

## UM Study Abroad Course Syllabus

### ***The Origins, Ecology & Conservation of Insular Diversity: A field natural history course in the tropical Pacific***

**3 credits - Summer 2013**  
*May 26 through June 16, 2013*

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#### **COURSE DESCRIPTION & OBJECTIVES**

Throughout the history of science, from Darwin and Wallace to Peter and Rosemary Grant's work in the Galapagos, island systems have inspired some of the most important conceptual advances toward understanding the origins and maintenance of biological diversity. In this context, the framing of this field course will be provided by one of most intact and inspiring oceanic archipelagos on earth – the Solomon Islands. Like the Hawaiian and Galapagos Islands, the Solomons represent one of the world's great natural laboratories, but unlike the Galapagos, the Solomons are comparatively rich in species, and unlike Hawaii, this diversity is largely intact. With the Solomon Islands as a backdrop, this course will link students with the activities and intellectual foundations of a long-term biodiversity research and community-driven protected areas program. This course will provide student with hands-on experience in the development and implementation of field research and conservation initiatives. This intensive field course endeavors to introduce students to the intellectual history and conceptual basis for current scientific characterizations of the diversity of life and its application to humanity's collective stewardship of the natural wealth of the planet. Emphasis will be placed on providing sufficient context in the presentation of scientific concepts so as to give students an ability to function as informed citizens of the biosphere, both within and outside the halls of academic science. All of the field components of the course will take place in remote localities across the Solomon Islands (primarily Makira Province).

#### Overarching Course Components:

1. Basic Insular Biology and Natural History
2. Theory in Insular Ecology and Evolution
3. Human Dimensions Across Pacific Archipelagos
4. Science and the Social Endeavor of Conservation Practice - Integration of Cultural, Literary, Artistic, Spiritual, and Biological Perspectives

Note: These course components will be interwoven among all of our activities,

discussions, readings, and writing throughout the course. As such, there will often be no discreet division between various academic work and topics.

### TEXT

**REQUIRED:** 1) **Course reader.** An annotated reader (*will be made available as a PDF file*).

### SUGGESTED READING:

Additional readings and materials will be distributed during the course or made available (e.g., field guides, handouts)

### GRADING

Your final grade in this course will be determined as follows:

<u>Course Component</u>	<u>Points</u>
Field journal (due June 17)	400
Individual scientific paper (due June 30)	200
Group scientific paper (due June 30)	200
Participation & level of engagement (readings, discussion, etc)	200
<b>TOTAL</b>	<b>1000</b>

Point-Letter Grade Equivalents:

<u>Letter Grade</u>	<u>Point Range</u>
A+	980-1000 pts.
A	930-980 pts.
A-	900-929 pts.
B+	880-899 pts.
B	830-879 pts.
B-	800-829 pts.
C+	770-799 pts.
C	730-769 pts.
C-	700-729 pts.
D	600-699 pts.
F	Below 600 pts.

### ASSIGNMENTS

#### **A) Field Journal (400 pts; due June 17th)**

A field journal is essential to a natural scientist's fieldwork, and will be a central part of this course. When you travel to remote corners of the tropical Pacific with your classmates, you will record all of your observations, details of your journey, thoughts, and questions in a field journal. Your field journal will be unique to you, reflecting your personal style, experience, and interests. However, for the

information within a field journal to be most useful to a scientist's work, following some basic principles is important.

Students will receive training in the principles of keeping a basic natural history journal and it is expected that each student will maintain a daily journal, including transcription of observational field notes, travel logistics, or community interviews. Students will utilize their journals throughout the course, both during discussion of course topics and in preparing a final paper. For your field journal you will need:

- 1) Pocket notebook to write notes throughout the day
- 2) A 9" x 7.5" binder, which will hold your journal
- 3) Loose paper for the binder

You will submit your binder with your field journal, and the pocket book for grading by June 17th. This gives us enough time to grade your field notebook prior to your return to the US/end of the field class on June 18th.

### **B) Individual scientific paper (200pts; due June 30) & Group scientific paper (200 pts; due June 30)**

The many steps along the path of scientific discovery need to be recorded, interpreted, and communicated to the scientific community and society as a whole. One of the main outlets for this is through the primary scientific literature, or the collections of papers published in scientific journals that require a review of the work by one's scientific peers. Thus, the reading and writing of scientific literature is an essential skill for all scientists. As a part of this course, all students are required to:

- 1) participate in a collaborative project to craft a scientific manuscript based on observations/experiments during our trip that is suitable for submission to a scientific journal (**Group scientific paper**). Only a single manuscript from the entire class is required. Note, however, that this is a collaborative manuscript and ALL students are required to participate equally. The manuscript should be formatted according to the guidelines of *Proceedings of the Royal Society of London, Series B* for Research Articles (see link below).
- 2) develop, initiate and craft a scientific manuscript based on an independent project by the student (**Individual scientific paper**). Each student will submit their own manuscript and this is not a group effort. The manuscript should be formatted according to the guidelines of *Proceedings of the Royal Society of London, Series B* for Research Articles (see link below).

Guidelines for *Proceedings of the Royal Society of London, Series B* can be found at:

<http://rspb.royalsocietypublishing.org/site/misc/preparing-article.xhtml#question1>

**C) Participation & Level of Engagement (200 pts.)**

This is a field course that will entail a great diversity of travel and intimate group living conditions in remote tropical settings. Because of this, serious engagement in both academic and logistic aspects of the course is expected of all students. Students will be expected to carry out a good deal of field biological and community engagement work independently in a productive and culturally sensitive fashion. Furthermore, students will need to rapidly develop strong skills of observation in a short period, which will require a substantial commitment of time and energy. Dedication and diligence in this course will reward students not only with a good grade, but also with the beginnings of invaluable life skills in and out of a scientific life. The course will be comprised of **20-21 full day sessions**.

**ACADEMIC INTEGRITY**

Academic integrity is expected of all members of the University of Miami community. Academic dishonesty threatens this community by undermining the central mission of the University: namely the personal and intellectual development of students.

As mentioned in UM's undergraduate code of conduct:

"This code is established for the undergraduate student body, to protect the academic integrity of the University of Miami, to encourage consistent ethical behavior among undergraduate students, and to foster a climate of fair competition. While a student's commitment to honesty and personal integrity is assumed and expected, this Code is intended to provide an added measure of assurance that, in fulfilling the University's requirements, a student's work will never involve falsification, plagiarism, or other deception regarding the true nature of the materials presented. Each student is responsible for completing the academic requirements of each course in the manner indicated by the faculty. "

Academic dishonesty includes, but is not limited to, the following:

**1. Preparation of Course Work**

- Plagiarism (copying words, concepts, or ideas from any source and submitting the material as one's own without acknowledging the source by the use of footnotes, quotation marks, or both)
- Submitting the same or substantially similar assignments to the same or two different instructional staff members without permission of both
- Unauthorized use of another student's work
- Citation of sources not actually used in preparation of an assignment
- Providing to or receiving from any source assistance which does not meet the instructor's expressed expectations regarding collaboration
- Submitting work obtained from the Internet as your own

**2. Examination Behavior**

- Unauthorized use of books, notes, papers, calculators, or other materials or devices during examinations

- Taking an examination for another student or permitting another student to falsely identify himself or herself in taking an examination
- Receiving unauthorized help from or giving help to another student during an examination in class or a take-home examination
- Providing an unfair advantage to another student by revealing information about an examination which that student has not yet taken

By joining this course, you pledge to follow UM's Honor Code. We also expect students to adhere to the social and safety rules outlined by the instructors at the beginning of the course. Violation of UM's Honor Code and rules of the field course can result in the student receiving a "F" for the course, and/or early return to the United States (depending on the severity of the violation).

For details on UM's Honor Code, please visit:

[http://www.miami.edu/sa/index.php/policies\\_and\\_procedures/honor\\_code/](http://www.miami.edu/sa/index.php/policies_and_procedures/honor_code/)

### **SPECIAL NEEDS**

This course is a physically demanding field study program in an exceptionally remote humid tropical setting. For most of our stay in the Solomons, we will be far from regular communications, hospitals and developed human settlements. What you bring with you should be all you plan to have access to in terms of hard goods, clothing and personal items (see the recommended packing list distributed to you at your initial orientation meeting). **If you require special assistance, please notify the instructors prior to the beginning of the program.**

**TENTATIVE COURSE OUTLINE & ITINERARY (2013)**  
**(this will likely change depending on logistics and weather)**

<b>Date</b>	<b>Itinerary/Activity</b>	<b>Topic for discussion/lecture</b>
26-May	Travel to Solomon Islands (via Air Pacific)	
28-May	Arrive in Honiara, spend afternoon and evening in Honiara	
29-May	Fly to Kirakira, Makira Island (via Solomon Airlines)	Reader: "Practice of a Naturalist" section
30-May	Boat ride to Frigate Bird Island (3-4 hrs on UM boats)	Field safety handout
31-May	Fauna of Makira Province: Invertebrates	Reader: "Some Biological Background on the Solomon Islands" & Field guides
1-Jun	Fauna of Makira Province: Vertebrates	Field guides
2-Jun	Introduction to ecology & evolution on islands	Reader: "Island Ecology and Evolution" section
3-Jun	Ecology & evolution on islands	Reader: "Island Ecology and Evolution" section
4-Jun	Biodiversity & speciation	Reader: "Island Ecology and Evolution" section
5-Jun	Field techniques & statistics	Reader: "Fieldwork in the Solomon Islands"
6-Jun	Group project	Facultative predator avoidance
7-Jun	Day off - Day trip to Cape Serville (bring your snorkel gear!)	
8-Jun	Individual project	
9-Jun	Individual project	
10-Jun	Individual project	
11-Jun	Solomon Islands Culture	Reader: "The Culture of the Solomon Islands"
12-Jun	Culture & Conservation	Reader: "Conservation in the Solomon Islands"
13-Jun	Conservation in the Solomon Islands	Reader: "Conservation in the Solomon Islands"
14-Jun	Fly to Honiara	
15-Jun	Honiara, Tinaru Falls hike - unique fauna and flora	
16-Jun	Mt. Austen, World War II history	
17-Jun	Day off	
18-Jun	Fly to LAX, USA	