

Biology 492: Animal Ecology
Course Syllabus — Spring 2020

Time: Wednesdays, 1:50pm – 4:50pm

Location: 119 Rice Creek

Instructor: Dr. Maria Sagot

Office: 230 Shineman Center

E-mail: maria.sagot@oswego.edu

Office hours: Mondays, 11:00am – 12:00pm and Wednesdays, 9:00am – 12:00pm, or by appointment.

Course Overview: In this course, you will integrate knowledge and skills you have learned in your previous biology classes. You will gain experience with every stage of the scientific method. Our focus this semester will be on Animal Ecology. This is a broad field; and thus, you will have the freedom to determine the specific direction your project will take. You will be able to develop field or data-based ecological projects using a wide range of study organisms, going from invertebrates to mammals.

Expected Learning Outcomes: In this course, you will:

1. Gain experience formulating interesting scientific questions, and practice developing and testing hypotheses by designing and implementing a project on Animal Ecology.
2. Learn how to perform scientific literature searches, and how to read, understand and critique scientific articles.
3. Learn to select and implement statistical tests appropriate for testing your hypotheses.
4. Improve your written and oral communication skills by preparing a proposal and a complete manuscript formatted like a scientific journal article and by giving an oral presentation on your work.

Course Format & Attendance: This course meets weekly. Class time will be used for a combination of lectures, paper discussions, workshops, independent research, data analyses and peer-review. If you are unable to attend, you should let me know in advance as early as possible.

You will work independently or in pairs to develop a research project and to plan and carry out data collection and/or experiments. If you work in pairs, you should work together gathering and analyzing data, but **writing must be completed independently**.

Proper time management is essential for success in this course. Thus, you are required to meet with me on a weekly basis to monitor progress, provide advice, etc.

Please keep in mind that you will need to devote a significant amount of time outside of our regularly scheduled classes to perform fieldwork, data analyses, writing, etc.

Textbook: There is no assigned textbook in this course. Additional readings will be made available on Blackboard.

Grading: The overall grade for the courses will be based on:

Abstract 25 pts
Paper summaries 15 pts
Participation in discussions 10 pts
Proposal 100 pts
Paper discussion 100 pts
Annotated Bibliography 50 pts
Introduction and methods 50 pts
Peer review: 100 pts
Rough draft: 200 pts
Final draft: 300 pts
Oral presentation: 50 pts

The grade distribution for the course will be: A=100%-95%; A-=94%-90%, B+=89%-85%; B-=84%-80%; C+=79%-75%; C-=74%-70%; D=69%-60%; E < 60%.

Assignments Late Policy: Late assignments will be accepted for up to **3 days** after the deadline, with a penalty of 10% per day late, of the maximum possible score.

Extra credit: None.

Disability Accommodation: If you have a disabling condition that may interfere with your ability to successfully complete this course, please contact the Office of Disability Services at dss@oswego.edu or 315-312-3358.

Academic Dishonesty/University Honor Code: This course adopts a zero-tolerance policy on academic dishonesty, including cheating and plagiarism. If you are unsure of whether something constitutes plagiarism while working on your assignments, do not hesitate to ask, as plagiarism is considered a serious violation of academic integrity. For more information on policies regarding intellectual integrity at SUNY Oswego, see the course catalog or <http://www.oswego.edu/integrity>. Any violation of the SUNY Oswego academic integrity policy is considered a serious violation. Plagiarism will result in severe grade penalties and will be reported to the dean and Provost's office.

ASSIGNMENTS: All the assignments should be submitted on blackboard.

Paper Discussions: Before each class discussion, you have to turn in a **200-word summary** for *each* of the papers to be discussed. Each student will be in charge of leading one discussion during the semester. To do so, you need to prepare a PowerPoint presentation where you summarize the paper(s) and come prepared with questions.

Questions can be about concepts covered in the papers, statements or methodologies that were not clear from the paper, arguments about the methodologies and conclusions, and/or questions that put the papers in the context of your project. During paper discussions, the rest of the class will be evaluated based on participation in the discussion.

Proposal:

a. Title page

b. Abstract: brief, 100 - 150 words. It should include background, ideas, purpose, methods, and importance of the research project.

c. Objective(s): should be clear, specific, and feasible.

d. Introduction: background, importance of the study, testable hypotheses and predictions.

e. Methods: a review of the methodology, techniques or procedures to be included, linked to the hypotheses and predictions.

f. Bibliography: Citations relevant to the proposal. **Follow the Ecology journal format.**

Draft and final manuscript:

a. Abstract: The purpose of the abstract is to interest the reader. Abstract should be based on the work you have done (no citations here). Change the proposal abstract to reflect your results.

b. Introduction: State any relevant background information you need for establishing the basis of your research project. Information gathered from the literature should be properly cited following the **Ecology journal format**. The question(s) you want to address and the hypotheses of your research are important components of the introduction and should be clearly stated.

c. Materials and Methods: You should include all materials used in the project and state the procedure in a logical sequence. Experimental design, treatments, replicates, and statistical analyses should be clearly stated.

d. Results: Include your findings as written paragraphs (no bullet points!), Note that tables and graphs are visual aids of the results and should not substitute a written statement of the results. If you used tables and/or graphs, you should refer to them in the body of your results as (Table 1, 2, or Fig. 1, 2, etc.). A table and/or a Fig. should appear on a separate page(s) and attached at the end of your paper. You need an appropriate caption for each table or figure. The caption should have enough info to explain the table or Fig. without going back to the main body of your text.

e. Discussion: Discuss whether your hypothesis is correct, and if not, clearly explain why not. Compare and contrast your results with similar studies in the field. Again, you should follow the proper method of citation as explained in the introduction. Based on your results, you may make some generalizations, practical application of your results, future studies, and what you could have done differently. The last paragraph of this section should be the conclusions.

f. Bibliography: List all the literature you cited in your text. **Follow Ecology journal format.**

Presentation: Each person/pair will give a ~15-minute presentation summarizing the

project. Use of PowerPoint is mandatory. You will be evaluated based on the info presented, visual aids, organization, and clarity.

Tentative Schedule

Date	Activities	Dues
Jan 29 th	Introduction, brainstorm of ideas	
Feb 5 th	Presentation and discussion of abstract/ Paper discussion 1	Abstract, Summaries
Feb 12 th	Presentation and discussion of the proposal and methods	Proposal
Feb 19 th	Statistics class	
Feb 26 th	Paper discussion 2	Summaries
Mar 4 th	Independent research/ individual meetings	Annotated bibliography
Mar 11 th	Paper discussion 3	Summaries
Mar 18 th	NO CLASSES	
Mar 25 th	Paper discussion 4	Introduction and methods, Summaries
Apr 1 st	NO CLASSES	
Apr 8 th	Independent research/Statistical analyses	
Apr 15 th	Statistical analyses	
Apr 22 nd	Peer editing workshop	Draft
Apr 29 th	Peer-review	Peer-review
May 6 th	Presentations	Final paper