Ecology & Evolutionary Biology
UNIVERSITY OF TORONTO

Tropical Field Biology
EEB403H0/1

Instructors
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Dates
August 16 - 30, 2020 (tentative)

Location
Peru (cloud forest and lowland rainforest in the provinces of Cuzco and Madre de Dios, Peru)

Cost
Approximately $1,900 (plus tuition* for 0.5 FCE) includes food, accommodation, field station fees, and in-country transportation (flights within Peru, and ground/boat transportation to and from field sites).

***Note on tuition:** If you are a student who currently pays the full tuition program fee, you are not required to pay the summer incidental fees relating to the field course. You must meet the condition that the field course is required for the program you are currently registered in to waive tuition for this course.

Not included: International airfare (approx. $1000 for a return flight from Toronto to Lima by Air Canada), travel insurance (mandatory), travel visa (if required), beverages, laundry, etc. If you wish to be on the same flight(s) as the instructors, information will be provided after you have made your course deposit. Students must purchase their own airfare tickets and must either travel with the professors, or meet the class in Lima by the time the professors arrive in Lima.

Prerequisites
BIO120H1, BIO220H, and permission of instructor

Recommended Courses
Upper-year courses in ecology, evolution, behaviour, or organismal biology.

Course Description
This field course will examine the ecology and evolutionary history of the Andes-to-Amazon region through a combination of lectures, discussions, and field research projects. There will be mandatory pre-trip lectures and meetings (dates and times TBA) during which we will discuss in detail the logistics of the trip, and introduce the ecosystems of the Neotropics. During our two weeks in Peru, we will visit two main field sites, one in cloud forest and one in lowland rain forest. Visiting these two sites will allow us to explore how plant and animal communities change as we travel from the Andes Mountains to the jungles of the Amazon Basin.

We will spend several days at the Wayqecha Research Center, which is located almost 3,000 m above sea level on the eastern slope of the Andes. We will then travel to a lowland rainforest in Madre de Dios, Peru, at just a few hundred meters above sea level and surrounded by lowland tropical rain forest.

During the first week of the field course, we will conduct several group exercises designed to familiarize you with common techniques and approaches in field ecology and evolution. We will explore cloud forests and lowland rainforests during these exercises, with the goal of introducing the tremendously diverse natural history of the Andean and Amazonian regions. We will also have a series of lectures to provide background and context to

what you see in the field. On the second week of the course, students will perform an independent research project, designed to test an ecological or evolutionary hypothesis. Students will gain exposure to all components of the scientific process including natural history observations, hypothesis generation, experimental design and data collection, data analysis, and an oral and written presentation of the results.

Physical Demands/Risks
We will spend a great deal of time in the field in all weather conditions, on our feet and walking. Students should be comfortable spending long hours outdoors, and physically and mentally prepared to spend two weeks in remote locations. Students should be prepared for strenuous physical activity, long hours, and rustic accommodations. Risks are similar to those for any eco-tourist visiting Peru (diarrhea, parasitic infections, snake and insect bites and stings, and crime). Students should be aware that on this field course there is limited access to medical assistance; therefore, travel insurance is mandatory.

Credit
0.5 FCE

Evaluation
Marks will be based on performance in group and individual projects, and participation. Each student will give oral presentations to the class and hand in a report on an independent project at the end of the course.

Assigned oral presentation	20%
Discussions of assigned readings	15%
Group projects	15%
Independent project	30%
Participation	20%

Registration/Enrolment

Maximum of 20 students. Students accepted will be enrolled into this course through the EEB Undergraduate Office. You will be enrolled in EEB403H1 as a second semester summer session student; therefore, the office cannot add you to ROSI until the March 2020 add date for the summer session. Grades for this class will be available a few weeks after completion of the course; please advise instructors if you have a grade deadline you need to meet for graduation. Any information about the pre-trip meetings and lectures will be sent to the successful applicants prior to the events.

The University's Grading Practices Policy states that some graded work be returned before the date to cancel a course without academic penalty. Please be aware that this is not practical for a two-week field course.

Important Notes
A $1000 deposit is due May 1, 2020 and the remaining $900 is due no later than July 17, 2020. Students must have a passport **valid until at least February 2021** (6 months beyond when the course returns from Peru). In May 2020, students must provide the EEB Undergraduate Office with photocopies of two documents: (1) Valid passport, and (2) Certificate of proof of travel insurance (that covers the dates of the field course).

Undergraduate Office
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