

**Biology 211, Principles of Biology I, Fall 2008**  
**Section 4, MWF 3:10-4:00 p.m. 1414 Molecular Biology Bldg.**

Instructor: Dr. Kirsten Hofmockel  
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Office Hours: Monday 9am – 11am  
or by appointment

Course Description: This course is intended to provide an introduction to the study of life on Earth. We will discuss the scientific method, attributes of living organisms, the diversity of life, forces and mechanisms of evolutionary change, and principles of ecology. Concurrent enrollment in 211L is strongly recommended.

Required Text: Campbell, N.A. and J. B. Reece. Biology, 8 th edition.  
Pearson/Benjamin Cummings, San Francisco.

We will cover materials from Chapters 1, 12-15, 22-34, 50 and 52-54 of the textbook, in the order shown on the class schedule (below). You are responsible for understanding the material in these chapters. Most of the remaining chapters are covered in BIOL 212, which many of you will take next semester.

I strongly recommend that you keep up with assigned readings. Also, be sure that you understand the figures and tables as well as the text. All of these assist you to understand the materials we will be discussing. Plan to spend a minimum of three hours every week reading your textbook, *in addition to* time spent on homework assignments and studying for exams. **You cannot catch up in this class, so keep up!**

**WebCT:** A syllabus and all powerPoint lectures will be available on WebCT. It will also be used to report grades and sometimes to submit assignments. To access WebCT simply go to the ISU Homepage (<http://www.iastate.edu/>) and click on the WebCT link in the Sign-Ons section. Log in to WebCT by entering your “Username” (the first portion of your ISU e-mail address) and your “Password.” Click on “BIOL 211Section-4”. Posted are directions for accessing your Mastering Biology account.

It is strongly recommended that you use the “Check Browser” function on your “My WetCT” page when you first login to WebCT Gold.

**Mastering Biology:** Course ID MBHOFMOCKEL10990

This web leaning tool is new this year. It will be used for homework and study tools. Directions for logging in are posted on WebCT.

**Objectives:** Upon completion of BIOL 211, the student should be able to:

Understand and use the basic vocabulary of biology.

Understand, identify, and be able to apply the scientific method.

Compare and contrast organisms in each of the kingdoms and major phyla of life.

Describe the basic mechanisms and principles of inheritance.  
Describe the theory of evolution, the evidence supporting evolution and the mechanisms of evolution.  
Understand basic ecological principles.  
Use relevant terms and concepts to formulate questions about biology.

**Student Responsibilities:** Each individual student is expected to:

Attend lectures.

Read all assigned materials. Look over assigned chapter(s) before coming to class, concentrate on figures and diagrams.

Complete all assigned homework and submit by due date.

Be sure that you understand how to access WebCT. Scores will be posted on WebCT.

Be sure that you can access Mastering Biology.

**Be considerate of your classmates.**

**Supplemental Instruction:** Supplemental instruction is a program of student-assisted study sessions to improve student performance. These sessions are voluntary, free, and open to all students in the course. A supplemental instructor will be available for help sessions and to review course materials prior to exams. The Supplemental Instructor (SI) is an advanced undergraduate student who attends lectures and arranges optional recitation sections for students, providing an opportunity for students to ask questions, get help, study, and meet with other students. The times and meetings will be announced during the first week of class. SI meetings are not meant as a substitute for lecture, but provide for small-group discussion of details from lectures and readings, free of professorial involvement.

**Students participating in Supplemental Instruction get better grades**

**Non-Discrimination Policy:** Iowa State University is “dedicated to fostering an environment in which differences in people such as nationality, race, gender, religion, cultural background, physical ability, and sexual orientation, are respected and mutual understanding is promoted.” (from the ISU Bulletin)

**Disabilities Statement:** If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me as soon as possible. Please request that a Disability Resources staff send a SAAR form verifying your disability and specifying the accommodation you will need. For further information or assistance, contact the Disability Resources (DR) office. DR is located on the main floor of the Student Services Building, Room 1076; their phone is 515-294-6624.

**Other Information:** All cell phones should be turned off prior to the start of each lecture.

Students who cause a disruption to the class as a result of reading the newspaper or other non-class material, talking, texting, etc. will be asked to leave the room.

**Grading:** Grades will be based on the accumulated scores from Exams, Quizzes, and in class Activities.

**Quizzes:** Quizzes will consist of announced and unannounced in-class quizzes (50 points total). **Pop quizzes** will be given regularly, at my discretion and without warning. These are generally 5 points each and typically cover the previous lecture. ***There will be no make-up quizzes.***

**In-Class Activities:** In-class activities will not be announced in advance and there will be no make-ups for missed in-class activities. Part of the intention of the in-class activities is to encourage, and reward, your attendance in class.

**Homework** assignments are occasionally assigned, and comprise an important component of this course. They are designed to assist you with learning Biology, and responsibility. Only homework that is turned in on time will be accepted. We have a broad range of students in this class, and some assignments may seem silly. Nevertheless, I urge you to complete all assignments, as there is typically only a 1- or 2-point difference between an A- and a B+.

**Exams:** Exams will consist of four (4) Unit Exams (35 points each) and a comprehensive Final Exam (50 points). The first three Unit Exams will be in-class midterm exams, while the fourth Unit Exam will be given in combination with the Final Exam on the scheduled Final Exam day. Exams will be available only during the scheduled exam dates and times. ***There will be no make-up exams.*** The lowest score from the first three Unit Exams will be dropped, which means that you can miss one of the first three Unit Exams without a sacrifice in your final grade. All students must take the fourth Unit Exam and the Final Exam. **The final exam is scheduled for Wednesday, December 17, at 07:30-09:30 a.m. in 1414 Molecular Biology Building** (the lecture auditorium), and will be worth 50 points. You will therefore have a total of 85 questions on the last exam you take (35 on fourth midterm and 50 on final).

<b>GRADING:</b>	3 unit exams (4 unit exams, drop the lowest score; 35 points each)	105 points (38%)
	<b>Comprehensive Final Exam</b>	50 points (18%)
	<b>In-Class Quizzes</b>	50 points (18%)
	<b>In-Class Activities</b> (unannounced)	20 points (7%)
	<b>Assignments</b>	50 points (18%)
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	<b>TOTAL POINTS</b>	<b>275 (100%)</b>

Grades will follow the ABCDF +/- system, and will be based on your cumulative score including all midterm exams (less your lowest midterm score), the final exam, all

quizzes, and all homework assignments. Your final grade will be based on your rank in the class, based on your total cumulative points.

## Tentative Lecture Schedule

<u>Date</u>	<u>Topic</u>	<u>Chapter</u>
Aug. 25	Introduction to Biology	
Aug. 27	Phylogeny and the Tree of Life	26
Aug. 29	Bacteria and Archaea	27
Sep. 1	<b>University Holiday (Labor Day)</b>	
Sep. 3	Prokaryotes	27
Sep. 5	Protists and the Origin of Eukaryotes	28
Sep. 8	Protists and the Origin of Eukaryotes	28
Sep. 10	Plant Diversity I – Evolution of Plants	29
Sep. 12	Plant Diversity I - Plant Ancestors & Phylogeny	29
Sep. 15	Plant Diversity I-Bryophytes & Seedless Vascular Plants	29
Sep. 17	Plant Diversity II - Gymnosperms	30
Sep. 19	Plant Diversity II - Angiosperms	30
Sep. 22	Fungi	31
Sep. 24	Fungi	31
Sep. 26	<b>Lecture Exam #1</b>	
Sep. 29	Introduction to Animal Diversity	32
Oct. 1	Invertebrates	33
Oct. 3	Invertebrates	33
Oct. 6	Vertebrates	34
Oct. 8	Vertebrates	34
Oct. 10	The Cell Cycle, Mitosis	12
Oct. 13	Sexual Reproduction, Meiosis	13
Oct. 15	Meiosis, Intro to Genetics	13
Oct. 17	<b>Lecture Exam #2</b>	
Oct. 20	Mendelian Genetics	14
Oct. 22	Mendelian Genetics	14
Oct. 24	Chromosomal Basis of Inheritance	15
Oct. 27	Development of Evolutionary Theory	22
Oct. 29	Evolution: Processes and Theory	22
Oct. 31	Evolution of Populations	23
Nov. 3	Evolution of Populations	23
Nov. 5	Speciation	24
Nov. 7	History of Life on Earth	25
Nov. 10	<b>Lecture Exam #3</b>	
Nov. 12	Animal Behavior	51
Nov. 14	Ecology and the Biosphere	52
Nov. 17	Ecology and the Biosphere	52

Nov. 19	Population Ecology	53
Nov. 21	Community Ecology	54
Nov. 24	<b>Thanksgiving Break</b>	
Nov. 26	<b>Thanksgiving Break</b>	
Nov. 28	<b>Thanksgiving Break</b>	
Dec. 1	Community Ecology	54
Dec. 3	Ecosystem Ecology	55
Dec. 5	Ecosystem Ecology	55
Dec. 8	Ecosystem Ecology	55
Dec. 10	Conservation & Restoration Ecology	56
Dec. 12	Conservation & Restoration Ecology	56
Dec. 17	<b>Lecture Exam 4 and Final Exam (7:30am - 9:30am)</b>	

\*\* Course/Instructor Evaluations will be given at the end of the semester. The exact dates when the evaluations will be given will be determined by course progression and will be announced at a later date.