

**Honors Research Methods
Biology (BIO) 487
Spring 2018**

Meetings: Monday, Wednesday, Friday 12-12:50
Room: Cooke 651
Instructor: Dr. Jessica Poulin
Email: jpoulin@buffalo.edu
Office: Hoch 621
Office Hour: Wednesday 2-3 PM (open door) or MAINLY by appointment

Required text:

PROVIDED FOR YOU ON DAY ONE OF THE COURSE – PLEASE DO NOT BUY:

Pechenik, J (2015). *A Short Guide to Writing About Biology* (9th Edition). NY: Pearson/Longman Publishers.

Goals of the Course:

This course is designed to help our top students by introducing them to the world of laboratory research. While much of research is learning techniques specific to your own individual project, all lab students need to understand how to comprehend and communicate effectively (and with confidence!) about the primary literature. This course, thus, has three sections: understanding research, critiquing research, and presenting research. Through assignments in each section, students should gain confidence working with the primary literature that will allow them to better integrate their own novel research into a scientific context. In addition to gaining facility with reading primary research, students should become comfortable critiquing published work, as well as the efforts of themselves and their peers. Bio 487 aims to cover these goals through a mixture of lecture, in-class assignments, and peer-review of work. In a weekly guest lecture series (during class) students will have access to working scientists who will help them understand the breadth of new biological research being done here at UB, as well as the paths these scientists have taken to get to different points in their careers. In all, the course should help students immerse themselves fully in the world of laboratory research so that they come out ready to be confident members of a laboratory team.

This course also serves as the formal pre-requisite for participation in our honors research program (Bio 497). Students receiving a B- or better in Bio 487 may continue in Bio 497 for their senior year, so long as they maintain a GPA of 3.6 or better. All students who successfully complete Bio 487 and six credits of Bio 497 will graduate with honors. Students will be assessed for graduation with high or highest honors at the end of their Bio 497 experience.

The formal assessment of these goals is detailed in the “Assessment Items for Bio 487”, handed out and posted under “Course Information” on UBLearn.

Course structure:

A grid showing the course plan ("Lecture Schedule") can be found in the "Course Information" section of our UB Learns site. Please check this regularly to make sure you know what is due and what to expect from each class.

With some variation, the course will follow the following format:

Monday: Lecture/in class activity, assignment for Wednesday

Wednesday: Submission of assignment, in-class analysis of submission

Friday: Guest speaker

Assignments are highly variable. Please check with me or with posted assignment explanations for complete information about all of the assignments.

Guest speakers will have a great deal of latitude in their topics, but will be asked to spend about half of the class time on their current work, focusing on projects undergraduates could work on, with the remaining half focused on their career path and how they became scientists. There will be refreshments for all speakers and time for questions at the end of the session. Students may miss one guest lecture without penalty.

Grading:

Your grade will be determined by your performance on the following assignments

Item	Points
In class article (read & discuss)	5
3-5 article options brought to class	5
Article questions	10
Summary paper (Draft)	50
Summary paper (Final)	50
In class article (read & critique)	5
Critique paper (Draft)	50
Critique paper (Final)	50
Peer editing (5 pts per draft)	10
Abstract writing assignment & discussion	10
Poster	50
Oral presentation (inc 7 pts for meeting Wk 12)	55
Guest lecture attendance (11, one absence ok)	50
Total	400

For 50 pt assignments:

A = 50, A- = 46, B+ = 43, B = 40, B- = 38, C+ = 36, C = 34, C- = 32, D = 29, F = 25 or less

Final grading is done on a straight scale, with scores rounded to the nearest tenth of a percent.

Low	High	Grade
0.930	1.000	A
0.900	0.929	A-
0.870	0.899	B+
0.830	0.869	B
0.800	0.829	B-

Low	High	Grade
0.770	0.799	C+
0.730	0.769	C
0.700	0.729	C-
0.600	0.699	D
0.000	0.599	F

Communication:

I will communicate regularly with you via postings on UBLearns and over email. Please make certain you are receiving my emails and that your email account is below quota so that my messages do not bounce from your inbox unread. Especially with the number of guest speakers we may have regular need for minor rescheduling or room changes and these sorts of announcements will go out over email. Please check regularly.

Safe Space: It is critical that this classroom is a safe place that encourages learning for all students. I expect all students to be respectful of fellow learners regardless of race, ethnicity, citizenship, age, disability, gender, sexual orientation, gender identity, or religion. Any type of harassment is against UB's Discrimination and Harassment Policy and will be reported, as such. Feel free to email me or make an appointment to speak with me if you have questions or concerns about this policy or about incidents in the classroom.

Academic Dishonesty: The University at Buffalo's regulations in this area are available on our UBLearns site under External Links, listing Academic Integrity. From that site: "Academic integrity is a fundamental university value. Through the honest completion of academic work, students sustain the integrity of the university while facilitating the university's imperative for the transmission of knowledge and culture based upon the generation of new and innovative ideas." Academic dishonesty, as defined at UB, includes submitting previously submitted work, plagiarism, using unauthorized materials, the giving and receiving of unauthorized assistance during an exam or on an assignment, falsification of academic materials, misrepresentation of documents, receipt or distribution of confidential academic materials, and selling or purchasing academic assignments.

Any sort of academic dishonesty is unacceptable and will result in course failure.

Incompletes: Incompletes will only be received by students in good standing (not failing) who have an excused absence from one of the exams. These students will be given an incomplete and expected to arrange to take the missed exam when the course is next offered. Arrangements to receive an incomplete must be made before the end of the semester. Please refer to the University Policy on Grading for more information.

Accessibility Resources: Students with disabilities sometimes require reasonable accommodations to ensure their opportunity to participate fully in a class. Any student requesting such accommodation any time during the term should contact UB's Accessibility Resources Office, 60 Capen Hall, 645-2608, where they can document their mental or physical impairments and receive written verification of disability and individualized written accommodation recommendations.