- Use a variety of electrical instruments to measure voltage, current and electrical power.
- Apply the National Electric Code to identify purpose and location of electrical components and current protection devices.
- Demonstrate the knowledge of electrical and other controls used in home and industry.
- Troubleshoot and repair a system at the component level.

Admission Requirements: Students must meet the general admission requirements established by the

College.

Program Requirements: The Career Studies Certificate in Energy Technology is designed to develop the job skills required of a person who is engaged as an electrician in industry, business, or housing. All classes will be offered in catalog order only; therefore, it is necessary to take all classes in sequence as they will not be repeated until the following year. Candidates for the Energy Technology Certificate Program must successfully complete all required courses and earn a minimum grade of "C" in all ELE, ETR, and DRF courses.

| Energy Technology Career Studies Certificate <i>Required Courses and Credits</i> <i>Schedule</i> | | |
|---|-------------------------------------|-----------|
| Fall Semester | | |
| DRF 175 | Schematic and Mechanical Diagrams | 2 |
| ELE 133 | Practical Electricity I | 3 |
| ENE 104 | Energy Industry Fundamentals | 4 |
| SAF 130 | Industrial Safety, OSHA 10* | 1 |
| Total Semester Credits | | 10 |
| Spring Semester | | |
| ELE 134 | Practical Electricity II | 3 |
| ELE 177 | Photovoltaic Energy Systems | 4 |
| MTH 121 | Applied Technical Mathematics I | 3 |
| Total Semester Credits | | 10 |
| Summer Semester | | |
| ELE 135 | National Electric Code: Residential | 3 |
| Total Semester Credits | | 3 |
| Total Program Credits | | 23 |

* Credit for the SAF 130 class can be awarded with a prior OSHA 10 or 30 certification. Proof of successful completion with a valid OSHA issued card will be required.