



# Syllabus

Course: Honors: Biology for Science Majors II (BIOL 1503) - Lab

Semester: Spring 2019

Lab Coordinator: Dr. Bill Wischusen  
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Lab Instructor: Sophie Jurgensen (Sections 1 & 2)  
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Office Hours: Thursday 2-4 pm; or schedule an appointment

Classroom: 13 (Life Sciences Building basement)

Class Sections:

Section #	Day	Time
1	Monday	11:30 – 2:20 pm
2	Monday	3:00 – 5:50 pm

Course Overview:

*The focus of this lab course is on you doing science.* This course is an introduction to conducting basic ecological research with natural populations and communities. Basic ecological research focuses on building knowledge through answering scientific questions intended to better understand the interactions between organisms and the environment. This knowledge can then be used to make decisions for how to best manage natural or human-modified habitats. **As a class, you will attempt to answer novel and important research questions which have not yet been answered – this is what makes this course particularly exciting!**

The lab will consist of a mixture of lectures, group discussions, and controlled experiments, with an emphasis placed on the topics of ecology, diversity, climate change, and basic research protocols (experimental design, data collection, data analysis, and communication of results). When conducting experimental work, you will work in groups, but outside of class (i.e., writing assignments) you are to complete work independently. If you need help, seek assistance from your instructor first.

Finally, biology labs typically require more work per credit than lectures - this lab is no exception. The expectations and workloads will be challenging, but you are expected to be up for it. Consider carefully, now, whether or not you are up to the task. If so, this lab will provide you with an informative introduction to conducting basic research in the biological sciences and ecology, as well as an introduction to some of the natural history of southeast Louisiana.

## Grading:

Assessment	Weighted Percentage
Quizzes	10
In-class Assignments / Lab Notebooks	20
Take Home Assignments	15
Formal Writing Assignments	20
Poster	20
Final Exam	15

*Quizzes (10%):* You will be quizzed on readings (including the syllabus), lab lecture materials, graphing, homework assignments, etc. Quizzes are likely to cover material from both preceding and forthcoming labs. These may be given at any time.

*In-class Assignments (20%):* These can consist of the completion of your lab notebook, questions, data analyses, graphs, presentations, peer reviews, or other in-class assignments. Lab notebook entries will be checked daily.

*Take-home Assignments (15%):* Some assignments will be completed at home – such as writing drafts, outlining, literature reviews, and other assignments.

*Formal Writing Assignments (20%):* There will be formal writing assignments during the semester, which will serve as an introduction to reading and writing in a scientific style. Feedback will be given to assist you in improving your written communication skills.

*Poster (20%):* Towards the end of the semester, each group will create and ultimately present a conference-quality poster outlining their research project. Guidance will be provided on what makes a good poster.

*Final Exam (15%):* The final exam will be comprehensive and will be based off of topics covered during the lab portion of the class, including reading and understanding literature, experimental design, data analysis, presentation, and interpretation, your research throughout the semester, and practical techniques.

## Course Policies:

*Late Assignments:* Assignments are expected to be turned in on time. You will be penalized **10%** of the assignment grade for each 24-hour day that it is late.

*Academic Integrity/Plagiarism:* All LSU students are responsible for observing the highest standards of academic and personal integrity. The penalties for academic dishonesty are severe, and ignorance is not an acceptable excuse. All cases of alleged academic misconduct will be referred to the Office of the Dean of Students. All students are encouraged to review Understanding and Avoiding Plagiarism on the Student Advocacy and Accountability website at <http://saa.lsu.edu/Plagiarism.html>. This website also includes the Code of Student Conduct. Although you will be working in groups for field work and experiments, all written assignments are expected to be individually written (with the exception of the group poster project). Written assignments which are very similar will be reviewed under the guidelines in the Code of Student Conduct.

*Attendance:* Your presence and participation in lab is mandatory. There is limited opportunity to make up a missed laboratory. If you are unable to attend a class, it will be your responsibility to obtain permission to make it up (a valid excuse must be approved by your instructor). If you are unable to attend a lab for a University accepted excuse only, you will be assigned makeup work. It is your responsibility to make arrangements for missed labs, the TA will not track you down to make sure you are caught up on what you missed. You should contact the TA 1 week before your absence. **If you miss the lab for any other reason (not University**

excused), you miss the points for that lab.

*Disclaimer on Course Flexibility:* The syllabus, the schedule listed below, and assignments may be changed at any point in the semester. In fact, because of weather, and other logistical uncertainties related to the dynamic nature of field/experimental ecology, you should expect changes. So, be flexible. Also, instructors of this course are given latitude so as to emphasize their own research and teaching strengths. Thus, the material covered and the specific requirements of each assignment may differ among semesters. If you have any problems during the semester please contact the coordinator.

Agenda (note this schedule may get revised throughout the semester)

Week	Date	Activity	Assignments DUE
1	January 14	Introduction Scientific method / experimental design	
2	January 21	NO LAB – MLK Day	
3	January 28	How to read a scientific paper Virus enumeration	
4	February 4	How to read a scientific paper Virus morphology	How to read a scientific paper sheet
5	February 11	Literature searches and work cited Viral metagenomics	
6	February 18	Introduction and Methods DNA extraction and quantification Analyzing metagenomes	Outline and literature cited
7	February 25	Graphing and Statistics	Introduction and Methods
8	March 4	NO LAB – Mardi Gras	
9	March 11	Graphing and Statistics	Introduction and Methods
*	March 14	CxC Workshop #1 – location TBD	
10	March 18	Graphing and Statistics Posters	Results and Discussion
11	March 25	Posters Science Media	Poster “scavenger hunt” Final paper
12	April 1	Posters Science Media	Draft posters
*	April 4	CxC Workshop #1 – location TBD	
13	April 8	Poster presentations Final exam review	Final posters
14	April 15	NO LAB – Spring Break	
15	April 22	Final Exam	
*	April 26	CURE Poster Session	Royal Cotillion Ballroom 1 – 4 pm