

Coral Reef Ecology – Bermuda: ENVB N0321.001
Earth Institute Center for Environmental Sustainability (EICES)
March 20TH-24TH 2019

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. This course is designed to provide students with a sound foundation in many of the ecological concepts underlying structure and function of coral reef ecosystems.

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. Students will hear from Faculty at the Bermuda Institute of Ocean Sciences about coral reef research and participate in a laboratory activity.

Students will also get an opportunity to visit Nonsuch Island where they will learn more about the various conservation issues on the island. Students will get exposed to the many threats to island 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 lectures

30% - Participation in laboratory activities

35% - Participation in field trips

5% - Course Evaluation completion