

# DEGREES, CERTIFICATES, AND TRANSFER PREPARATION INFORMATION

## ENERGY EFFICIENCY

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This program is designed to provide formal training for individuals who seek entry into the Energy Services field. Students will learn to conduct energy audits in residential buildings; establish energy efficiency benchmarks for commercial buildings and data center physical infrastructures; and help utilize resources more efficiently by reducing lighting, and lowering heating and cooling energy consumption in building systems and processes.

Students will learn to provide analyses and recommendations that will help suggest alternative energy sources, as well as unconventional lighting, cooling, space heating, and resource management procedures.

### Degrees and Certificates

- Energy Efficiency Specialist Department Certificate (13 units)
- See also Photovoltaic Installation

## Energy Efficiency Specialist, Department Certificate

**Program Learning Outcomes:** Students will be able to identify the salient concerns related to safe and efficient energy use in the built environment and the issues that threaten the ecological conditions on the planet related to energy production and use. Students will be able to explain how a solar cell converts sunlight into electrical power and how power is conditioned for use in buildings. Students will be proficient in conducting an energy utilization index (EUI) analysis. Students will be able to recognize the physical properties that consume or produce energy in residential and commercial energy systems, including HVAC, lighting, and renewable energy systems. Students will be able to apply appropriate regulatory codes when conducting energy efficiency requirements for new and existing buildings, and compliance with new Zero Net Energy (ZNE) code requirements.

### Area of Emphasis: (13 units)

#### Required Courses (13 units):

- ENERGY 1, Introduction to Energy Efficiency (3)
- ENERGY 2, Residential Building Science (3)
- ENERGY 3, Commercial Building Science (4)
- PV 11, Introduction to Solar Photovoltaics (3)