

BIO 261: SOPHOMORE PROJECT PROPOSAL

COURSE SYLLABUS

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Office Hours: TR 2 – 3 pm, W 3 - 4 pm,
or by appointment**Class Meeting time:** Mon, 3:00 – 3:50 PM in DOW E242**Catalog Description:** Review of the scientific method and scientific research procedures.
Identification of a research topic. Preparation and presentation of a research proposal.**Course Objectives:** In this course, students will:

- deepen their understanding of scientific reasoning and methodology;
- develop skills in literature search and review;
- develop an answerable scientific research question and hypothesis;
- propose a method of testing their scientific hypothesis.

Reading Material: There is no assigned textbook for this course. Readings will be assigned and provided to students on an as-needed basis.**Assessment:**

Course grades at Oregon Tech follow a “whole grade” structure: A = 100-90%, B = 89-80%, C= 79-70%, D = 69-60%, F < 60%. Student grades will be based on the following percentage breakdown:

Component	% of grade
Topic of interest	3
Annotated bibliography	5
Research Questions & Hypotheses	5
Participation (peer reviews)	10
Preparedness for individual meetings with instructors & instructor engagement	5
Proposal Outline	12
Final Proposal (7 – 10 full pages)	60
Total	100

All assignments are due at the beginning of class on the scheduled due date. If you cannot attend class, make sure that you email a copy of the assignment to me by the time it is due. Deadline extensions may be offered only in the case of a documented illness or personal emergency. In either case, the student must contact the instructor by phone or email as soon as possible (**before the assignment is due**) and explain the general circumstances responsible for their absence.

Topic of interest: The first assignment due on Jan. 13 is one to four typed sentences describing a general topic that you are interested in pursuing for your research project.

Annotated bibliography: On Feb. 3 you must turn in a typed list of annotated references (10) on your topic. The references must be in alphabetical order by first author, and they must be in the format shown below. *You must attach your graded previous assignment (topic of interest and list of 3 relevant papers) to the back of this assignment.*

As you assemble your list of references, you should start obtaining them so you can read them and write a brief summary of the pertinent findings. Some will be available online, and some you'll have to obtain via Interlibrary Loan. **Don't wait until the last minute to obtain your references;** the ones you get by Interlibrary Loan, in particular, may take a while to arrive.

You may include web pages in your bibliography, but they do not count towards the 10 references. **You may not include Wikipedia;** it can be a valuable place to start looking for some kinds of information, but you should trace the information back to its original source and cite that instead.

You will not need to use all of this initial list of references in your final proposal--as you read them, you may find that some are not as relevant as you originally thought. You may add additional references between now and writing the proposal.

Research questions and hypotheses: On Feb 10 you will submit a succinct typed research question and hypotheses. *You must attach your graded previous assignments (topic of interest and annotated bibliography) to the back of this assignment.*

Proposal Outline: this is due Feb 24. You must attach the previous 3 assignments to the back of the outline.

When writing your outline, you can use Roman numerals for the top level, then capital letters, then numerals, then lower-case letters. You don't have to have four levels. This format is not required; you can use any outline format you want, as long as the hierarchy of topics and subtopics is clear.

You should probably have one line at the lowest level of the outline for each paragraph in the final paper. At this level, you should include some of the citations you'll use, in the format shown below. You don't need to reprint the reference list; I'll look at the previous, graded one if I want to look up one of your citations.

Here's part of an outline of a paper on adaptive radiations in Hawaiian spiders. I've made up some citations, since this is only an example:

- I. What is an adaptive radiation?
 - A. History of the concept (Schluter 2000)
 - B. Classic examples of adaptive radiations
 - 1. Galapagos finches (Darwin 1859; Lack 1940; Grant and Grant 2003)
 - 2. Lake Victoria cichlid fish (Kornfield and Smith 2000; Salzburger et al. 2005)
- II. Evolution of spiders in general
 - A. Systematics (Parker and Jameson 2003)
 - B. Fossil record (Spinne and Makari 2007)

C. Anatomy

1. Feeding structures (Araña and Geomi 1983; Kumo 2009)
2. Web-spinning structures (Anlalawa 2000)

III. Spiders in Hawaii

- A. Geological history of the Hawaiian islands (Pele and Haleakala 1982)
- B. etc., etc.

Citation Format: citations in the text of the paper and a literature cited page are absolutely necessary. Any paper without them will receive a zero for a grade.

In-Text Citations: citations are put into the body of the paper to note where an idea, fact, or quoted material has come from. Your papers and presentations, since you are re-packaging what information you have gathered from others, should be chock full of citations. Failure to do so is considered plagiarism and will result in a 0 for the paper, so put them in and follow your paper or outline with a literature cited page.

Be sure to place **quotes** around all sentences or phrases taken from the literature. After the quoted material, list its citation. Also, you have to **cite any ideas or facts taken from the materials** (Byrne, 2011), **even if you are not taking it word-for-word**. Literature citations are to be done by placing the last name of the author and the year of the materials publication in parentheses at the end of the sentence or paragraph in which the material is mentioned (Byrne and Lauenroth, 2013). When you are introducing several things from a single source in a series of sentences as part of a paragraph, then wait until you have presented them all before including a citation (this saves space and makes for less repetition). Examples for 1, 2, and 3-or-more authors (in order):

(Byrne, 2011) for a single author, or (Byrne and Lauenroth, 2013) for a pair, or (Byrne et al., 2014) for more than two.

The **literature cited section** should come at the end of the text, must alphabetically list all materials consulted and should use the following formats:

- 1) **Book:** Author's Last Name, Initials. Year. Title. Publisher. City and country of publication, pages of interest (if not the entire book).
- 2) **Article from a Book:** Author's Last Name, Initials. Year. Title of article. Ed. Editor of book. Title of book. Publisher. City and country of publication, page numbers of article.
- 3) **Journal Article:** Author's Last Name, Initials. Year. Title of article. Journal name, Volume number: pages (of entire article).
- 4) **Internet material:** Author's Last Name, Initials. Year. Title of article/Name of site. Internet site URL, date accessed.

A few final comments:

1. All topics must be pre-approved by the instructor. It is okay to change your topic after the topic assignment is due, but you must okay the change with me.
2. No quotations can be as long as a sentence in length. I want to know what you know in your own words, not what your sources know.

3. Cheating and plagiarism are strictly enforced in all aspects of this course. See the section on the “the honor code” below for more information.

General Details

Student Success Center Website: <http://www.oit.edu/current-students/student-support>

The Student Success Center provides a wide range of student support services including Testing Services which promotes academic success by working with faculty by providing testing services for any of the OIT academic courses as well as specialized testing services such as those needed for accommodations for students with disabilities, in-class test proctoring, and a computer lab, and Career Services which offers career advising, resume writing, job interviewing workshops, job search assistance, career fairs, and job listings.

Testing Services: 541-885-1791

Career Services: 541-885-1020

Peer Consulting Services Website: <http://www.oit.edu/current-students/student-support/tutoring>

Peer Consulting is a **completely free** academic support service available for all students of Oregon Tech. Peer Consultants are typically Oregon Tech students who have taken the same classes you have and have earned a B or better in their areas of expertise. We often have professors and staff that offer their time and assistance in the Center as well. Our goal is to provide assistance in all areas, majors, and courses offered at Oregon Tech. Peer Consulting reinforces what you are learning in your classes, fosters your sense of community and strengthens intercultural communication. Peer Consulting helps empower you to become successful in your academic career and reach your graduation goal. **Office:** LRC 233 **Tel:** 541.851.5236

Disability Services Website: <http://www.oit.edu/current-students/student-support/disability-services>

If you may need a course adaptation or academic accommodation because of a disability, or if you might need special arrangements in case the room or building must be evacuated, please see me as soon as possible. I rely on the Disability Services for assistance in verifying the need for accommodations and developing accommodation strategies. If you have not previously contacted that office, I encourage you to do so. Staff will assist in communicating information about needs and adjustments to instructors. **Call:** 541-885-1031 or 541-851-5227 for further assistance. **Office:** LRC 230B

Disrupting the Academic Environment: obstruction or disruption of teaching, research, administration, disciplinary procedures, or other institutional activities, including the Institution's public service functions or other authorized activities on institutionally owned or controlled property is strictly prohibited by Oregon Tech's code of student conduct and may result in disciplinary action.

The Honor Code: Cheating and plagiarism are strictly enforced in this course. Students caught cheating will receive a zero on the assignment and be reported to student services.

Plagiarism means to:

- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

All of the following are considered plagiarism:

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (see our section on "fair use" rules)

For more information on plagiarism and how to properly cite scientific works and writings contact your instructor or visit www.plagiarism.org

Tentative Lecture Schedule

This is a tentative schedule of lecture topics; check on blackboard or come to class to get updates from Dr. Byrne as the quarter progresses. *The due dates for assignments will not change.*

Week	Date	Topic	Assigned Reading
1	6-Jan	Course administration and context	
2	13-Jan	From topics to questions, topic of interest due	Booth et al. (2005), chpt 3
3	20-Jan	NO CLASS - Holiday	
4	27-Jan	Library research session in LRC 113	Booth et al. (2005) chpt 5
5	3-Feb	Anatomy of a science proposal, annotated bibliography due	
6	10-Feb	Review of undergraduate research proposal, research questions and hypotheses due	Undergraduate research proposal (blackboard)
7	17-Feb	NO CLASS - meet with Dr. Byrne this week	
8	24-Feb	Peer review of proposals; proposal outline due	
9	3-Mar	NO CLASS - meet with Dr. Byrne this week	
10	10-Mar	Short informal presentations of proposals with peer feedback; Draft proposals due	
FINALS	16-Mar	Final proposals due by 4pm in our normally scheduled classroom	