

BI 252: Principles of Biology
Winter 2010
Course Syllabus for CRN 40307 (day lecture)

Instructors:	<u>Section 1 (1st 5 weeks)</u> Dr. Susan Masta Office: SB 1, Rm. 606 email: smasta@pdx.edu Phone: 725-8505 Office hrs: M: 3-4, W: 1-2 web: http://web.pdx.edu/~smasta	<u>Section 2 (2nd 5 weeks)</u> Dr. Mandy Cook Office: SB 2, 238C (only during office hrs) email: tursiops@pdx.edu Phone: n/a Office hrs: M 4-6 web: n/a
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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, CRN 40307: MWF, 11:30-12:35, Hoffman Hall
or Section 2, CRN 40308: MW, 6:40-8:30 pm, Hoffman Hall
and a Laboratory Section (required) , room 409 SB1

Course Web Site: Blackboard (<http://psuonline.pdx.edu>)

All lecture presentations for both sections will be posted, 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 (for example, videos will not be posted). 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*, 3rd Ed., S. Freeman (2005), Pearson-Prentice Hall
Supplemental Readings posted on Blackboard

Lab Manual: Must be downloaded from Blackboard
Optional: *Study Guide for Biological Science*, 3rd 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	72%	Lab subtotal	28%
4 Exams, with the lowest score dropped	24% each	Lab Quizzes	8%
		Weekly Reports	18%
		Pressed Plants Project	2%
Total = 72% + 28% = 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. You will be allowed to drop the lowest exam score for the lecture, and the lowest quiz and lab report score for the labs. This policy will therefore cover an exam or quiz that was missed due to illness. **No make up exams or labs will 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. Everyone is expected to help maintain the appearance of the classroom, including the laboratory. After class, all trash should be removed and placed 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 provide the necessary DRC paperwork as soon as possible. It will be necessary to schedule all of your tests at the DRC to be taken **on the same day** each of the exams is given. It is necessary to schedule **all 4** of these exams with the DRC as soon as the term starts, because testing availability at the DRC is limited.

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 Cook 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 4	Introduction, Natural Selection	Chapter 24
Jan 6	Natural Selection; Evolutionary processes	Chapters 24, 25
Jan 8	Evolutionary processes	Chapter 25
Jan 11	Speciation	Chapter 26
Jan 13	Phylogenies and the History of Life	Chapter 27, pp. 593-601
Jan 15	The History of Life	Chapter 27
Jan 18	Martin Luther King Day – no class	
Jan 20	EXAM 1	
Jan 22	Taxonomy and Intro to Animals & Deuterostomes	Chapters 32, 34
Jan 25	Deuterostomes	Chapter 34
Jan 27	Deuterostomes	Chapter 34
Jan 29	Protostomes	Chapter 33
Feb 1	Protostomes	Chapter 33
Feb 3	Protostomes	Chapter 33
Feb 5	Protostomes	Chapter 33
Feb 8	EXAM 2	
Feb 10	What is a Green Plant?	Chapter 30
Feb 12	Phylogeny of Green Plants	Chapter 30
Feb 15	Plant Reproduction	Chapter 40
Feb 17	Plant Reproduction	Chapter 40
Feb 19	Plant Form and Function	Chapter 36
Feb 22	Plant Form and Function	Chapter 36
Feb 24	EXAM 3	
Feb 26	Plant Development	Chapter 23
Mar 1	Water Transport	Chapter 37
Mar 3	Photosynthate Transport; Plant Nutrition	Chapters 37, 38
Mar 5	Plant Nutrition	Chapter 38
Mar 8	Review of Photosynthesis; Plant Sensory Systems, Signals, and Responses	Chapters 10, 39
Mar 10	Plant Sensory Systems, Signals, and Responses	Chapter 39
Mar 12	Fungi	Chapter 31
THURS Mar 18	EXAM 4 (FINAL EXAM), 12:30-2:20 pm	

[†]Schedule is subject to change

*Pages and chapters refer to the Freeman text

Lab Schedule

Date	Topic
Jan. 4-9	1. Natural Selection
Jan. 11-16	2. Arthropods: Sexual Selection
Jan. 19-23 Note MLK Holiday on Jan. 18*	3. Phylogeny and Comparative Anatomy
Jan. 25-30	4. Cnidarians, Platyhelminthes, and Annelids
Feb. 1-6	5. Mollusks: Phenotypic Diversity
Feb. 8-13	6. Vascular Plants: Vegetative Structures & Functions
Feb. 15-20	7. Vascular Plants: Reproductive Structures & Functions
Feb. 22-27	8. Plant Diversity: Vascular Plants
Mar. 1-6	9. Plant Diversity: Green Algae & Bryophytes
Mar. 8-13	10. Photosynthesis and Pigments; PLANT PRESS DUE

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