

First-Year Opportunity: Introduction to Cutting-Edge Research in Biology

Biology 181, Fall 2018

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Teaching Assistant: Eric Hsu <e.hsu@wustl.edu>

Biology 181 is designed to present a realistic picture of how science is done. An additional objective is to acquaint prospective Biology majors with fields of study in biology and with the research of faculty in Biology and related departments. If you have any questions concerning Biology 181, please talk with either Paul Stein or Eric Hsu before or after class or make an appointment.

DESCRIPTION: The course consists of a series of 13 class meetings. 12 meetings will be research lectures given by different faculty members on topics of the professor's interest. 1 meeting will include lectures by Biology 500 students on their undergraduate research. Class meetings will be on Tuesdays from 3:30pm-5:00pm in Room 322 in Rebstock Hall.

See the course website <http://www.nslc.wustl.edu/courses/Bio181/bio181.html> for the up-to-date lecture schedule, the PDFs for readings, and the background information for each speaker. Enter user name: bio181 and the password provided in class to access PDFs. Credit for the course is 1 unit PASS/FAIL only. No letter grades will be issued. This does not interfere with your ability to take another Cr/NCr course.

REQUIREMENTS:

1. CLASS MEETINGS: Students are required to attend at least 9 of the class meetings (see web page for schedule) in order to pass the course. You are expected to take notes at each faculty research lecture to assist you in the preparation of your short papers and to gain skill in note-taking during science lectures. Please print your name and sign your name on a sheet that we will have in the back of the lecture room each week to indicate you attended. It is a serious breach of the honor code for a person to sign in for an absent student. You must be present during the entire duration of the class meeting in order to receive credit for attendance at that meeting. On selected random Tuesdays, students must sign a 2nd signup sheet at 5PM at the end of class to verify their attendance during the entire class. There are two different options that you can use to substitute for the CLASS MEETING requirement. You may receive credit for a maximum total of two substitutions (two of one option or one of each option).

Option 1: Lectures in Chemistry 181 may be substituted for lectures in Bio 181. Arrange for an EMail to stein@wustl.edu from the coursemaster of the course to verify your attendance and receive Bio 181 credit for your attendance. Links to the Chem 181 home page are on the Bio 181 home page. Option 2: Regularly scheduled seminars in the Biology Department may be substituted for lectures in Bio 181. To receive credit for this option, you must attend the entire duration of the seminar and submit a 1-page double-spaced written summary of the main points of the seminar speaker's talk. See the seminar webpage <http://wubio.wustl.edu/events> for a current schedule. If you elect to use this option, your written summary does not count as a required short paper described in the next section. The deadline for receipt of the written summary is 3:30pm on December 4, 2018.

2. READINGS AND TWO SHORT PAPERS: PDFs of articles are posted on the course website for each faculty research lecture to enable you to pursue topics further. You are required to choose 2 of the research topics presented by faculty speakers in Bio 181 lectures and read the PDFs posted for these lectures. You will need to write 2 short papers that each receive a mark of "++" or "+" in order to pass the course. Short papers that receive a mark of "-" will need to be re-written; Eric Hsu will provide suggestions for improvement. Each short paper will be at least 2 pages long and will include:

- (1) a short summary of the main points of the speaker's talk;
- (2) a description of the main points of at least two of the PDF articles associated with the talk;
- (3) suggestions for future experiments in the field.

Double space your paper and include a reference list. Include your name, the date, and the page number on the header for each page. When you state a claim in your paper based upon an outside source, be sure to reference that source within the text of your paper and to include the specifics of that reference in your reference list. Use the style described in the file titled "2018 Citation Guidelines for Bio 181 Papers" that can be downloaded from the Bio 181 home page. Use headings for the major sections of your paper: Lecture Overview, Article Summaries, Suggestions for Experiments. Use subheadings for major ideas within each of the sections of the paper. Hand in your papers to the course teaching assistant, Eric Hsu.

Direct your questions, comments, or concerns with respect to the papers to Eric Hsu. The first short paper is due in class by 3:30pm on September 25, 2018; the second short paper is due in class by 3:30pm on November 6, 2018. You may select any Bio 181 faculty speaker for your second short paper except for the Bio 181 faculty speaker whose talk was summarized in your first short paper. The deadline for receipt in class of re-written short papers is 3:30pm on November 27, 2018.

A SPECIAL REQUEST: Biology 181 is an optional course. We offer it because we know that some first-year students are very interested in research. In order to allow the student to test that interest, we ask world-class research scientists to spend time with you to give you the flavor of biological research. Each year, sometime into the course, some students decide the lectures are not very interesting to them. Fair enough. One of the objectives of the course is to allow students to test the water. If you find that the lectures do not hold your interest, please withdraw from the course. The course is only 1 unit of credit and is meant to be interesting. For reasons beyond our understanding, in the past, students who have lost interest continue to attend class, are inattentive, and even rude. This makes for a very unpleasant situation for all concerned. Feel free to withdraw from the class if you lose interest in the material. If you attend the class, please be attentive and, of course, polite.