BIOL 392: INTRODUCTION TO BIOLOGICAL RESEARCH  
Spring 2017 Syllabus

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COURSE OBJECTIVES
The primary objective of Introduction to Biological Research is to give you the opportunity to learn how to develop and present research and research proposals to various audiences—in written, oral, and poster formats. We will address this objective through hands-on research, writing, and presentation.

In this course, you will select a research area, narrow the topic to identify a specific question, read the primary literature pertinent to your question, and develop a research plan to answer your question. The culmination of your work will include: a complete research proposal for a general audience, a request for budgetary support for your project, an oral presentation of your proposal to your colleagues in the course, and a poster outlining your research project that you can discuss with students and faculty. Along the way we will work on general writing skills, literature review, peer editing, and much more.

COURSE MECHANICS

Seminar Attendance
In addition to working on your own research, you will also have the opportunity to learn about the research presented by others through the following activities:

- You are required to attend and critique five (5) science seminars or major presentations during the semester.
- You are required to attend a portion of the Phi Sigma Undergraduate Research Symposium held April 1 – 2, 2017. Your observations at this event will form the basis for further discussions about presentations.

We will provide more information about both of these requirements.

Class Meetings and Materials
Class meetings will vary in format and include lectures, group discussions, group work, individual meetings, oral presentations, or poster construction workshops. Participation by everyone is essential and is an important part of your grade. We will post most materials for this course on Moodle. You will also submit some of the assignments through the course Moodle site.
Readings and References
There is not a specific textbook for this course. We will post readings on Moodle. You may find some of the following reference sources useful. You may already have some of these sources from previous courses or they may be available through the library:

- **A Short Guide to Writing About Biology**, by Jan Pechenik
  - You may already own this book as it is required for some introductory biology courses
- **A Student Handbook for Writing in Biology**, by Karin Knisely.
  - You may already own this book as it has been required for some introductory biology courses in the past.
- **A Writer’s Reference**, by Diana Hacker and Nancy Sommers
  - You may already own this book as it has been required for all students for the past few years.
- The Science of Scientific Writing by George D. Gopen & Judith A. Swan
- **Writing Papers in the Biological Sciences** by Victoria E. McMillan
- **The Scientific Attitude** by Frederick Grinnell
- **Elements of the Scientific Paper** by Michael J. Katz
- **Communicating in Science: Writing and Speaking** by Vernon Booth
- **Presentation of Data in Science** by Linda Reynolds and Doug Simmonds
- **A Handbook of Biological Investigation** by Harrison Ambrose and Katherine Ambrose
- **Writing to Learn Biology** by Randy Moore
- **Writing to Learn** by William Zinsser
- **The Craft of Research** by Wayne Booth, Gregory Colomb and Joseph Williams
- **The Sense of Structure: Writing From a Reader’s Perspective** by George D. Gopen

Also, remember that the Center for Writing, Learning, and Teaching (Howarth 105) provides excellent assistance and resources.

Course Grade
Your final course grade will be earned based on the quality and timeliness of your assignments and your participation in the class. Approximately equal weight will be given to each of the following components:

- Research proposal (general audience)
- University Enrichment Committee (UEC) research grant application
- Proposal editing and quality of peer-review
- Annotated references
- Oral presentation of research proposal
- Poster presentation of research proposal
- Seminar critiques (5) and attendance at the Phi Sigma Undergraduate Research Symposium
- Class attendance and overall participation
Late Assignment Policy
Please pay close attention to due dates. No make-up assignments will be given for in-class activities. Late assignments will **NOT** be accepted without a verified medical or bereavement excuse.

**Academic Integrity**
The university’s academic integrity policy is clear and comprehensive. It is available online [http://www.pugetsound.edu/student-life/student-resources/student-handbook/academic-handbook/academic-integrity/] and in the printed *Academic Handbook* and you are responsible for understanding what constitutes plagiarism and other forms of academic dishonesty. Academic integrity is vital to your work as a student, including in this course. **All assignments must be written individually unless otherwise noted. Cheating, plagiarism, and other forms of academic dishonesty will NOT be tolerated.** Contact us with any questions regarding academic integrity.

**Behavior Expectations**
We expect you to behave in an appropriate manner while attending this class. Use your common sense and here are a few guidelines:

- Be punctual.
- During class time, I expect you to be working on materials for this course only.
- *Personal technology;* please be respectful of others in class:
  - Switch your phones to vibrate or no-ring before coming to class and have them stowed in your bag or pocket
  - No email or text messaging
  - You may not have ear buds in at any time while in class
  - Digital devices (laptops, tablets, phones) can only be used by permission of instructor
- You may not make audio recordings of our class or lab sessions without prior consent from us.
- Lack of respect for diversity will **not** be tolerated in the class. Diversity encompasses age, life experiences, profession, race, religion, gender, lifestyle, social class, learning style, ethnicity, philosophy of life, sexual orientation, personality, mental and physical challenges, customs, and values, among others.
- You may bring food and/or drinks to class **as long as the consumption of food and/or drinks is not a distraction to others.**

**Office Hours, Contacting the Instructor, and Class Correspondence**
We have a drop-in policy for office hours. You may stop by either of our offices at any time with the caveat that we may not always be available to speak with you. If either of us is unavailable when you stop by, we can set up an appointment to meet. Note that emailing either of us for an appointment before you stop by will guarantee our availability.
You may contact Vanessa or Bryan by telephone, e-mail, or in person. We check e-mail periodically throughout the day but usually not often in the evenings or on weekends. We will respond to email within 24-48 hours. Please consider before emailing Vanessa or Bryan whether or not a question can best be answered in person. If that is the case, please request an appointment.

We will use e-mail and/or Moodle to provide information about the class. Make sure you routinely check your Puget Sound e-mail and the Moodle site for this class.

**Bereavement Policy**
Upon approval from the Dean of Students’ Office, students who experience a death in the family, including parent, grandparent, sibling, or persons living in the same household, are allowed three consecutive weekdays of excused absences, as negotiated with the Dean of Students. For more information, please see the Academic Handbook.

**Accessibility and Accommodation**
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodation, 105 Howarth, 253.879.3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Please notify both instructors well in advance should you require accommodation in the class.

**Emergency Response Procedures**
Please review university emergency preparedness and response procedures posted at www.pugetsound.edu/emergency/. There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings.

If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative.

If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Lie on the floor out of sight and away from windows and doors. Place cell phones or pagers on vibrate so that you can receive messages quietly. Wait for further instructions.

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