BIOSC 1375 **Tropical Biology** **Fall 2020**

M/W 12:40pm – 1:55pm EST **Dr. Cori Richards-Zawacki**

Web-Based (regardless of University operating posture) ***cori.zawacki@pitt.edu***

Course Description:

This course will provide an introduction to ecological and evolutionary studies of living organisms in the tropics. The course will focus on major themes in ecology and evolutionary biology as they play out in the tropics, the most biodiverse region of the globe. We will read a number of classic papers in the field and compare their insights with those of contemporary topical biology literature.

Course Objectives:

I expect students to demonstrate that they have attained the following capabilities: (1) develop and critique logical arguments in ecology and evolutionary biology based upon principles and theories in the disciplines, (2) use the scientific literature to acquire, evaluate and communicate scientific evidence, and (3) demonstrate written communication skills for careers in science and related disciplines.

Specific Aims:

The specific aims of this course are for students to learn to: (1) appreciate the diversity of tropical ecosystems and understand the ecological and evolutionary processes that make them so, (2) find, read and comprehend primary scientific literature, and (3) communicate their understanding of concepts in tropical biology in writing.

Prerequisite:

C or better in BIOSC 0160, Foundations of Biology 2

Textbook:

Chazdon, R. L. & Whitmore, T. C. (2002) Foundations of Tropical Forest Biology: Classic Papers with Commentaries. University of Chicago Press, Chicago.

Supplemental Material:

Supplemental material will be provided on Canvas.

Office hours:

Class time on Monday will be used for Zoom office hours (recorded). I am happy to schedule one-on-one (not recorded) office hours with any student by email (cori.zawacki@pitt.edu) appointment.

Course Structure:

This course will consist of ***asynchronous*** (recorded) lectures, readings, and group work and ***synchronous*** (i.e., during the assigned class time) Zoom discussions (whole class and/or small group). Quizzes can be completed synchronously (during class on Monday) or asynchronously (Mondays after class). Lectures will be used to

introduce new material and discussions will give you a chance to discuss lecture and reading material and work on assigned questions (with me and with your classmates) to improve understanding.

In this course we will be using Canvas as the Learning Management System. Asynchronous lectures will be recorded using Zoom. Synchronous course meetings will take place on Zoom and will also be recorded. These recordings will be available on Canvas and are only for use by students in this course during this term. Quizzes will be administered using Canvas. You will be able to access all of these platforms for the course through Canvas.

Quizzes:
There will be no midterm or final exams in this class. Instead you will take six quizzes, each covering two of the 12 units of the course. Quizzes must be started and completed between 1:00 and 7:00pm EST on Mondays. You will have 30 minutes, once you begin your quiz, to complete it. You **may** use your own written notes, your textbook, or any of the class material that is available on Canvas during your quiz, but beware of the 30 minute time limit. You may not share your answers or any information about the quiz with your classmates. If it helps your overall grade, I will drop one quiz and have the quiz portion of your overall grade **(50%)** be calculated based on your top 5 quiz scores. Oral makeup quizzes (on Zoom with the instructor) will be available to students with a valid reason for missing an online quiz window.

Groups:
At the beginning of the term you will be placed into a study group of 5 – 6 students. You will work within this group on your discussion questions (see below) and final paper (see below). I will do my best to put you into groups that work well for your particular situation this semester, but please reach out to me if you would like to be moved to another group and I will do my best to accommodate you.

Discussion Questions:
Each unit of the course has a set of discussion questions associated with it. You are responsible for submitting ***draft answers*** to these questions individually ***by the start of class (12:40pm EST)*** each ***Wednesday***. These draft answers will not be graded, but you will receive 2 points for each unit in which you submit an on time, reasonable attempt (i.e., typing random text does not earn you a point, 'reasonable' is up to my discression) for all questions. Answering some (but not all questions) on time will earn you 1 point. ***Your total score for draft questions (out of the possible 24 across the term) will make up 10% of your final grade.***

Between Wednesday's class time (which will be devoted to group discussions of these questions) and ***Friday at 7pm EST***, everyone must individually submit their ***final answers*** to all questions. However, the idea is for you to work on these in groups (so it is ok if all answers submitted within a group are identical. They need not be if, for example, there was disagreement on how to answer the question or some individuals chose not to work within their group). Each week I will grade the final answers from students in a randomly chosen subset of groups (you will not know each week whether your final answers will be graded or not). ***Everyone will be graded on their final answers to 4 sets of questions. The average of all four question set grades will be worth 20% of your total grade.***

Final paper:
Throughout the course, your group will work together to choose a journal article (related to tropical biology) and write a review of it. The details of this assignment can be found on Canvas. By Friday, October 16th your group must submit your chosen article to me, along with a paragraph description of why you chose it **(5% of total grade)**. You have the option to turn in a draft of your review of the journal article by Friday, October 30th for feedback or to simply turn in a ***single (final) draft by Friday November 20th. The grade your group receives on its paper will make up 15% of your total grade.***

Attendance:
Attendance and participation in class Zoom sessions on Mondays and Wednesdays is strongly encouraged but not mandated or graded.

Course Grades:
Final grades for this course will be calculated as follows:

Quizzes (best 5 or 6 out of 6)	50%
Unit question drafts (due Wednesdays)	10%
Unit question final answers (due Fridays, 4 of 12 graded)	20%
Journal article and paragraph (due 10/16)	5%
Final review paper (due 11/20)	15%

Grading Policy: Course grades will be determined according to a straight scale. Percentages are not rounded up (*example*: a student with 92.6% average would receive an A-, not an A in the course).

A+	96 – 100%
A	93 – 96%
A-	90 – 92%
B+	87 – 89%
B	83 – 86%
B-	80 – 82%
C+	77 – 79%
C	73 – 76%
C-	70 – 72%
D+	67 – 69%
D	63 – 66%
D-	60 – 62%

Academic Integrity:
Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported

to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed. View the complete policy at www.cfo.pitt.edu/policies/policy/02/02-03-02.html.

Turnitin:
Students agree that by taking this course all required assignments may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of Turnitin.com page service is subject to the Usage Policy and Privacy Pledge posted on the Turnitin.com site.

E-mail Communication Policy:
Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. To forward e-mail sent to your University account, go to http://accounts.pitt.edu, log into your account, click on Edit Forwarding Addresses, and follow the instructions on the page. Be sure to log out of your account when you have finished. For the full E-mail Communication Policy, go to www.bc.pitt.edu/policies/policy/09/09-10-01.html.)

Disability Resources:
If you have a disability for which you are, or may be, requesting an accommodation, you are encouraged to contact both the instructor for this course and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.

BIOSC 1375 Schedule

Unit	Dates	Topic		Readings (to read before class time on Wednesday)	Quiz: day, units	Assignments (due Friday)
	19-Aug	Class organization introcuction, syllabus walk through				
1	8/24 - 8/28	Introduction to the tropics and early tropical naturalists		Text pp. 5-21, 37-50, 60-62, 63-67		unit 1 group questions
2	8/31- 9/4	Biogeography of the tropics		Text pp. 69-73, 99-104, 150-161; paper 1		unit 2 group questions
3	9/7 - 9/11	Arthropod diversity		Text pp. 407-413, 414-425, 427-437, 438-439	Wed., 1 & 2	unit 3 group questions
4	9/14 - 9/18	Vertebrate diversity		Text pp. 441-447, 449-456, 470-484, 486-497; paper 2		unit 4 group questions
5	9/21 - 9/25	Plant diversity		Text pp. 513-522, 538-544, 545-555	Mon., 3 & 4	unit 5 group questions
6	9/28 - 10/2	Origins of tropical diversity		Text pp. 163-173, 216-226, 230-242, 259-267; paper 3		unit 6 group questions
7	10/5 - 10/9	Plant - animal interactions		Text pp. 269-278, 309-321, 322-338; paper 4	Mon., 5 & 6	unit 7 group questions
	10/12 - 10/16	Finding primary literature - select review paper topic/article				group paper choice paragraph
8	10/19 - 10/23	Coevolution		Text pp. 339-347, 366-379, 380-390, 391-397		unit 8 group questions
9	10/26 - 10/30	Forest dynamics and regeneration	Ecosystem ecology	Text pp. 577-583, 616-636, 639-645, 660-670; paper 5	Mon., 7 & 8	unit 9 group questions, paper draft (if feedback sought)
10	11/2 - 11/6	Dry forest ecosystems	Savanna ecosystems	Papers 6, 7		unit 10 group questions
11	11/9 - 11/13	Freshwater ecosystems	Marine Ecosystems	Papers 8, 9	Mon., 9 & 10	unit 11 group questions,
12	11/16 - 11/20	Conservation and future of tropical ecosystems		Text pp. 703-711, 712-715, 727-741, 771-778		unit 12 group questions, group paper (final draft)
	11/23				Mon., 11 & 12	