

Biology 211, Section 1, Spring 2015

Principles of Biology I

Required Text: Biological Science, 5th Edition, by S. Freeman and coauthors. 2014. Pearson. It is recommended that you purchase the e-textbook, which includes access to the on-line learning tools that we will take advantage of. At the bookstore it is listed as BIOLOGICAL SCI MASTERING BIOL CARD+EBK. We will cover materials from chapters 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 resources will 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!**

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.

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

1. Understand and use the basic vocabulary of biology.
2. Understand, identify, and be able to apply the scientific method.
3. Compare and contrast organisms in each of the kingdoms and major phyla of life.
4. Describe the basic mechanisms and principles of inheritance.
5. Describe the mechanisms of, and the evidence supporting, the theory of evolution, and correctly interpret phylogenetic trees intended to reflect evolutionary relationships.
6. Understand basic ecological principles.
7. Use relevant terms and concepts to formulate questions about biology.

Blackboard: A syllabus and all PowerPoint lectures will be available on Blackboard. Blackboard will also be used to submit assignments and report grades. To access Blackboard simply go to the ISU Homepage (<http://www.iastate.edu/>) and click on the Blackboard link in the Sign-Ons section. Log in to Blackboard by entering your "Username" (the first portion of your ISU e-mail address) and your "Password." Click on "BIOL 211Section-1". Through Blackboard you can access all Mastering Biology assignments. It is strongly recommended that you use the "Browser Test" function on your "Blackboard Learn" page when you first login to Blackboard.

Student support for Blackboard Learn can be found here: http://www.celt.iastate.edu/elearning/?page_id=5268

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 Blackboard. Scores will be posted on Blackboard.

Be sure that you can access Mastering Biology.

Be considerate of your classmates.

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

Grading: Grades will be based on the accumulated scores from Exams, Quizzes, Homework assignments and Learning Catalytics questions.

Quizzes: Quizzes will consist of out-of-class quizzes (35 points total). Quizzes will be available on Blackboard during specific dates. These are generally 5 points each and typically cover the previous lectures. **There will be no make-up quizzes.**

Learning Catalytics: In-class questions will be presented via “Learning Catalytics”. Students will be able to respond to questions presented by the instructor using any WiFi enabled device provided they have registered for the course and purchased access.

Homework: Mastering Biology assignments comprise an important component of this course. They are designed to assist you with learning Biology. There are 21 assignments and I urge you to take these seriously and complete all assignments before the class when the topic will be discussed.

Mastering Biology: is an on-line resource associated with your textbook. Homework assignments require using Mastering Biology. In addition, other materials that you may find useful will be made available to assist you with this class. To register for Modified Mastering Biology:

1. Make sure you have an access code. This can be bought in the bookstore or directly from Pearson during the registration process
2. Log Into your Blackboard
3. Click on your current Biology course
4. Click the Mastering Biology Link on the left hand side of the page
5. Click the Mastering Biology Home tab
6. From there, you will be prompted to sign into your Pearson account or to create one
7. Then you will need to enter your access code or purchase one (note: You will need the one with the etext if your professor is using **Learning Catalytics** in their course. If purchased from the bookstore, it automatically has the ebook)
8. You are all registered.
9. From now on, just log into Blackboard and click on your course and then Mastering Biology link. You will no longer need to log into Mastering Biology

Exams: Exams will consist of seven (7) Unit Exams (50 points each). Exams will be multiple-choice, one point per question. Therefore, **there will be no make-up exams.** The final exam will be **cumulative** and **all students are required to take the final.** Exams will be administered through Blackboard at the Center for On-Line Learning (Rooms 60 Carver Hall and 2552 Gilman Hall). Testing facility policy and procedures are available on Blackboard. Exams will be available only during the scheduled exam dates and times. Use the link below to familiarize yourself with the facility rules.

<http://www.elo.iastate.edu/online-testing-center/online-testing-center-for-students/>

**The testing centers are open Mon - Thur: 8:00 am – 8:00 pm (doors close at 7:30)
Friday: 8:00 am – 6:00 pm (doors close at 5:30)**

Grading:

7 unit exams	350 points (55%)
7 Blackboard Quizzes	35 points (5.5%)
~40 Learning Catalytics questions	40 points (6.5%)
21 Mastering Biology Assignments	210 points (33%)

TOTAL POINTS

635 points (100%)

Grades will follow the ABCDF system with +/-, and will be based on your cumulative score including all exams, all quizzes, in-class questions, and all homework assignments. Your final grade will be based on your total cumulative points.

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 that requires assistance, please notify me as soon as you become aware of your needs. Students seeking accommodations based on disabilities should obtain a Student Academic Accommodation Request (SAAR) from Student Disability Resources (<http://www.dso.iastate.edu/dr/>, 515-294-7220). The Disability Resources Office is in Room 1076 of the Student Services Building.

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Tentative Lecture Schedule

MB = Mastering Biology Assignment on Blackboard.

Quiz = out-of-class quiz available on Blackboard

All Chapter readings, Mastering Biology assignments **should be completed before** the assigned day (8 am)

<u>Date</u>	<u>Topic</u>	<u>Text Chapter(s)</u>
Jan 12	Introduction; Syllabus: Mastering Biology, Blackboard	Pre-Quiz
Jan 14	Scientific Method	1.5 MB
Jan 16	The origins and history of life	1.4 MB
Jan 19	Holiday – No Class	
Jan 21	Viruses	36 MB
Jan 23	Prokaryotes: Bacteria and Archaea	29 MB
Jan 26	Protists: Microscopic eukaryotes	30 Quiz
Jan 28	exam – no class (28-30 January)	
Jan 30	Introduction to Kingdom Animalia	33 MB
Feb 2	The Invertebrates	34 MB
Feb 4	The Invertebrates	
Feb 6	The Vertebrates	35 MB
Feb 9	The Vertebrates	Quiz
Feb 11	exam – no class (11-13 February)	
Feb 13	Origin of Plants: Bryophytes	31 MB
Feb 16	Seedless Vascular Plants	
Feb 18	Gymnosperms	
Feb 20	Angiosperms	
Feb 23	Fungi	32 MB Quiz
Feb 25	exam – no class (25-27 February)	
Feb 27	Cell cycle and Mitosis	12 MB
Mar 2	Meiosis and Sexual Life Cycles	13 MB
Mar 4	Mendelian Genetics	14 MB
Mar 6	Mendelian Genetics	
Mar 9	Inheritance	
Mar 11	Inheritance	Quiz
Mar 13	exam – no class (11-13 March)	

<u>Date</u>	<u>Topic</u>	<u>Text Chapter(s)</u>
Mar 16-20	Spring Break – no class	
Mar 23	Darwinian Evolution	25 MB

Mar 25	Darwinian Evolution	
Mar 27	Evolution of Populations	26 MB
Mar 30	Evolution of Populations	27 MB
Apr 1	Origin of Species	28 MB
Apr 3	Origin of Species	Quiz
Apr 6	exam – no class (7-9 April)	
Apr 8	Ecology	52 MB
Apr 10	Ecology	
Apr 13	Population Ecology	54 MB
Apr 15	Species Interactions	
Apr 17	Community Ecology	55 MB Quiz
Apr 20	Community Ecology	
Apr 22	exam – no class (23– 25 April)	
Apr 24	Ecosystem Ecology	56 MB
Apr 27	Ecosystem Ecology	
Apr 29	Biodiversity & Conservation Biology	57 MB
May 1	Biodiversity & Conservation Biology	Quiz
May 4	exam - no class (4-8 May)	