

Meeting times and places:

Science Seminar: 12:45 – 1:45 PM, Tuesdays, BSC 1023

Class Meeting: 5:00 – 6:50 PM, Thursdays, BSC 2202

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Office hours: 10 AM- 12:00 PM Tuesdays, or any other time by appointment

General course description: This is a seminar course involving in-depth examination of current issues in biology. 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.

In this course we will do three things:

1. Philosophical Debates. 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.

2. Peer Review. In the second part of the course, you will gain experience with peer review. One essential skill of a professional scientist is the ability to evaluate the efforts of others. However, all too often very little formal training is provided that would allow one to learn how to do this. In this course, each of you will be given a manuscript or, possibly, a grant proposal, that I have been asked to review in the past or have authored myself. You will lead a discussion in which the work is critiqued, emphasizing each paper's strengths and weaknesses. Note that, while grammar and style can positively or negatively impact the evaluation of a paper, this is not an English course, and so your critique should emphasize more substantive matters. After the class has met, I will provide the official reviews of the paper/proposal so you can see how your critiques compare to those of the real reviewers.

3. Science Seminar Previews. To my knowledge, the schedule of speakers for Science Seminar this semester is not yet available. Consequently, this part of the course is tentative at this time. Assuming a schedule becomes available soon, and that it contains at least four speakers, then each of you will lead a discussion of what you consider to be one or more of the most important papers published by one of the speakers. This discussion will occur the Thursday before the scheduled talk the following Tuesday, so you should be able to ask knowledgeable questions of

the speaker before or after the talk. Papers to be discussed must be made available to the other members of the class at least **one week** prior to the date when they will be discussed.

Required books: None

Completion of the course requires the following:

- 1. Attendance at Science Seminars:** Mandatory for all speakers hosted by the Biology Department, schedule to be announced.
- 2. Discussion Leader:** As described above, each of you will lead a discussion of a manuscript for peer review, as well as one that covers the major papers authored by one of the Science Seminar speakers.
- 3. Participation:** Seminars are about discussion. Thus, it is critical that each of you actively participate. Even when you are not leading a discussion, you are still expected to contribute. Consequently, a portion of your grade will be based on your participation in each week's discussion.

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.

Discussion Leader, Peer Review:	100 points
Discussion Leader, Science Seminar:	100 points
Participation (during entire semester, but emphasis on group debates):	50 points
Attendance at Science Seminar:	50 points (10 points/seminar)
Total	300 points

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, then you automatically fail the course.

Final grades will be based on the following point totals:

A = 270 – 300

B = 240 – 269

C = 210 – 239

BIOL 7900 Course Schedule

Month	Day	Topic	Discussion Leader(s)
January	12	Organizational meeting	NA
	19	Reductionism versus Holism	Pro-reductionism: Harris, Holley Pro-holism: Mohanty, Sanchez
	26	Teleology	Pro: Harris, Mohanty Con: Holley, Sanchez
February	2	Adaptation	Pro: Harris, Sanchez Con: Holley, Mohanty
	9	The Nature of Natural	Pro: Harris, Holley Con: Mohanty, Sanchez
	16	Theory of Mind	Pro: Harris, Sanchez Con: Holley, Mohanty
	23	Nature versus Nurture	Nature: Harris, Sanchez Nurture: Holley, Mohanty
March	2	Peer review 1	TBD
	9	Peer review 2	TBD
	16	SPRING BREAK: No Class	NA
	23	Peer review 3	TBD
	30	Peer review 4	TBD
April	6	Science Seminar Preview 1	TBD
	13	Science Seminar Preview 2	TBD
	20	Science Seminar Preview 3	TBD
	27	Science Seminar Preview 4	TBD

Note that the above schedule is subject to revision based on when speakers for Science Seminar will be presenting.