



Syllabus

Course Title: Rain Forests, Reefs, and Conservation

Program and Date: Belize Summer Session, May 30 – June 13, 2027

Academic Department: Biology, University of Pikeville

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Get to Know Your Professor

I am a Biology Professor at the University of Pikeville (UPIKE), where I have the privilege of teaching courses that span the breadth of biological science, including Principles of Biology, Environmental Science, Special Topics in Biodiversity and Conservation, Fundamentals of Anatomy and Physiology, Seminar in Biology, and Medical Terminology. I earned my Ph.D. in Biology from the University of Kentucky in 2004, with an emphasis in Environmental Toxicology and a focus on freshwater ecosystems.

My passion for biology is rooted in a deep curiosity about the remarkable connections that bind living organisms to one another and to the environments they inhabit. I have always been fascinated by the complexity of natural ecosystems—the intricate relationships, delicate balances, and remarkable adaptations that allow life to persist and flourish. For me, biology is far more than a subject found in textbooks; it is a dynamic story unfolding all around us.

I am especially drawn to hands-on exploration and discovery. Whether observing wildlife in its natural habitat, examining ecological patterns and data, investigating the impacts of environmental change, or participating in conservation efforts, I believe some of the most meaningful learning happens when we step outside the classroom and engage directly with the natural world. Every forest, stream, wetland, and landscape has a story to tell, and I am continually inspired by the opportunity to uncover those stories.

Course Description

Explore the diverse ecosystems of Belize through an immersive field-based study of tropical ecology, biodiversity, and conservation. Students will investigate coral reefs, mangrove forests, rainforests, and freshwater habitats through hands-on activities including snorkeling at Hol Chan Marine Reserve, biodiversity surveys, rainforest hikes, wildlife observation at the Belize Zoo and Tropical Education Center, and water-quality testing. Field experiences in Cockscomb Basin Wildlife Sanctuary and local fishing communities provide opportunities to examine species interactions, conservation challenges, sustainable fisheries, climate change impacts, and ecotourism practices. Students will also participate in conservation projects such as tree planting and ecological data collection while developing practical field research skills. Through scientific observation, cultural experiences, and student presentations, the course promotes environmental stewardship and a deeper understanding of tropical ecosystem conservation in Belize.



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Course Level and Credit Hours

Upper Division Undergraduate
Three credit hours

Prerequisite(s)

One year of college coursework, including completing a basic writing course and at least one biology course such as Principles of Biology.

Student Learning Outcomes

Upon completion of all coursework with a passing grade and full participation in course activities, students shall be able to:

1. Identify and describe the structure and function of Belize's major ecosystems (marine, coastal, and terrestrial).
2. Examine current conservation efforts protecting biodiversity and natural resources.
3. Understand the relationship between local communities, ecotourism, and environmental sustainability.
4. Develop field research skills through direct observation and data collection.
5. Demonstrate an appreciation for the global significance of Belize's biodiversity and ecosystems.

Required Readings and Materials

There is no textbook required for this course. Reading materials will be distributed as part of pre-departure assignment.

Assignments and Grades

Note: The full academic experience of a study abroad course involves more than just the time spent on the travel portion of the program. Pre-program preparatory studies and post-program final projects or exams are key aspects of mastering the course material and of ensuring that participants will maximize the impact of experiential learning overseas.

The final grade will be assessed as follows:

Pre-departure assignment due 48 hours before departure date = 10%

Field journal entries documenting observations of flora, fauna, and ecosystems = 15%

Participation in Habitat Survey = 10%

Participation in Wildlife Behavior Study = 10%

Participation in Marine Biology Exploration = 10%

Conservation Project = 10%

Participation in Group or Individual Presentation = 10%



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Post-trip assignment due two weeks after return from Australia (topic to be determined with instructor) = 25%

Grading Scale

The following scale will be used to compute your grade.

90 – 100% = A
80 – 89% = B
70 – 79% = C
60 – 69% = D
Below 60% = F

Onsite Learning Experiences and Activities

Onsite learning experiences in this class will likely include the following site visits. This is a tentative list which will be replaced with a detailed daily itinerary of class meetings and field trips prior to the departure date.

- Trip to Belize zoo to study native species.
- Fieldtrip to Belize Mangrove Forest.
- Boat trip to and snorkeling at Hol Chan Marine Reserve.
- Visit Belize fish market.
- Fieldtrip to and night hike at The Belize Maya Forest.
- Fieldtrip to Cockscomb Basin Wildlife Sanctuary.
- Fieldtrip to Mountain Pine Ridge Forest Reserve
- Freshwater or river ecological assessment
- Tree planting and NGO visit.
- Eco-lodge visit project work for ecotourism and sustainability

Attendance Policy

Attendance is mandatory at all scheduled activities and class meetings as well as field trip excursions. This includes any virtual meetings before and after the onsite experience. Repeated absences, including for ill health, will require documentation to be excused.

Academic Integrity Policy

Plagiarism or other forms of academic dishonesty (see your campus student handbook for definitions) will not be tolerated and will result in failing assignment grades or even a course grade of F. Violations of academic honesty will be reported back to the student's home campus.



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Physical Expectations

Program requires walking 3-5 miles per day on uneven pavement in all kinds of weather and long periods of standing. Students must be able to carry their own bags and belongings.

Students must know how to swim and be prepared to snorkel.

Disability Accommodation

CCSA is committed to providing access to education abroad to the extent possible in a study abroad setting. The earlier CCSA and the faculty know the needs, the more likely we can accommodate them. At a minimum, students seeking accommodations are to contact both the CCSA office and the faculty one month in advance of the program's beginning. Students seeking such accommodation must provide CCSA with a copy of the letter on file with their own Office of Disability Services outlining what services they receive on their home campus.

Title IX Policy

Sexual misconduct (including sexual harassment, sexual assault, and any nonconsensual behavior of a sexual nature) and sexual discrimination violate CCSA policies. Students experiencing such behavior may obtain support from the Onsite Program Director or the CCSA Executive Director. To report sexual misconduct or sex discrimination, contact either of these two officers. Disclosure to faculty instructors or CCSA officers of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on the program or involving a visitor, student or employee is not confidential under Title IX. Faculty and other CCSA employees are required to forward such reports, including names and circumstances, to the CCSA Executive Director.

Statement about Final Syllabus

Please note that all CCSA syllabi are subject to change, but every effort will be made to ensure participants receive notice of such changes in a timely manner.