

UF in Cuba: Tropical Marine and Island Ecology

FAS 4932/6932 (4 credits) Summer A 2019

Course Description

Course will provide students with a hands-on understanding of the ecology of marine and terrestrial ecosystems of central and southern Cuba, the effects of land-use and management activities on ecological communities, and an introduction to Cuban politics, history, and culture.

Prerequisites: Biology 1 & 2 (or equivalent), **experienced swimmer, snorkeling experience**

Coral reefs are akin to tropical rainforests with regard to their biodiversity and complexity but are threatened by abiotic and biotic factors such as climate change, over-fishing, and coastal land-use activities. Although rare, pristine coral reefs offer a unique opportunity to study many aspects of marine ecology and biology in a geographically small area. In parallel, tropical terrestrial ecosystems harbor intriguing biodiversity and provide critical ecosystem services, but they are heavily impacted by human land-use, land degradation such as deforestation, invasions of non-native species, and poorly managed agricultural operations. To protect biodiversity and improve management, it is critically important to understand how tropical marine and terrestrial ecosystems interact along coasts, on particular on islands.

Instructors

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Student Learning Outcomes

At the end of this course, students will:

- Know the structure, function, and connectivity of coastal marine habitats such as coral reefs, and seagrass beds, and terrestrial ecosystems such as forests, woodlands, and agroecosystems.
- Know the common coral reef, forest, and agroecosystem taxa and be able to identify common organisms
- Know the theories, mechanisms, and management actions that are believed to drive coral reef, tropical forest, and agroecosystem structure
- Understand how coastal and terrestrial human activities affect nearshore marine and upland communities
- Have an understanding of contemporary issues surrounding marine and tropical island ecology such as the potential effects of climate change, non-native species invasions, and conservation/management issues such as forest preservation and Marine Protected Areas

- Understand the history, present political relationship, and cultural connections between Cuba and the US
- Gain an appreciation for the perspective and world view of their Cuban contemporaries at the University of Havana

Course Meeting Times

The class will meet online *and* on campus May 28th at 1pm in Newins-Ziegler Hall room 222 to learn background information and prepare for an intensive 13-day trip to Cuba from May 30th – June 11th. These meetings will be recorded so you do not need to attend at the time of the meeting if you are not in Gainesville.

Recommended (optional) Texts/Readings

1. **Reef Fish Identification**, 2nd Edition, by Paul Humann. 2002. New World Pub. Inc. Jacksonville, FL.
2. **Reef Creature Identification** by Paul Humann. 2001. New World Pub. Inc. Jacksonville, FL.
3. **Reef Coral Identification** by Paul Humann. 2001. New World Pub. Inc., Jacksonville, FL.
4. **Tropical Trees of Florida and the Virgin Islands** by T. Kent Kirk. Pineapple Press, Inc. Sarasota, Florida.
5. **Wildlife of the Caribbean** (also includes plants) by Herbert A. Raffaele and James W. Wiley. Princeton University Press, Princeton, New Jersey.
6. **Primary literature** will be assigned to complement or supplement the material covered in lecture each day.

Course Format, Policies on Attendance and Make-up Exams

Course format:

The format of the course will be an introductory, planning, and discussion meeting on campus followed by activities in and around Havana, Viñales Valley, Bahia de Cochinos, and Trinidad. The trip to Cuba will involve a mixture of field experiences and discussions. On the final day of the course students will submit their journals and take an end of course exam online following their return to the US.

Attendance Policy:

Attendance is required at all class meetings and the field trip to Cuba.

Make-up Policy:

Late assignments **will not** be accepted without prior consent of the instructor.

Assignments

Journal: Students will be required to keep a field journal to record observations, ideas, and a list of the organisms encountered during field excursions. The journal is 150 of the 350 total points of the course grade and is due prior to leaving Cuba. Journals will be graded on organization, detail, and content. Students will be supplied with waterproof notebooks for keeping the journal.

Literature Discussion: Student teams of 2-3 must select a paper from those supplied by the instructor, provide a brief (10 min) presentation on, and lead discussion during a class meeting session. All students are expected to read the papers and participate in the discussion. Presentation of a paper and leading discussion will count for 30 points of the course grade. Participation in the discussions will count toward 20 points of the course grade.

Exam: An online final exam will cover all of the material presented in the course and count for 150 of the 350 total points. It will include multiple choice, short answer questions, and brief essays.

Evaluation of Student Learning

Final grades will be assigned based on the percentage of the total points earned.

150 points	Field journal
30 points	Lead primary literature discussion
20 points	Participate in literature discussions
<u>150 points</u>	<u>Final exam</u>
350 points	Total

Grading Scale

Grades will be assigned using the following scale:

94-100 = A; 90-93 = A-; 87-89 B+; 83-86 = B; 80-82 = B-; 77-79 = C+; 73-76 = C; 70-72 = C-; 67-69 = D+; 63-66 = D; 60-62 = D-; < 60 = E.

For additional information on the university grading policy please see:
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Schedule of Class Activities and Topics

Course Introductory Lectures and other Logistics	May 28 th
Arrive in Havana, Cuba	May 30 th
Depart Havana, Cuba	June 11 th

SEE ATTACHED ITINERARY FOR 2019

Scheduling of lectures and activities will be contingent upon weather and sea conditions so will be subject to change. BLD = Breakfast, Lunch, Dinner meal cost included where noted.

Final exam (online) following return to USA

Additional References

The Biology of Coral Reefs. Sheppard, Davy and Pilling. Oxford University Press

Coral Reefs of the USA. Riegl and Dodge. Springer Verlag.

Marine Plants of the Caribbean. Littler and Littler.

Native Trees and Shrubs of the Florida Keys: A Field Guide/Also South Florida, Cuba, the Bahamas by James Scurlock. Hafftime Enterprises.

Web of Knowledge

http://apps.isiknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=4C5mNGg@8e3@GGm611N&preferencesSaved=

Other Information

Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities

In 1995 the UF student body enacted an [honor code](#) and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

(Source: 2010-2011 Undergraduate Catalog)

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor.

This policy will be vigorously upheld at all times in this course.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*

Counseling Services

Groups and Workshops

Outreach and Consultation

Self-Help Library

Training Programs

Community Provider Database

- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/