

Course Syllabus
BIOL 4510, Senior Seminar in Biology, Fall 2016
Thursdays 1-2:50pm, Olsen 106
Prof. Sarah McMenamin, sarah_mcmenamin@uml.edu
Office Hours: Wednesdays 11am-1pm, Olsen 513

Course description: This course instructs students in developing effective writing and speaking skills required for preparation of scientific manuscripts and presentations, and communicating in the scientific world. Students will be required to prepare and present oral presentations and to submit written reports.

Course objectives:

1. To hone the skills required in critically reading primary scientific literature
2. To orally and visually present biological research to scientific peers
3. To communicate complex biological concepts and methods in writing for different types of scientific and non-scientific audiences
4. To engage in national and global conversations about biology, science and technology

Course overview and structure: Each class session will start with a short and (easy!) multiple choice quiz on the reading. The bulk of each class will be a “journal club” style discussion of a biological primary research article selected by one of your peers. Each class will end with a Biology in Society presentation by one of your peers.

1:00-1:10 Quiz
1:10-1:25 Paper introduction
1:25-2:20 Paper discussion
2:20-2:50 Biology in Society presentation

If you are late to class you will miss the quiz. *There will be no make-up quizzes!*

Assignments: Students will have two major assignments during this class:

1. Leading a Literature Discussion

Early in the semester, you will *carefully and thoughtfully* choose a primary literature paper of interest. See the [Leading a Literature Discussion](#) handout for more details. In brief, you will:

- a. Turn in a written assignment for the paper, ***due at noon the Monday before your class presentation and discussion***, which will include your quiz questions, a scientific summary, a press release and a tweet.
- b. Present an introduction to this paper (~15 min) and *actively* lead the class in a discussion of the manuscript (~55 min).

2. Science in Society presentation

Early in the semester, you will choose a subject to creatively present to your colleagues in a ~30 min format. You should strive to address or answer a broad question of interest to you, and to scientists and/or society at large. See the Science in Society Presentation handout for more details.

Additionally, you are required to read the papers chosen by your colleagues. Unless otherwise noted, you are responsible for finding and downloading each paper, and leaving enough time to thoroughly read and digest the manuscript.

Course grade: The course will be graded on a straight scale. In general, >95 points will correspond to an A in the course, >85 will correspond to a B, etc.

Attendance	15
Quizzes	15
Discussion participation	20
Written assignments	20
Paper presentation and discussion	20
Biology in Society presentation	10
Bonus	??
<hr/> TOTAL	<hr/> 100+

Seminars: Departmental seminars are held every week on Wednesday at 4 pm. I recommend that you attend as many as possible! In particular, we will be reading papers by Dr. Monaghan and Dr. Siegfried, and I have invited each of them to present a colloquium this semester! You will have a chance to hear about their research after reading and thinking deeply about their papers. The schedule for these seminars is:

Oct 12 James Monaghan Seminar
Nov 16 Kellee Siegfried-Harris Seminar

Diversity and equality: Students are encouraged (and indeed, required!) to speak and actively participate during class sessions. Everyone comes from a different life experience, belief system and background, and every member of the class must show respect for all of their colleagues.

As the instructor, I am committed to diversity and equality in all areas of campus life, and I will work to promote an anti-discriminatory environment where every student feels safe and welcome. Discrimination, be it personal or institutional, direct or indirect, is unacceptable. We all have a responsibility to not be offensive to each other, or to participate in or condone harassment or discrimination.

I have been provided with a list of names from the registrar. If you prefer a different name (and/or a different pronoun) than what was provided, please let me know.

Class schedule and weekly assignments: Paper citations will be posted by you and your colleagues at <http://tinyurl.com/zyhe73f>. You must locate, download, and read the chosen paper before coming to class.

Sep 1 Course outline, syllabus. Introduction to primary literature, types of experiments. Discuss paper topics and biology in society topics.

Sep 8 Discuss Paper 1, discuss paper and presentation selections
DUE: Read Paper 1, select ~5 possible papers and Biology in Society ideas

Sep 15 DUE: Read Paper 2. All papers and Biology in Society presentations should be chosen by today.

Sep 22 DUE: Read Paper 3

Sep 29 DUE: Read Paper 4

Oct 6 DUE: Read Paper 5

Oct 13 DUE: Read Paper 6

Oct 20 DUE: Read Paper 7

Oct 27 DUE: Read Paper 8

Nov 3 DUE: Read Paper 9

Nov 10 DUE: Read Paper 10

Nov 17 DUE: Read Paper 11

Nov 24 **NO CLASS** Happy Thanksgiving!

Dec 1 DUE: Read Paper 12

Dec 8 DUE: Read Paper 13