

Graduate Proseminar

Biology 691: Syllabus

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Meeting Time: 6–8:45 PM Wednesday
Location: CR 5201 (Biology Conf. Room)
Office Hours: 5–6 PM Wednesday, OBA

Course Overview

Becoming a professional biologist is challenging and requires mastering a variety of skills. Graduate Proseminar has traditionally focused solely on mastering techniques for presenting scientific information. Learning to give effective professional presentations (be it a brief conversation in the hall, or a 50-min presentation at an international meeting) is a fundamental and invaluable skill; however, the topics I cover in Proseminar are broader. Hence, the curriculum is designed primarily to help you master scientific communication, but will also provide you with several related skills needed by all professional biologists. The general goal is to give you opportunities to learn, practice, and evaluate oral and written methods of presenting scientific and your professional academic information in a variety of formats.

Assignments

Project Descriptions—Write a jargon-free paragraph (up to 0.5 page maximum) explaining your proposed research and its relevance to basic and/or applied biology. Because the purpose of this assignment is communicating with the general public (e.g., your grandmother—assuming she is not a biologist), it would be helpful to have a non-biologist read your work prior to submission.

How-to Demonstration—Demonstrate a specific scientific technique or method, or the use of an instrument. These demos are similar to those in teaching labs, on fieldtrips, and at lab meetings. No handouts, overheads, or PowerPoint—just you, the chalkboard/whiteboard, and (where appropriate) the instrument. *Time limit: 5 min + 2 min for questions.*

Short Presentation #1—A short version of a PowerPoint presentation such as those required in a graduate seminar course. The focus will be on describing a biological idea, theory, or concept rather than data and/or data analysis. Presenters will provide a one-page handout including an outline of the presentation and a bibliography. *Time limit: 10 min + 2 min for questions.*

Short Presentation #2—This PowerPoint presentation will follow the style used at scientific conferences. Presentations should focus on data and analyses and conclusions drawn from the data (the data can be real—your own or borrowed, or contrived). *Time limit: 10 min + 2 min for questions.*

Short Seminar—A PowerPoint presentation used in teaching and university seminars (e.g., BIOL 692: Biology Colloquium), symposia at scientific conferences, M.S. and Ph.D. defenses, and interviews for university faculty positions. *Time limit: 20 min + 5 min for questions.*

Curriculum Vitae—This is an account of a scientist’s career, qualifications, and accomplishments and is roughly equivalent to, but distinctly different from a résumé. A handout will be provided describing how to prepare an effective CV.

Grant Proposal—You will prepare a short (≤ 500 word) grant proposal based on your proposed research. A handout will be provided describing how to prepare an effective grant proposal.

Attendance & Participation—Your participation is critical to every aspect of the course (especially in reviewing and revising each other’s work). Consequently, a portion of your grade will be based on your timely attendance and substantive participation (unexcused tardy: -2 points; unexcused absence: -5 points). Likewise, assignments must be submitted on time; late work will receive a 5-point deduction per hour late. Students exceeding the allotted time on their oral presentations will lose 5 points.

Format

Our primary focus will be on oral presentations of scientific information. Each student will make presentations using the formats described above. Your colleagues will evaluate your presentations and assignments for quality and effectiveness. Each presentation will also be evaluated by the instructor for organization, clarity, logical flow, style, timing, effectiveness of supplementary materials, etc. Feedback will be provided to the presenters in the form of evaluations from their peers and the instructor.

Grading

Grades are based on the quality of your presentations, assignments, and class participation. Although all participants will play a role in evaluating the presentations and assignments, grades will be assigned solely by the instructor.

| Assignment | Points |
|----------------------------------|------------|
| Project Descriptions..... | 10 |
| How-to Demonstration | 25 |
| Short Presentation #1 | 50 |
| Short Presentation #2..... | 50 |
| Short Seminar | 75 |
| Curriculum Vitae | 25 |
| Grant Proposal | 25 |
| Attendance & Participation | 20 |
| Total | 280 |

Grades will be distributed as follows:

$$\geq 90\% = \mathbf{A}; \quad 80-89\% = \mathbf{B}; \quad 70-79\% = \mathbf{C}; \quad 60-69\% = \mathbf{D}; \quad \leq 59\% = \mathbf{F}$$

Plus and minus grades will be assigned as follows: percentages ending with 8 or 9 will be given a plus (e.g., 88–89% = B+); percentages ending with 0 or 1 will be given a minus (e.g., 90–91% = A–). Grades will not be curved.

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Curriculum

| Date (Tuesdays) | | Subjects Covered |
|------------------------|----|---|
| August | 31 | Introductions; Course Objectives and Content; Advice for Graduate Students; Professional Communication |
| September | 7 | Practice Professional Introductions [Submit Project Descriptions]; Professional Presentations: Dos and Don'ts |
| | 14 | Short How-To Demonstrations |
| | 21 | Short Presentation #1: Theory or Concept (Group #1) |
| | 28 | Short Presentation #1: Theory or Concept (Group #2) |
| October | 5 | Short Presentation #2: Data (Group #1) |
| | 12 | Short Presentation #2: Data (Group #2) |
| | 19 | Short Seminar (Group #1) |
| | 26 | Short Seminar (Group #2) |
| November | 2 | Short Seminar (Group #3) |
| | 9 | Elements of the Curriculum Vitae (CV); Critique Sample CVs |
| | 16 | [Email CVs by 5 PM, Friday 11th] Critique Student CVs |
| | 23 | Grant-Writing Skills; Critique Sample Grant Proposals |
| | 30 | [Email Proposals by 5 PM, Friday 25th] Critique Student Grant Proposals |
| December | 7 | Research Ethics; Publishing and the Peer-Review Process <i>or</i> Job Searching and the Interview Process |
| | 14 | No Class (Final Examination Week) |
