OCN 102 : Introduction to the Environment and Sustainability

This course will introduce students to the basic principles of environmental science and sustainability as they apply to analysis of environmental systems on a global scale. The integrated natures of ocean, terrestrial and atmospheric systems will be introduced by first introducing the Earth's major ecosystems and then discussing their coupled integration. The concepts of sustainability will be infused into the course with an emphasis on the importance of sustaining resources and mitigating pollution to ecosystems. This issue of sustainability will be approached from the perspective of the impact that 9 billion or more people will impose upon the planets resources and ecosystems. Similarly, this course will include the concepts of sustainability with Native Hawaiian culture and indigenous knowledge.

Credits 3

Lecture Hours 3

Designation

DB

Course Outcomes

- Define the Earth's major ecosystems and the major flows of matter and energy through them.
- List the identity, source and action of the major pollutants that disrupt these ecosystems.
- Relate the carrying capacities of each major ecosystem relative to these pollutant loads, as well as the consequences to the environment if they fail.
- Define the fundamentals of sustainability metrics in terms of major impact categories (into which pollutants and activities are grouped) and their units.
- State how the cultural practices and indigenous knowledge of the Native Hawaiians relate to sustainability.