

Sustainable Science Management (SSM)

Sustainable Science Management (SSM) Classes

SSM 101 : Introduction to the Science of Sustainability

Credits: 3

Class Hours: 3 lecture

Prerequisites: Concurrent enrollment in MATH 75X or qualified for MATH 82X.

Description: This course identifies sustainability concepts which have become evident from early human movement toward Industrialization in the 1500s to the present. Examines diverse societal circumstances and approaches in resource use including water, energy, waste, land use, economics, oceans, and others. Introduces fundamental systems approaches to recognize interconnections and ramifications of practices. Identifies global sustainability issues and uses Hawai'i and island case studies as a means of better understanding their applied relevance.

Semester Offered: Fall, Spring

Designation:

Foundations: Global and Multicultural Perspectives – FGB (1500 to modern times)

SSM 110 : Sustainable Water and Waste Management

Credits: 3

Class Hours: 3 lecture

Prerequisites: Qualified for MATH 100.

Recommended: Completed ENG 100.

Description: This course explores water, wastewater, and waste management challenges and solutions, with an emphasis on issues specific to Hawai'i. Students will explore sustainable operational management of water, wastewater, and solid waste systems. This includes composting, recycling processes, energy from waste, and water quality testing. Students will take water samples and analyze water quality with state-of-the-art technologies.

Semester Offered: Fall, Spring

Designation:

Diversification: Physical Sciences – DP

SSM 201 : Sustainable Building Design, Construction, and Operations

Credits: 3

Class Hours: 3 lecture

Prerequisites: "C" or higher in ENG 100.

Recommended: Completed SSM 101.

Description: This course introduces: principles of green building design and operations, including site planning and zoning, construction practices, energy efficiency, economics of green building, benefits and barriers, green rating systems and the LEED rating system.

Semester Offered: Fall, Spring

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