

Coral Reef Ecology – Bermuda: ENVB N0321.001

Earth Institute Center for Environmental Sustainability (EICES)

Wed. March 18 – Sun. March 22, 2015

Course Rationale:

Coral reef ecosystems around the world contain some of the highest biodiversity on our planet. Not only are coral reefs home to thousands of marine species but are important to our daily lives through tourism, fisheries, carbon sequestration and coastal protection, just to name a few.

The decline of coral reefs has become a pressing concern for scientists and managers alike as environmental and human threats to these ecosystems increase. Understanding the complex ecological relationship of coral reefs is a cornerstone to understanding how they will respond in the coming decade. Bermuda is an ideal location for an introduction to Coral Reef Ecology because it is the northern most tropical reef in the world and on the cutting edge in research on the effects of climate change on coral reefs.

Course Description:

The course is an introduction to the coral reef as an ecosystem and some of the many organisms that inhabit and sustain the reef. Students will be taught about the basics of corals and their growth, reproduction and recruitment.

Accompanying lectures are hands on snorkels to see up close what the coral species and reef ecosystems of Bermuda look like. Additionally demonstrations will allow for students to become the scientist and learn techniques that marine biologists use to analyze corals and food chains.

Students will also get an opportunity to visit the Bermuda Aquarium and Zoo and Nonsuch Island where they will learn more about the various projects being studied on the islands. Students will get exposed to the many threats to these ecosystems and some of the ways that conservation efforts have aided their preservation.

Objectives:

- understand the basis of coral reef formation and maintenance
- learn the coral species and taxa located in Bermuda
- understand the threats to coral reefs
- understand the driving force behind coral reefs and inhabitants
- understand better sustainability pressures on small island nations
- gain experience with some of the techniques used to monitor and evaluate coral reef ecosystems
- gain experience collecting and compare scientific data
- gain experience reading and synthesizing a scientific article

Grading (Pass / Fail)

35% - Participation in lecture and trips

30% - Participation in laboratory activities

35% - Assignment (completed during course)

5% - Course Evaluation completion