BIOL 7010 Special Topics in Ecology and Evolution Fall 2015

Meeting time and place: 5:00 - 6:50 PM, Mondays, BC 1202

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Office hours: 2:00-3:00 PM, Tuesdays, or any other time by appointment

General course description: This is a seminar course involving in-depth examination of current issues in ecology and evolution. You will present a critique of a certain part of that topic that will be the starting point for a full discussion by all members of the seminar. Educational outcomes associated with this course include numbers 1 and 2 as specified by the VSU Biology Department for its Master's program, and general outcomes numbers 3, 4, 5, and 7 as specified by the University.

This year's topic: Classic papers in ecology and animal behavior

Required books:
1. Real, L. A., and J. H. Brown. 1991. Foundations of Ecology. University of Chicago Press, Chicago.
2. Houck, L. D., and L. C. Drickamer. 1996. Foundations of Animal Behavior. University of Chicago Press, Chicago.

Completion of the course requires the following:

1. Presentations: Each week, two of you will lead a discussion of two chapters from the textbooks, i.e, one of you will cover a chapter from Real & Brown and the other will cover a chapter from Houck & Drickamer. Suggested chapters are listed in the course schedule (last page). However, do not feel obligated to adhere to these suggestions; if you have a preference for a different chapter, let me know and we will try to accommodate that. In addition to covering the chapter from the book, one week prior to your presentation each of you will provide to everyone in the class a current, peer-reviewed paper that relates to the issues in the book chapter. Thus, your presentation will focus on not just the historical paper but also how it resonates in the current literature.

During the first class meeting we will fill in a schedule for the presentations based on the number of students enrolled (see below). Note that each of you will do three presentations over the course of the semester. Presentations should be relatively brief (~ 30-45 minutes) and highlight what you view as the main issues for debate. **DO NOT** just recap what is in the papers; everyone will have read them already and we will not require a blow-by-blow retelling. Rather, try to focus on points of controversy, unanswered questions and so on. Each presentation will be worth a maximum of 50 points and will be graded by me. Emphasis will be placed on the clarity of your presentation and your effectiveness in leading the class discussion.

2. Review Paper: Each of you must write a review paper about some topic related to the chapters in the textbooks. You may use one or more of your presentations as the starting point for this paper, but you are not obligated to do so. You must get your topic approved by me no later than midterm (**Thursday, October 8**) and all papers must be turned in by **5 PM, Monday, November 23**. Topics will be assigned on a first-come, first-served basis, so if you have a particular area you wish to cover, sign up soon. Papers must be written in the style of a journal article (the *Quarterly Review of Biology* and *Annual Review of Ecology and Systematics* provide excellent models) and be exhaustive reviews of the subject. One critical part of this paper will be to provide an extensive bibliography of the literature pertaining to your topic.

3. Peer-review: You will provide a 1-2 page critique of a subset of the review papers submitted. Each paper will be reviewed by 2 other members of the class. Imagine that these papers have been submitted to a scientific journal for possible publication and you have been asked to review them. Your reviews should emphasize the strengths and weaknesses in each paper and what the author could do to improve it. As the last part of the review, you must assign a numerical grade, based on a maximum total of 50 points. All reviews of all papers are due no later than dead day (**Tuesday, December 8**). I will then send each of you all the reviews of your paper and its averaged reviewer score (individual point scores will remain anonymous).

Grading: Grades will be based on a total of 350 points as described below. In addition, you need to be aware that there is a punitive attendance policy. The seminar requires active participation by all of you. So, if you are not here, the class will suffer dramatically. Consequently, for each unexcused absence, you will lose one letter grade off your final grade.

Presentations:	150 points
General participation:	50 points
Review paper:	100 points (calculated as the average of the peer-review scores + 50 possible points from my own evaluation of your paper)
Peer review critiques	50 points (based on my evaluation of all the reviews you submit)
Total	350

Evaluating the above is admittedly subjective. I will start the seminar assuming everyone has an A. So long as you do your job, that will not change. However, if you don't show up or don't participate, then your grade will start to fall. If you don't show up for one of your presentations or don't turn in your paper, then you automatically fail the course. Late submissions of any assignments will be penalized at the rate of 10% per day.

Final grades will be based on the following point totals:

A = 315 – 350
B = 280 – 314
C = 245 – 279

BIOL 7010 Course Schedule

Month	Day	Reading from Houck & Drickamer	Discussion Leader	Reading from Real & Brown	Discussion Leader
August	17	Organizational meeting	NA		
	24	1-Darwin, 1872	Loughry	7-Lindeman, 1942	Loughry
	31	2-Romanes, 1882	Binns	3-Clements, 1936	Bryller
September	7	Labor Day—No Class			
	14	4-Watson, 1924	Bryller	4-Gleason, 1926	Farrow
	21	5-Lehrman, 1953	Farrow	6-Nicholson & Bailey, 1935	Haney
	28	6-Tinbergen, 1963	Haney	10-Cole, 1954	Lowe
October	5	20-Harlow & Zimmermann, 1959	Lowe	16-Hutchinson, 1959	Lowery
	12	Fall Break—No Class			
	19	23-Aschoff, 1960	Lowery	17-Hairston et al., 1960	Merritt
	26	24-McClintock, 1971	Merritt	18-Ehrlich & Raven, 1964	Moore
November	2	29-Hinde, 1960	Moore	23-Birch, 1948	Ragan
	9	36-Marler, 1961	Ragan	27-Odum, 1969	Binns
	16	41-Hamilton, 1964	Binns	34-Kettlewell, 1955	Lowe
	23	42-Orians, 1969	Bryller	38-Paine, 1966	Lowery
	30	43-Trivers, 1972	Farrow	39-Simberloff & Wilson, 1969	Merritt
December	7	44-Maynard Smith & Price, 1973	Haney	40-Likens et al., 1970	Ragan