

SSM 275 : Basic Energy Production

Credits: 3

Class Hours: 3 lecture

Prerequisites: "C" or higher or concurrent enrollment in ENG 100. Qualified for MATH 82X or higher or approval of instructor.

Description: This course will explore electricity generation, distribution, storage, and usage. We will take an in-depth look at the science, technology, and environmental considerations associated with electricity generation from coal, oil, natural gas, wind, solar, biomass, biogas, and hydroelectric (dam, tidal, wave). This class includes field trips to various electricity generation locations on island. We will also complete hands-on labs utilizing on campus renewable energy technologies.

Semester Offered: Fall, Spring

Designation:

Diversification: Physical Sciences — DP

Course Student Learning Outcomes (CSLOs):

1. Describe the technical, political, and economic aspects of creating and maintaining a sustainable, high-renewable energy resource power grid.
2. Describe various forms of renewable energy and their associated benefits and challenges including distribution and generation technologies.
3. Explain the physical and chemical properties that govern energy and the methods of converting from one form of energy to another.
4. Describe existing power production systems.
5. Use physical energy equations for basic energy applications.