

Biological Concepts: Diversity 26-106

Course Syllabus

Spring 2008

Instructor: Dr. Stephen Bentivenga (Office: 111C Halsey; Phone: 7088; email: *bentiven@uwosh.edu*)

Office Hours: Mon. 2:00 – 4:00, or by appointment.

Text (Recommended): *Biology* (8th Edition) by Raven, Johnson, Losos, Mason & Singer

Lab Text (Required): *Photo Atlas for Biology* by Perry and Morton

Also Required: Sketchbook (available in bookstore)

Lab Manual (available in bookstore)

Meeting Times: T-Th 9:40 - 11:10 a.m. (lecture), Room 260 Halsey
Lab meeting times vary by section. All lab sections meet in Room 228 Halsey

Course Description:

This four credit-hour course will examine the diversity of life on Earth. We will cover all major organismal groups including bacteria, protists, fungi, plants, and animals. A central theme in the class is evolution as a force driving diversity. Particular emphasis will be placed on how these organisms impact humans, and the role of humans in the ecosystem. Labs will involve observation of specimens to illustrate this diversity. The course ends with a section on various aspects of human biology. The prerequisite for this class is Biology 105 or equivalent.

Course Objectives:

When you complete this class you should be able to:

1. Discuss the characteristics of life, and current theories of the origin of life
2. Understand the 3 Domain/4 Kingdom classification scheme, and how it differs from previous schemes
3. Describe need for classification, and the role of taxonomy in biological thought
4. Discuss the characteristics of various groups of organisms and how they impact humans
5. Discuss the basis of evolution as an explanation of the diversity of life
6. Understand how all life is interconnected
7. Explain important aspects of human biology including reproduction, circulation, and immunology
8. Discuss the role of humans as living beings on the Earth

Attendance Policy:

While there is no formal attendance requirement, attendance in lecture and lab is strongly recommended. Lectures will include much information not included in the textbook. The laboratories will include the observation of specimens and exercises that usually cannot be made up if missed. Earning a high grade in the class will be difficult, if not impossible, without regular attendance. If you miss a class period, it is your responsibility to get notes from a fellow student. You are 100% responsible for all material covered in class.

Courtesy in the Classroom:

Please be respectful of your fellow students by arriving on time. Also, be sure all cell phones and alarms are turned off at the beginning of class. Please refrain from using a cell phone at any time; similarly, do not use headphones or music players of any kind.

Grading:

This course can be thought of as having two halves: Lecture and Lab. Lecture grades will be determined by your performance on 4 exams, worth 100 points each. Your lab instructor will discuss how you will be evaluated in lab. The grading scale for the entire course is below:

90 - 100%	A
85 - 89%	AB
80 - 84%	B
75 - 79%	BC
70 - 74%	C
65 - 69%	CD
60 - 64%	D
< 60%	F

Make-up Exams:

I do not give make-up exams lightly. Make-up exams will be given only in extreme circumstances (such as the death of a close relative or other University-approved excuse). I will require notification *prior* to the start of the exam as well as confirmation of the excuse (such as a letter from the Dean of Students). 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, term paper).

Outside Assistance:

I am willing to spend time outside of class with any student who is having difficulty. I am most willing to help students who help themselves. If you can demonstrate that you have read the book, studied your notes, and reviewed the lab material, I will be more than happy to spend time with you. I will do whatever it takes to get you up to speed. Please try to see me during my office hours. If you cannot make these times, call me and arrange a time that fits into both of our schedules. A tutor for the class is also available, free of charge. I will post the tutor's hours in class.

Student Input:

This is your class as much as it is mine. I feel strongly that students learn more effectively when they actively participate in the course. For this reason, I will regularly solicit student input on how the class is organized. If you have suggestions, please feel free to contact me about the course format. I am always looking for ways to improve my class.

Academic Dishonesty:

Academic dishonesty of any sort will not be tolerated. The giving or receiving of assistance on any exam or the misrepresentation of someone else's work as your own is considered cheating. Sanctions may range from a zero for that assignment to a failing grade for the course. See the UW Oshkosh Student Code of Conduct for additional information on academic dishonesty.

Lecture Schedule:

Date	Topic(s)	Text Reading
Tue. Feb. 5	Origin and geological history of the Earth	
Thur. Feb. 7	Origin of life on Earth Definition of life Higher classification of life	Ch. 26: 503-506; 510-514
Tue. Feb. 12	Domain Archaea Domain Bacteria	Ch. 28: 539-560
Thur. Feb. 14	Bacteria (continued) Viruses	Ch. 27: 523-538
Tue. Feb. 19	Domain Eukarya Kingdom Protista	Ch. 29: 561-580
Thur. Feb. 21	Protista (continued) Origin of Eukaryotic Cells	
Tue. Feb. 26	Exam 1	
Thur. Feb. 28	Introduction to life cycles Kingdom Fungi b bbb b	Ch. 31: 603-620
Tue. Mar. 4	Fungi (cont'ed)	
Thur. Mar. 6	Kingdom Plantae Mosses and Liverworts Ferns	Ch. 30: 581-592
Tue. Mar. 11	Seed plants (Gymnosperms & Angiosperms)	Ch. 30: 593-602
Thur. Mar. 13	Plant structure and function	Ch. 36: 717-740
Tue. Mar. 18	Plant nutrition and transport	Ch. 38-39: 757-764; 776
Thur. Mar. 20	Exam 2	
Tue. Apr. 1	Kingdom Animalia Invertebrate phyla	Ch. 32-34: 621-680 Ch. 53: 1095
Thur. Apr. 3	Vertebrates	Ch. 35: 681-716
Tue. Apr. 8	Vertebrates (cont'ed)	
Thur. Apr. 10	Population biology	Ch. 55: 1145-1166
Tue. Apr. 15	Community biology Ecosystem biology	Ch. 56: 1167-1188 Ch. 57: 1189-1210
Thur. Apr. 17	Natural selection and evolution	Ch. 21: 415-432
Tue. Apr. 22	Exam 3	
Thur. Apr. 24	Circulatory system	Ch. 49: 983-999
Tue. Apr. 29	Immune system	Ch. 51: 1039-1064
Thur. May 1	Endocrine system	Ch. 46: 919-942
Tue. May 6	Reproductive system	Ch. 52: 1067-1086
Thur. May 8	Human nutrition	
Tue. May 13	Human evolution	Ch. 35: 709-716
Thur. May 15	Exam 4	