

Biology of Plants and Microbes 231

Lecture Syllabus

Fall 2007

- Instructor:** Dr. Stephen Bentivenga (Office: 111C Halsey; 424-7088, bentiven@uwosh.edu)
- Office Hours:** Tue. & Thur. 2:00 - 4:00, and by appointment.
- Required Text:** *Biology of Plants* (7th Edition) by Raven, Evert, and Eichhorn (2005)
Bring your text to class each period
- Also required:** Biology 231 Laboratory Manual (available in the bookstore)
(bring your lab manual to each lab, you will need to make drawings in it)

Course Description:

This four credit-hour course will examine the biology of plants, fungi, algae, and microorganisms traditionally studied by botanists, with an emphasis on photosynthetic organisms and fungi. Topics to be covered include taxonomy, evolution, ecology, physiology, morphology and life history traits. The impact of these organisms on human affairs will be stressed.

Course Objectives:

When you complete this class you should be able to:

1. Demonstrate an appreciation of the diversity of the domains and kingdoms of living organisms
2. Outline the higher taxonomy of the plants, fungi, algae, protists, and bacteria
3. Discuss the ecological roles of plants, fungi, and microorganisms
4. Demonstrate an understanding of how plants, fungi, and microorganisms impact human affairs
5. Demonstrate a working knowledge of how these organisms grow and reproduce, and their important structures
6. Discuss important aspects of plant physiology and anatomy

Attendance Policy:

Attendance in both lecture and laboratories is highly recommended. Earning a high grade in the class will be difficult if not impossible without regular attendance. If you miss a lecture period, it is your responsibility to get notes from a fellow student; I do not give my lecture notes out to students. You are 100% responsible for everything covered in class.

If you miss a lab period without a University-approved excuse, you will not be allowed to make up the missed points for that day. If you know in advance that you will miss a lab, it may be possible for you to attend another section that day, provided you make arrangements with all lab instructors involved. DO NOT attend a lab section other than your own without prior permission.

Grading:

4 Lecture Exams – 100 points each
 4 Laboratory Exams – 50 points each
 Laboratory Notebook –100 points

Grading Scale – out of 700 points total:

100 - 90%	A
89 - 88%	AB
87 - 80%	B
79 - 78%	BC
77 - 70%	C
69 - 68%	CD
67 - 60%	D
< 60%	F

Make-up Exams:

Make-up exams will be given only in extreme circumstances (such as the death of a close relative). Notification is required *prior* to the start of the exam as well as confirmation of the excuse afterwards. To be fair to those students who took the scheduled exam, make-up exams will generally be more difficult than the original exam. A make-up exam may take any format I deem appropriate (e.g., practical, essay, oral).

Outside Assistance:

I am willing to spend time outside of class with any student who is having difficulty. If you are not performing well in this class, I would like to speak with you early in the semester to try to rectify the situation. I can often help with study techniques to assist you in learning the material. Please come by my office any time; please do not feel limited to my office hours only.

Academic Dishonesty:

Academic dishonesty of any sort will not be tolerated. The giving or receiving of assistance on any exam, talking during exams, using notes or books during exams, or the misrepresentation of someone else's work as your own all are considered cheating. Do not copy drawings from someone else's lab sketchbook; the work you turn in must be based on your own observations of the material. The first offense will result in a zero for that assignment; a letter will be sent to the Dean of Students. The second offense will result in an "F" for the course. See the UWO Code of Student Conduct manual for additional information on academic dishonesty.

Courtesy in the Classroom:

Try to arrive to lecture and lab on time. If you arrive to lab early, please do not begin the work until you have been instructed to do so. We have pre-lab lectures for a reason.

Please silence all cell phones during all class periods (lecture and lab). Refrain from using your cell phone for text messaging during class. Please do not use music players or headphones of any kind during class.

Biology of Plants and Microbes 231

Lecture Schedule

Lecture No.	Date	Topic	Reading
1	Sep. 5	Course Intro Prokaryotes vs. Eukaryotes	
2	Sep. 10	3 Domains and 5 Kingdoms Taxonomy & Systematics	Ch. 12 pp. 219-237
3	Sep. 12	Bacteria I	Ch. 13 pp. 238-259
4	Sep. 17	Bacteria II: Cyanobacteria	
5	Sep. 19	Eukaryotic Life Cycles Fungi I	
6	Sep. 24	Fungi II	Ch. 14 pp. 260-295
7	Sep. 26	Fungi III	
	Oct. 1	Exam 1 (lectures 1-7)	
8	Oct. 3	Protists and Algae I	Ch. 15 pp. 296-306; 322-326; 340-342
9	Oct. 8	Heterokonts	Ch. 15 pp. 309-321
10	Oct. 10	Chlorophyta	Ch. 15 pp. 327-339
11	Oct. 15	Bryophytes	Ch. 16 pp. 345-367
12	Oct. 17	Seedless Vascular Plants	Ch. 17 pp. 368-407
13	Oct. 22	Gymnosperms	Ch. 18 pp. 408-433
14	Oct. 24	Angiosperms	Ch. 21 pp. 434-451
	Oct. 29	Exam 2 (lectures 8-13)	
15	Oct. 31	Flowers and Fruits	pp. 436-442; 456-470
16	Nov. 5	Plant Cell Biology	Ch. 3 pp. 38-58
17	Nov. 7	Plant Anatomy I: Roots	Ch. 24 pp. 528-546
18	Nov. 12	Plant Anatomy II: Stems and Leaves	Ch. 25 pp. 547-564
19	Nov. 14	Plant Water Relations	Ch. 30 pp. 667-686
	Nov. 19	Exam 3 (lectures 14-18)	
	Nov. 21	No class (Thanksgiving Break)	
20	Nov. 26	Plant Hormones Tropisms Photoperiodism	Ch. 27 pp. 603-621 Ch. 28 pp. 622-634
21	Nov. 28	The Nature of Light and Pigments	Ch. 7 pp. 115-121
22	Dec. 3	Photosynthesis: Light Reactions	pp. 121-127
23	Dec. 5	Photosynthesis: Light-Independent Reactions	pp. 127-139
24	Dec. 10	Economic Botany	Ch. 21 pp. 475-495
	Dec. 12	Exam 4 (lectures 19-24)	