

BIOL 394 (A&B): Caribbean Marine Biology

Field Trip to the Roatan Institute for Marine Sciences

March 12 – 20, 2022 (Saturday to Sunday)

Welcome to BIOL 394 A & B (Sect. HN): International Field Trips in Biology – Caribbean Marine Biology.

BIOL 394A: International Field Trips in Biology: Pre-trip Seminar, Cr. 1.

BIOL 394B: International Field Trips in Biology: Field Trip to International Location, Cr. 1.

Course Instructors:

Dr. [Don Sakaguchi](mailto:dssakagu@iastate.edu), GDCB, Rm. 113 Bessey (or 5205 ATRB), Ph. 294-3112, (dssakagu@iastate.edu)

Dr. [Jeanne Serb](mailto:serb@iastate.edu), EEOB, Rm. 245 Bessey, Ph. 294-7479, (serb@iastate.edu)

Course Delivery:

This course is being offered on campus via face-to-face format. This class will use a combination of in-class lectures, in-class activities, Canvas-based assignments, and video assignments. We urge you to complete all reading assignments, attend lectures, and complete all assignments and in-class activities. Follow the syllabus's class schedule and complete all the readings and assignments to succeed in this course. The Canvas-based assignments and video assignments are essential parts of the course.

Pay attention to the deadlines for completion of assignments. The deadlines are set to help you stay on pace with the course and not fall behind.

BIO 394A: COURSE SCHEDULE

Biology 394A (Sect. HN): Pre-trip Course Syllabus (1 credit)

Class meets on Tuesdays, 5:00-7:00 PM, in Room 2234 Bessey Hall (unless an alternate location is specified).

Course schedule/syllabus (Subject to change)

DATE	TOPIC/S OF DISCUSSION
Jan. 18	1) Assignment: Introductions - meet your classmates. 2) Discuss class and field trip organization and logistics (DS/JS). 3) What is a marine biologist (JS). 4) Reef creature identification assessment.
Jan. 25	1) Pre-departure Orientation Program: Jodi Cornell, Global Agriculture Programs 2) Introduction to formulation of research projects (Past examples/titles). (JS/DS) Class discussion: Each student describes their possible research interests: Begin forming research teams. Post your ideas onto the BIOL 394 Discussions board: "Your group research projects...." 3) Discuss snorkeling/scuba gear *.
Feb. 1	1) Prof. Boris Jovanovic , Introduction to the marine ecological communities: Corals, Seagrasses, and Mangroves. 2) Marine invertebrates and discussion of their life history traits (JS) 3) Assignment: Submit proposed group research project title, members, hypothesis.
Feb. 8	1) Prof. Al Wanamaker , Dept. of Geological and Atmospheric Sci., ISU: <i>Coral reef development, some of the major problems facing corals globally (especially ocean acidification and bleaching), and how corals can be used as proxy climate archives.</i>

	<p>2) Assignment: view the video before class: “<i>Mission Blue: the story of world-renowned oceanographer Sylvia Earle as she travels the globe on an urgent mission to shed light on the dire condition of Earth's oceans</i>” and be prepared for class discussion.</p> <p>3) Reef fish ID – Part 1 (DS)</p>
Feb. 15	<p>1) Guest speaker: Shaun Jamieson, International Risk Manager, ISU Office of Risk Management</p> <p>2) Assignment: Submit completed draft of your group Research Project (docx file) and submit pptx presentation about your group research project.</p> <p>3) Group Research Project presentations.</p>
Feb. 22	<p>1) Invasive Lionfish: Threats and Solutions: Dr. Mark Hixon, Univ. of Hawaii, 2015 NREM Seminar Series (YouTube video). https://www.nrem.iastate.edu/invasive-lionfish-threats-and-solutions-dr-mark-hixon</p> <p>2) Reef fish ID – Part 2 (student presentations)</p> <p>3) Reef Indicator Species ID Quiz</p>
Mar. 1	<p>1) Final revised research project proposals due by 12 (noon). Upload final research proposal (docx and a pptx) via Canvas.</p> <p>2) Student presentations of research projects.</p>
Mar. 8	<p>1) “A day in the life of a BIOL 394 student”</p> <p>2) Group presentations/discussion of your research projects. Finalized projects: pptx presentation, 5 minutes/group.</p> <p>3) Finalize field trip organization and logistics.</p>
Mar. 12-20	Marine Biology Field Trip to the Roatan Institute for Marine Sciences (RIMS) Saturday to Sunday
Mar. 22	No class. However, get your images (photos/videos) uploaded to the course CyBox folder this week.
Mar. 29	<p>1) Post trip discussions.</p> <p>2) Discuss plans for Research Symposium.</p>
Apr. 5	<p>1) Discussion on REEF surveys and Transect Line Surveys.</p> <p>2) Discussion about the April 19 Research Symposium.</p>
Apr. 12	<p>1) Discussion on REEF surveys and Transect Line Surveys.</p> <p>2) Discussion about next week’s Research Symposium.</p> <p>3) Final assessment: Reef creature identification.</p>
Apr. 19	<p>ISU BIOLOGY 394 Research Symposium: Student group presentations. 5:00-7:00 PM, Room 2234 Bessey Hall – Light refreshments provided.</p> <p><i>Assignment due by 12:00 noon:</i> Email your Powerpoint (pptx) presentation to dssakagu@iastate.edu.</p>
Apr. 26	<p>Awards Ceremony. (Refreshments provided)</p> <p>Course Notebook/Field trip journals are due at 5:00 PM in class.</p> <p>Final papers are due by 5:00 PM. Upload your papers before class at Canvas <i>Assignments</i>.</p>
May 3	Prep Week: Additional BIOL 394 class discussion.
May 10	Final’s week: class notebook/journal will be available for you to pick-up in room 113 Bessey Hall – email dssakagu@iastate.edu to setup an appointment.

* United Airlines flight itinerary:

Flights											
Nr.	Airline	Flight number	Class of Travel	Departure	From	Destination	Arrival	Stops	Equipment	Flt Time (Total)	Operated by
1	UA-United Airlines	UA 6115	G-Economy	Saturday, 03/12/2022 06:00 AM	Des Moines, Des Moines International Airport, IA, United States	Houston, George Bush Intercontinental Airport, TX, United States	Saturday, 03/12/2022 08:30 AM	0 ()	Embraer 175 JET	2:30	MESA
2	UA-United Airlines	UA 2043	G-Economy	Saturday, 03/12/2022 09:48 AM	Houston, George Bush Intercontinental Airport, TX, United States	Roatan, Roatan Airport, Honduras	Saturday, 03/12/2022 12:45 PM	0 ()	Boeing 737-800	2:57	UA-United Airlines
3	UA-United Airlines	UA 2457	G-Economy	Sunday, 03/20/2022 12:40 PM	Roatan, Roatan Airport, Honduras	Houston, George Bush Intercontinental Airport, TX, United States	Sunday, 03/20/2022 04:34 PM	0 ()	Boeing 737-800	2:54	UA-United Airlines
4	UA-United Airlines	UA 6330	G-Economy	Sunday, 03/20/2022 08:10 PM	Houston, George Bush Intercontinental Airport, TX, United States	Des Moines, Des Moines International Airport, IA, United States	Sunday, 03/20/2022 10:30 PM	0 ()	Embraer 175 JET	2:20	MESA

Assignments:

1) Numerous assignments to collect information about Roatan (marine environment, ecosystems, culture, history, economy, etc.). Information may be obtained from various resources: library, World Wide Web-based, etc.

2) Develop group research project proposal. Conduct research projects on site on the coral reefs surrounding Roatan Island. Projects will be discussed during 394A class - projects must be approved by the course instructors.

3) Group oral presentations (10-15 minutes) on your research topic in coral reef marine biology. To be presented during our Research Symposium on April 19, 2022 beginning at 5:00 PM. Presentations will be based on field observations of the marine environment.

4) Course notebook/field trip journal: You are required to maintain a Course Notebook/Field Trip Journal. These journals will be collected in class on April 26, 2022.

5) Term paper on a selected topic dealing with some aspect of coral reef marine biology. Papers must be at least 10 pages double-spaced (use 1" margins, 12-page maximum) and include at least 10 references. Topics for these papers must be approved by the course instructors. Final papers are due by class on April 26, 2022. Upload your papers to Canvas *Assignments*.

Attendance at the seminar is compulsory unless you have a non-resolvable conflict. Anyone who will miss a seminar should Email: Don Sakaguchi (dssakagu@iastate.edu) and Jeanne Serb (serb@iastate.edu) with the reasons before the seminar.

Canvas:

All course materials, including announcements, lecture handouts, worksheets, homework assignments, will be posted to or accessed through Canvas. Go to the Iowa State Homepage (<http://www.iastate.edu>) to access Canvas, and click on the Canvas link in the dropdown “Sign-ins” panel on the top right. Sign in and click on the thumbnail for “BIOL 394A Section HN (Spring 2022).”

You are responsible for checking Canvas regularly for announcements, assignments, and deadlines.

Student Learning Outcomes / Course Goals:

A primary goal of this Program is to provide students with a coral reef marine biology field experience.

1. Students will gain an understanding and appreciation of the marine environment, especially the waters off Roatan, Honduras, through readings, lectures, discussions, and field observations.
2. Students will gain an understanding of ecological relationships among different marine organisms (e.g., predator-prey, competition, symbiosis).
3. Students will be able to recognize some of the organisms (e.g., marine invertebrates, marine fish) that occur in particular marine habitats around Roatan and the Roatan Institute of Marine Sciences.

ADDITIONAL INFORMATION**COVID-19 Policies:**

- **Face masks encouraged:** Because of the continuing COVID-19 pandemic, all students are encouraged to wear face masks, consistent with current recommendations from the Centers for Disease Control and Prevention. Further information on the proper use of face masks is available at: <https://www.cdc.gov/coronavirus/2019-ncov/your-health/effective-masks.html>.
- **Vaccinations encouraged:** All students are encouraged to receive a vaccination against COVID-19. Multiple locations are available on campus for free, convenient vaccination. Further information is available at: <https://web.iastate.edu/safety/updates/covid19/vaccinations>.
- Vaccinations may also be obtained from health care providers and pharmacies.
- **Physical distancing encouraged for unvaccinated individuals:** Classrooms and other campus spaces are operating at normal capacities, and physical distancing by faculty, staff, students, and visitors to campus is not required. However, unvaccinated individuals are encouraged to continue to physically distance themselves from others when possible.
- **Do not attend class** if you are sick or experiencing symptoms of COVID-19.
- **Do not attend class** if you have been told to self-isolate or quarantine by a health official.

Free Expression

Iowa State University supports and upholds the First Amendment protection of [freedom of speech](#) and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Academic Dishonesty

The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the [Dean of Students Office](#).

Accessibility Statement

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After

eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Feeling sad? Please consider contacting **Student Counseling Services**, 2505 Union Drive, 515-294-5056. They have many resources available for assisting students.

Discrimination and Harassment

Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email eooffice@iastate.edu

Prep Week

This class follows the Iowa State University Prep Week policy as noted in section 10.6.4 of the [Faculty Handbook](#).

Religious Accommodation

Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the [Dean of Students Office](#) at 515-294-1020 or the [Office of Equal Opportunity](#) at 515-294-7612.

Contact Information for Academic Issues

If you are experiencing, or have experienced, a problem with any of the above statements, email academicissues@iastate.edu

Embracing Diversity, Inclusion and Principles of Community:

In our classes, we will practice the ISU Principles of Community. Our goals are to create a classroom environment that fosters learning, embraces diversity, demonstrates respect for others, and is free of discrimination.

ISU Principles of Community (<http://www.diversity.iastate.edu/principles-of-community>)

Respect: We seek to foster an open-minded understanding among individuals, organizations and groups. We support this understanding through outreach, increasing opportunities for collaboration, formal education programs and strategies for resolving disagreement.

Purpose: We are encouraged to be engaged in the university community. Thus, we strive to build a genuine community that promotes the advancement of knowledge, cooperation and leadership.

Cooperation: We recognize that the mission of the university is enhanced when we work together to achieve the goals of the university. Therefore, we value each member of the Iowa State University community for his or her insights and efforts, collective and individual, to enhance the quality of campus life.

Richness of Diversity: We recognize and cherish the richness of diversity in our university experience. Furthermore, we strive to increase the diversity of ideas, cultures and experiences throughout the university community.

Freedom from discrimination: We recognize that we must strive to overcome historical and divisive biases in our society. Therefore, we commit ourselves to create and maintain a community in which all students, staff, faculty and administrators can work together in an atmosphere free from discrimination, and to respond appropriately to all acts of discrimination.

Honest and respectful expression of ideas: We affirm the right to and the importance of a free exchange of ideas at Iowa State University within the bounds of courtesy, sensitivity and respect. We work together to promote awareness of various ideas through education and constructive strategies to consider and engage in honest disagreements.