BI 252: Principles of Biology
Winter 2008
Course Syllabus for night class, section 2

Instructors:

Section 1 (1st 5 weeks)	Section 2 (2nd 5 weeks)
Dr. Susan Masta	Dr. Mark Fishbein
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Course Description: The Principles of Biology sequence (Bi 251, 252, and 253) is an in-depth introduction to the study of life. In Bi 252 we examine the structure, diversity, and evolution of life, with a focus on animals and plants. Topics include evolutionary processes, phylogenetics, animal diversity and morphology, and plant diversity and morphology.

Prerequisite: Chemistry 221 and 227 (or concurrent enrollment)

Meeting Time/Place: Section 1: MWF, 11:30-12:35, Hoffman Hall
or Section 2: MW, 6:40-8:30 pm, 53 Cramer Hall
and a Laboratory Section (required), room 409 SB1

Course Web Site: WebCT (http://psuonline.pdx.edu)

All lecture presentations for both sections will be posted in their entirety, along with supplemental materials for the lecture and lab. It is very important to realize that the posted lecture presentations do **not** contain all of the content that you are responsible for learning. It would be a serious mistake to not attend the lectures. It would be highly advantageous to view (or print) the presentations prior to each lecture to help you organize your notes. However, the presentations are in no way a substitute for good note taking.

Texts: Required: *Biological Science*, 2nd Ed., S. Freeman (2005), Pearson-Prentice Hall
Supplemental Readings posted on WebCT
Lab Manual: Must be downloaded from WebCT
Optional: *Study Guide for Biological Science*, 2nd Ed., S. Freeman (2005), Pearson-Prentice Hall (available at bookstore)

Readings should be completed prior to (and following) the corresponding lecture or lab. You will need to read assignments carefully; some reinforce the lectures and some

supplement them. **Lectures supplement, not replicate, the readings.** You are responsible for material presented in both.

Grading System:

Lecture subtotal	**70%**	**Lab subtotal**	**30%**
Exam 1	15%	Formal Lab Report	5%
Exam 2	20%	Lab Quizzes &	
Exam 3	15%	Wkly Assignments	25%
Exam 4 (Final)	20%		

Total = 70% + 30% = 100%

Grades will be based on a modified 90-80-70-60 scale for A-B-C-D. The lowest "minus" grades may be slightly lower than these cutoffs, based upon class performance.

Be sure to note exam and due dates in the lecture and lab schedules. If you can foresee any conflicts, bring them to the attention of Dr. Fishbein, Dr. Masta, and your TA **now**. Missing an exam or due date will result in no credit, unless an extreme emergency is involved, supported by documentation. **Make up exams will not be possible.**

Classroom Policies and Guide to Student Etiquette

Academic Honesty. Cheating or plagiarism of any kind will not be tolerated in this class. Please see the Code of Student Conduct and Responsibility for more information (http://www.pdx.edu/dos/conduct.html). If a **first offense** of cheating occurs, the grade for the assignment will be a "0" and the student will be reported to the appropriate University officials as described in the Code (577-031-014: Procedures for Complaints of Academic Dishonesty). Penalties for repeat offenders are stiff and likely will result in expulsion from the University. It is **your** responsibility to understand what constitutes plagiarism or other forms of cheating.

Academic Courtesy. Respect the rights of fellow students during class. Please avoid talking and other distracting behavior and turn off cell phones.

Punctuality. Students are expected to arrive for class on time so that lectures and labs start and end according to schedule and are not interrupted.

Respect the facilities. All are expected to help maintain the appearance of the classroom, including the laboratory. After class, all trash should be removed and place in appropriate garbage and recycling receptacles.

Students with Disabilities

If you have a disability and are in need of academic accommodations, please register with the **Disability Resource Center** at (503) 725-4150, http://www.pdx.edu/uasc/drc.html
Please notify Dr. Masta and Dr. Fishbein as soon as possible to make any necessary arrangements.

Tips for Success

Take advantage of available resources. Campus services are available to help you in all aspects of your education (http://www.pdx.edu/dos/). The Undergraduate Advising and Support Center offers academic advising and referral, an academic support program, community-college relations, a disability resource center, student athlete advising, study skills workshops, tutorial programs, and veteran services. See http://www.pdx.edu/uasc/ for more details. If you are unfamiliar with college courses, you may find it useful to attend one or more the Study Skills Workshops (http://www.setc.pdx.edu/), which cover topics such as time management, note taking, effective studying, and test taking.

Figure out and use your learning strengths. Some people learn best by reading, writing, or drawing, or through discussion with fellow students. You will have opportunities to use all of these capabilities in this course. Experiment (this is a science course!) and discover which techniques work best for you.

Be an active learner. Attend all lectures. Take notes during class and do not rely on passive reading of the downloaded slide shows. While taking notes, write down questions that occur to you at the time. Don't hesitate to ask pertinent questions in class. Right after each lecture, try to identify the main points. Review your notes and fill in any gaps that are still fresh in your memory. Compare notes with a classmate. Do your notes agree? When reading the text, take the time to reflect on your reading. How does it fit with what you've already learned? How does it reinforce, or add to what you've learned in lecture? Try to integrate lecture and reading material so that you've synthesized the big picture. This will be a very useful approach to studying.

Schedule time specifically for this course. The course requires regular time spent on reading assignments and reviewing these readings and the lectures. The more time spent revisiting, or even rewriting, your notes, the better you will do. This will take a significant amount of time

outside of lecture and lab meetings (10-15 hrs/week)/. Later topics build upon material covered earlier, so there is a real danger if you fall behind and try to catch up later.

Ask for help if you get confused or feel lost. Even if we seem very busy or distracted on the outside, we (Drs. Masta and Fishbein and your TA) are committed to help you learn this material. We think biology is incredibly fascinating and we will do what we can to help you make sense of the challenging topics in this course.

Lecture schedule[†]

Date	Topic	Reading*
Jan 7	Introduction, Natural Selection	Chapter 23
Jan 9	Evolutionary processes	Chapter 24
Jan 14	Speciation, Phylogeny	Chapters 25, 26
Jan 16	Phylogeny, Taxonomy	Chapter 26, pp. 613-614; 706-709
Jan 21	**Martin Luther King Day – no class**	
Jan 23	**EXAM 1**	
Jan 28	Intro to Animals	Chapter 31
Jan 30	Deuterostomes	Chapter 33
Feb 4	Protostomes	Chapter 32
Feb 6	Protostomes	Chapter 32
Feb 11	**EXAM 2**	
Feb 13	What is a Green Plant?, Phylogeny of Green Plants	Chapters 28, 29; "How Trees Get High" article
Feb 18	Plant Life Cycles, Green Life in Water and The Conquest of Land	Chapter 29
Feb 20	Origin of Vascular Tissue	Chapter 29
Feb 25	Origin of The Seed	Chapter 29
Feb 27	**EXAM 3**	
Mar 3	Plant Structure and Development, Plant Tissue Systems	Chapters 35, 40 (pp. 923-928)
Mar 5	Water and Photosynthate Transport	Chapter 36; "How Trees Get High" article
Mar 10	Plant Sexuality and Pollination	Chapter 40; "The Flower and the Fly" article
Mar 12	Floral Evolution and Diversity	Chapter 40
Mar 17	**EXAM 4 (FINAL EXAM), 7:30-9:20 pm**	

[†]Schedule is subject to change
*Pages and chapters refer to the Freeman text unless stated otherwise

Lab Schedule

Date	Topic
Jan. 7-12	1. Natural Selection
Jan. 14-19	2. Arthropods: Sexual Selection
Jan. 21-26 **Note MLK Holiday on Jan. 21***	3. Phylogeny and Comparative Anatomy
Jan. 28-Feb. 2	4. Cnidarians, Platyhelminthes, and Annelids
Feb. 4-9	5. Mollusks: Phenotypic Diversity
Feb. 11-16	6. Photosynthesis: The Hill Reaction – **Lab Report**
Feb. 18-23	7. Plant Diversity: Green Algae & Bryophytes **(Optional draft of Lab Report Due)**
Feb. 25-Mar. 1	8. Plant Diversity: Vascular Plants **(Optional draft of Lab Report Returned)**
Mar. 3-8	9. Vascular Plants: Vegetative Structures & Functions **(Final Lab Report Due)**
Mar. 10-15	10. Vascular Plants: Reproductive Structures & Functions

***Students enrolled in labs meeting on Mondays must see their TA about attending another lab for this week only.**