

# **Field Research On Tropical Marine and Terrestrial Systems (EAS, ENV, BIO 415)**

**Summer 2015  
May 25-June 14, Times TBA**

**Instructors:** Dr. Beth Christensen, Dr. Aaren Freeman, Dr. Matthias Foellmer, Dr. Andie Ward

**Office Hours:** By Appointment

## **Texts:**

Posted articles on Moodle

## **Course Description:**

This three-week long, field-based research course is taught in Australia. Students will be introduced to the two most diverse ecosystems on Earth, corals reefs and tropical rainforests, which are threatened by human activities. Students conduct a research project on coral reef ecology during the stay on Heron Island.

(Learning Goals:G;Distribution Reqs:NS)

## **Course Learning Goals:**

1. Students will acquire an excellent knowledge of the major groups of plants and animals present in the Great Barrier Reef and the tropical rain forests of Queensland, Australia.
2. Students will acquire knowledge on behavior, physiology, and adaptations of coral reef and rainforest species and how these species are being affected by human activity.
3. Students will learn how to read and interpret the scientific primary literature.
4. Students will learn experimental design, field research methods, and statistical analyses.

## **Overall Course Grading:**

Pre-trip paper	10%
Taxa Powerpoint	15%
Journal	40%
Participation	10%
Research results/ presentation	25%

**Participation /Attendance:** Required for all lectures and activities.

## **Grading details:**

**1. Pre-trip paper:** You will prepare two assignments: a short paper on the Great Barrier Reef, and a PowerPoint on your assigned component of the coral reef. Both must be submitted to Moodle by 4:00 pm on May 21st. See below (or handout) for details.

**2. Pre-Trip Taxa Powerpoint:** The reef system includes corals as well as echinoderms, plankton, gastropods, and other organismal groups. The goal of this assignment is to introduce you to the ecology of the modern

coral reef by focusing on one component of the coral reef system. (See handout for your assigned taxonomic group.) Since you are reporting on a group of animals rather than one species, you may find more than one answer for any of the questions below. In that case, focus on the most common strategy, etc., but mention the others.

Your PowerPoint presentation should take about 15 minutes. Please practice it! You are teaching your classmates about the material so please present the information clearly and in a well-organized fashion. You should expect questions as you go through the material. You may find photographs of GBR species on the website below as well as many class photos others available on the web. Please reference them!

[http://www.reef.crc.org.au/discover/plantsanimals/facts\\_plantanimal.htm](http://www.reef.crc.org.au/discover/plantsanimals/facts_plantanimal.htm)

Your PowerPoint should include the following:

- An overview of the group
- Total # species
- Distribution
- Common types in the GBR. (The tropical Pacific may be too general)
- General differences between them
  - Feeding strategies
  - How do they obtain food- e.g., deposit feeders? filter feeders? what do they eat?
  - Ecological role in the reef system
  - Reproductive strategies
  - Lifestyle/ habitat- Do they live in or on the sediment; in or around the corals? Do they swim? Are they sessile?
- Environmental concerns

Make sure any figures (and tables when appropriate) are clear, legible, numbered, captioned, and referenced. You should include at least 3 references from the following sources: Scientific American, National Geographic, taxonomic reference books, and oceanographic encyclopedias found in the university library. Graduate students are expected to present a higher level more in- depth presentation, and should use peer- reviewed journals as well. Internet references are generally not allowed because most are not peer reviewed; however, you may use the following internet sites: NOAA, EPA, USGS, and the Encyclopedia of Earth. Please get our approval if you want to use other sites in your presentation. Properly reference all information sources, including websites.

If you have any questions on the assignment, please do not hesitate to contact us. However, please bear in mind that exam time is a busy time for all of us, and it may take a few days to get back to you and your questions. This is definitely not something to put off until the last minute.

***We will not accept Powerpoints or Papers after Thursday May 21st at 4.***

**3. Journal:** During the course students will be required to keep a journal of their personal observations, species descriptions (3/day), field notes, and notes from lectures. Students will be graded on the insightfulness, thoroughness and neatness of their journal.

**4 . Research project/ presentation:** Working alone or in groups of 2-3, students will conduct a research project while on Heron Island. Successful projects will be hypothesis-driven and investigate some ecological, biological, or natural history questions on the reef/island. Results of the research projects will be presented, in poster format, to the class at the end of our time on Heron Island.

**Honor Code:** The code of academic honesty prohibits behavior, which can broadly be described as lying, cheating, or stealing. Violations of the code of academic honesty will include, but are not limited to, the following:

1. Fabricating data or citations
2. Collaborating in areas prohibited by the professor
3. Unauthorized multiple submission of work
4. Sabotage of others' work, including library vandalism or manipulation
5. Plagiarism: presenting any work as one's own that is not one's own
6. The creation of unfair advantage
7. The facilitation of dishonesty
8. Tampering with or falsifying records
9. Cheating on examinations through the use of written materials or giving or receiving help in any form during the exam, including talking, signals, electronic devices, etc.

**TurnItIn:**

Adelphi University has a license agreement with Turnitin.com, a service that helps prevent plagiarism from internet resources. I reserve the right to request an electronic copy of any written assignment submitted in this course for review through Turnitin.com. Please see Adelphi's tips for students on preventing plagiarism and Student instructions for Turnitin.com for more information.

**Letter Grades:**

90-100% = A- to A+  
80-89.9% = B- to B+  
70-79.9% = C- to C+  
60-69.9% = D- to D+  
<60% = F (no course credit)

Students with continually improving grades **may** be given **some** additional consideration (1/3 grade over the above criteria).

An incomplete grade (I) is given only in accordance with university criteria (see A.U. bulletin for criteria; if criteria are met, a written contract must be signed both by instructor and student, it is not intended as an escape clause for poor performance).

**Moodle:** A course web site has been set up on Moodle. You can access Moodle with the same username and password that you use for E-Campus. Please check the website frequently as we may post additional readings that will be helpful for the upcoming class.

**FERPA:** Under the Family Educational Rights and Privacy Act (FERPA), a student's grades or academic record **cannot be revealed to anyone outside of university officials** without written permission of the student.

**Accessibility:** If you have a disability that may impact your ability to carry out assigned course work, and are not enrolled in the Learning Disabilities Program, it is important that you contact the staff in the Disability Support Services Office (DSS), University Center, Room 310, (516) 877-3145. DSS@adelphi.edu. DSS will review your concerns and determine, with you, appropriate and necessary accommodations. All information and documentation of disability is confidential.

**Course Evaluations:** During the last week of the course, you will receive notification, via email and eCampus, that the course evaluation is available for your input electronically. Availability will end at the start of the final examination period. Your feedback is valuable and I encourage you to respond. Please be assured that your responses are anonymous and the results will not be available to the instructor until after the end of the semester and therefore after course grades have been submitted.

**Cell Phone Policy:** The use of cell phones during lecture and laboratory time is prohibited. This includes texting or answering/making phone calls. Please silence your phones prior to the beginning of class (vibrate mode does not count).

**Schedule:**

See Itinerary on Moodle