

Meeting time and place: 5:00 - 6:50 PM, Mondays, BC 2202

Instructor: Jim Loughry

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Office hours: 12:30-2:00 PM R, 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. 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: Great Debates in Ecology and Evolution

There are a number of long-standing controversies in biology that are rooted in philosophy and cannot easily be resolved empirically. In the first part of the course we will discuss some of these. Prior to each week's seminar I will provide one or more short readings relevant to each topic that introduce the issue at hand. The class will be split into two groups, with each group assigned to advocate one side of the argument (see course schedule for group assignments). Each group must provide at least one (or more) peer-reviewed papers to be read by the entire class that support their side of the issue. These readings must be made available at least **one week** prior to the date when they will be discussed in class.

In the second part of the course, each of you will identify a current controversy in your own area of specialization, provide readings relevant to the topic and lead a classroom discussion of it.

Required books: None

Completion of the course requires the following:

1. Presentations: As described above, each of you will lead a classroom discussion during the second half of the semester that covers a current controversy in your own area of specialization.

During the first class meeting we will fill in a schedule for the presentations. 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. Your presentation is worth a maximum of 100 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 one of the topics discussed in class. You must get your topic approved by me no later than midterm (**Thursday, March 5**) and

all papers must be turned in by **5 PM, Monday, April 27**. 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 **Tuesday, May 5**. 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 300 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.

Presentation:	100 points
Participation (during entire semester, but emphasis on group debates):	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	300

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 = 270 – 300
- B = 240 – 269
- C = 210 – 239

BIOL 7010 Course Schedule

Month	Day	Topic	Discussion Leader(s)
January	13	Organizational meeting	NA
	20	MLK: No Class	NA
	27	Reductionism versus Holism	Pro-reductionism: Castellano, Crews & Hector Pro-holism: Lamb, Le, Rodriguez & Slaton
February	3	Teleology	Pro: Crews, Hector, Le & Slaton Con: Castellano, Lamb & Rodriguez
	10	Adaptation	Pro: Castellano, Hector, Lamb & Slaton Con: Crews, Le & Rodriguez
	17	The Nature of Natural	Pro: Castellano, Le & Slaton Con: Crews, Hector, Lamb & Rodriguez
	24	Theory of Mind	Pro: Castellano, Crews, Rodriguez & Slaton Con: Hector, Lamb & Le
March	2	Nature versus Nurture	Nature: Castellano, Lamb & Le Nurture: Crews, Hector, Rodriguez & Slaton
	9	Student Presentation 1	TBD
	16	SPRING BREAK: No Class	NA
	23	Student Presentation 2	TBD
	30	Student Presentation 3	TBD
April	6	Student Presentation 4	TBD
	13	Student Presentation 5	TBD
	20	Student Presentation 6	TBD
	27	Student Presentation 7	TBD
May	4	Work on Paper Reviews: No Class	NA

