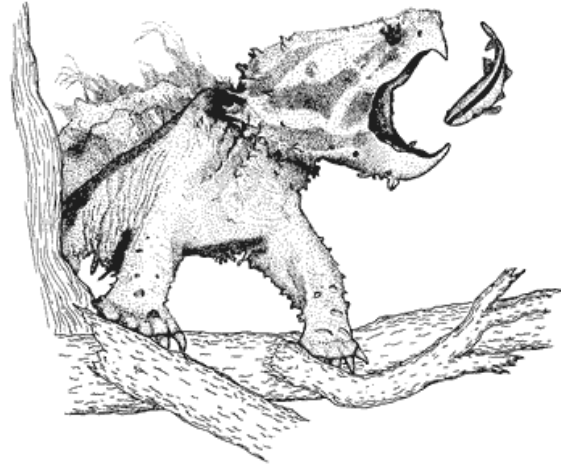


This manual contains notes that will help guide you through our Biology of Organisms laboratory and recitation. In addition to providing guidance for recitation lectures and laboratory activities, these notes provide taxonomic terms, morphological structures, aspects of functional morphology, and natural history information that you will be required to know and understand on quizzes and comprehensive laboratory examinations. However, it is likely that more information will be added to these lists as the semester progresses. You will be responsible for additional information mentioned in lab and recitation! Consult your course syllabus for a description of grading and attendance policies.



Goals of the Biology of Organisms Laboratory

The Biology of Organisms Recitation and Laboratory examine the diversity of life through lectures, demonstrations, dissections, fieldtrips, and experiential activities. Form and function of microbes, plants, and animals will be compared to demonstrate how organisms have adapted to their environments.

At the end of the semester, you should be familiar with:

- Taxonomy and interrelationships of major phyla
- Evolutionary innovations characteristic of major phyla
- Functional morphology and natural history of major phyla
- Microscopes, dissection, and other basic laboratory skills
- Observation, measurement, and formulation of hypotheses
- Collection, analysis, and communication of biological data

About this lab manual: Images found in this manual have been collected and modified from a variety of academic texts, internet sources, and public domain clip art files. The text was written by Kathy Anzelmo, Bruce Fleury, Don Hauber, Craig Hood, Frank Jordan, James Wee, and David White. These materials have been brought together as an educational tool and are not meant for sale.

Instructors

Section	21	22	24	25	26
Day	T	T	R	R	F
Time	2:00-4:50	5:00-7:50	2:00-4:50	2:00-4:50	12:30-3:20
Prof.	Wee	Hauber	Anzelmo	Barrilleaux	Anzelmo
Office	MO 321	MO 360	MO 361	MO 355	MO 361
Phone	865-2548	865-2769	865-2215	865-2087	865-2215
Email @loyno.edu	wee	hauber	anzelmo	ambaril	anzelmo
Office Hours		W & R: 3:30- 5:00			

Required Materials: Biology of Organisms Lab Manual

Laboratory Guidelines: Laboratory and recitation are coordinated with one another and attendance in both is critical to your success in the Biology of Organisms course. You must complete all assigned work during the regular laboratory period. There will be no makeup labs. Because class size is based on the number of microscopes and seats, you must attend the section for which you are registered. Be prepared for the material when you come to lab. Review the material in your lecture text to facilitate uptake of knowledge. Lab manual and web pages will help you prepare for quizzes. Don't try to rush through the exercises—this invites disaster.

Quizzes will be given at the beginning of laboratory, so be sure you are on time! Quizzes will test you on diversity, form, and function material from the previous recitation and lab ($\approx 80\%$) and the upcoming lab ($\approx 20\%$). No makeup quizzes will be allowed, but your lowest quiz grade will be dropped. A laboratory practical covering arthropods, echinoderms, and chordates will be held during one of the last lab periods.

Clean your station thoroughly before you leave. Your area must be clean, your microscope properly stored, all slides returned to their proper trays, and all display materials returned to wherever you found them. All plant and animal matter goes into a red biohazard bag. Do not put arms, legs, lower life forms, pieces of the instructor, etc. into the regular trash containers. Dispose of glassware ONLY in the container provided.

There will be a number of miscellaneous assignments during the semester, including formulating hypotheses, making drawings from dissections, using the Internet to make a virtual insect collection, and writing short descriptions of laboratory exercises. These assignments are usually described in your laboratory manual, but your instructor may make additional assignments. We will drop your lowest score on miscellaneous assignments.

To develop your communication skills, you will prepare two (2) word-processed reports that clearly and concisely describe the purpose, methods, results, and conclusions of activities of several labs. Unless specified otherwise by your instructor, you will use the format and

Tentative Lab Schedule

Week of	Recitation Activity	Lab Quiz	Lab Activity and Assignments Due
1/10	Introduction and prokaryotes		Collect microbes from Audubon Park Set up cultures for Lab 2 Review use of light microscope
1/17	MLK Holiday (no recitation)	1	Diversity of prokaryotes Examine cultures from Audubon Park Set up Sordaria cultures for Lab 4 Assignment 1: hypotheses
1/24	Protists	2	Diversity of protists Using dichotomous keys
1/31	Fungi and Lichens	3	Diversity of fungi & lichens Genetics of ascospore color in Sordaria
2/7	Mardi Gras vacation		Have fun, but be responsible
2/14	Review results of Sordaria lab Mosses and Ferns	4	Diversity of mosses & ferns Assignment 2: scavenger hunt
2/21	Gymnosperms & Angiosperms	5	Diversity of gymnosperms & angiosperms Use of dichotomous keys Turn in Sordaria report
2/28	Early Animals	6	Diversity of early animal groups Assignment 3: dichotomous key
3/7	Protostomes	7	Diversity of annelids and mollusks Dissect clam and squid Assignment 4: dissections
3/14	Deuterostomes	8	Diversity of arthropods, echinoderms, & chordates Dissect starfish and frog Assignment 5: dissections Assignment 6: virtual insect collection
3/21	No recitation (Easter holiday)		Have fun!
3/28	No recitation (Easter holiday)		Field trip to Jean Lafitte National Historic Park Data analysis help sessions (TBA)
4/4	Review		Arthropod, Echinoderm, Chordate, and Field Trip Lab Practical
4/11	Overview of human exercise lab		Human exercise physiology lab
4/18	Analysis of exercise lab results		Field trip to Audubon Park for scavenger hunt. Assignment 7: Jean Lafitte report Assignment 8: Audubon scavenger hunt
4/25	Career Testing		No lab meeting. Turn in Exercise Physiology Report