



Ecology of Plant Communities of Mississippi

BISC 443

Fall 2019

3 Credit Hours
Meeting Time –
Friday afternoon 1:00 to 4:00 pm
225 Shoemaker Hall
1 weekend field trip

Instructor: Steve Brewer (jbrewer@olemiss.edu),
Professor of Biology
Office: 412 Shoemaker; Lab: 409 Shoemaker
Office Hours: 2:00 to 3:00 PM MW

Prerequisites: BISC 162 and Instructor Approval

Grading:

Attendance and Participation – 10%
Data Analysis and Reports 30%
Plant Identification – 30%
Final Exam (TBA) - 30%

Grading Scale: 10% increments (90% and above, A; 80-89%, B; 70-79%, C; 60-69%, D)

Learning Outcomes: This class is a predominantly field-oriented class to be offered in the fall semester. It is designed to provide undergraduates with hands-on experience with the study of plant ecology. Students will work together on two class research projects. After completing this course, the students will become familiar with the natural plant communities of Mississippi and several of the associated dominant plant species.

Attendance and Participation: You are expected to attend class ON TIME every session. I will take attendance every class period. Absences will affect your grade. Class starts at 1:00 pm SHARP. Many of the classes will be in

the field. You therefore need to dress appropriately and be prepared for field work. Covered shoes are a must. Long, loose-fitting pants and a hat are HIGHLY recommended. I will provide water, but you must bring a water bottle. I don't recommend eating a large, heavy lunch before class, especially on hot days early in the semester. I will provide insect repellent, but if there is a brand you prefer, please bring it. Sunscreen is also recommended.

Attendance Verification Statement: If your attendance has not been verified at the end of the third week, and if you have not voluntarily dropped, you will be administratively dropped from the class. This action may have an impact on your financial aid eligibility and full-time status.

Collecting Good Quality Data: The success of class projects hinges upon your collecting good quality data. Collecting good data requires paying close attention to detail, filling out data sheets properly, reading the assignment and instructions ahead of time, and paying attention to your instructor. *Do not assume that you will get full credit for attendance and participation by simply attending the lab and handing in data. Submitting data that are unusable will negatively affect your attendance and participation grade.*

Weekend Field Trip to the Gulf Coast. This is a course about plant communities throughout Mississippi, which is a tall state. We're going to see several cool places, one of which will require a seven-hour drive to the coast, which will necessarily make it a weekend trip. We will work together to find a weekend in October or early November that is suitable to everyone. My plan is for us to stay at the Grand Bay National Estuarine Research Reserve Dormitory near Moss Point, MS. We will leave Friday at 1:00 pm (or earlier if possible) and return Sunday afternoon. You'll need to bring a sleeping bag, pillow, towels, and overnight supplies. The Department of Biology will pay for transportation, the dormitory fees, and a portion of the meals. You'll be responsible for restaurant meals in the evening.

Electronic Device Policy: Your personal electronic devices have no place in the ecology classroom and are very distracting. *You are not to use ANY electronic device in the classroom or in the field unless the assignment specifically calls for it (e.g., computers for data analysis).*

Disability Accommodations: It is University policy to provide, on a flexible and individual basis, reasonable accommodations to students who

have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities, which have been verified through the [Office of Student Disability Services](#), are encouraged to contact their instructors to discuss their individual needs for accommodations.

A Word about Data Analysis for your Class Projects: The data analyses require some familiarity with Microsoft Excel. I will provide a brief introduction to some basic operations, but it is ultimately your responsibility to gain enough familiarity with entering and copying formulas to enter and analyze the data collected in this course.

Topics Covered and Schedule

- Introduction to landscape history of Mississippi (Lecture) – August 30
- Introduction to identification of groundcover plants and trees in forests and savannas in Mississippi – September 6; Slides and Herbarium Specimens
- September 13 – Field Work; Project 1. Responses of groundcover plant communities to ecological restoration of fire at Strawberry Plains Audubon Center and Tallahatchie Experimental Forest (several trips during class time)
- September 20 – Field Work; Project 1
- September 27 – Field Work; Project 1
- October 4, 11, 18, and 25 – Field Work – Project 1 or Project 2 (one of the four weekends).
 - Project 2. Weekend field trip to wet pine savannas in southern Mississippi; Why are there so many species of plants in wet pine savannas?
 - Two parts
 - Part 1. Flowering responses to simulated season of fire
 - Part 2. Collection of soils for seed bank analysis
- November 1 – Instructions for constructing a dichotomous key (required attendance for ENV 399 students; optional for BISC 443 and BISC 613 students)
- November 8 – Data analysis (required attendance for BISC 443 and BISC 613 students; optional for ENV 399 students)
- November 15 - Final practical for plant identification (Examination); First draft of final report from BISC 443 and ENV 399 due; Brewer and the BISC 613 make comments
- December 6 - Final report due and oral presentation by BISC 443 and ENV 399 students on projects. BISC 613 attend, ask questions, and provide comments.
- December 11 at 1:00 pm - Final one-hour in-class exam on plant communities of Mississippi (Examination)

Final Reports and Presentations

The first draft of the final report is due three weeks before the end of the semester. It will be returned to BISC 443 and ENV 399 students no later than two weeks before the end of the semester. The final draft is due at the time of the oral presentation during the final week of classes. After incorporating comments and suggested revisions (from me and the BISC 613 students), BISC 443 and ENV 399 students will hand in the revised version to me, and I will grade this revision. Students must also provide a cover document, explaining how they have responded to the reviews.

Final Practical – You will be tested on identification of 20 to 25 of the more common plant species that occur in natural plant communities in northern and southern Mississippi.

Final Exam – The final is a multiple choice exam on the survey of natural plant communities of Mississippi. You will be tested on the basic geology, landscape features, and names and characteristics of vegetation types.