BIO 101-09: INTRODUCTORY BIOLOGY
Winter 2005

Instructor: Erica D. Smith
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Phone: (206) 527-3746 NSCC Science Division Office, (206) 616-9484 UW Lab Number
Class Meetings: T 6:00-9:30 PM AS1617 (lecture and lab)
Th 6:00-9:30 PM AS1521 (lecture and discussion)
Office Hours: Th 5:30-6:00 PM and by appointment, IB2324C (206) 527-3755
Required Texts: Essential Biology. Campbell, Reece, and Simon (2nd Edition) 2004
Laboratory Hand-Outs and Discussion Articles (online or distributed)
Required Materials: Lab notebook, Scantron sheets and No. 2 pencils

Course Description and Objective: In this course, you will learn fundamental biological concepts and terminology, from the 'micro' scale of cellular organization and processes to the 'macro' scale of the biosphere and its diverse ecosystems and organisms. We will pay particular attention to molecular and cellular biology, genetics, and biodiversity. By the end of the quarter, you will have a basic understanding of the scientific process and be able to knowledgeably discuss current topics in biology and medicine.

Attendance and Participation: Attendance and participation in class, lab, and discussions are essential to the learning process. Attendance will be recorded. In the event of illness or emergency, please contact me by email prior to class if you are unable to attend. A student who stops attending class without an official withdrawal will be given a grade based upon work completed up to the point of withdrawal. I will use attendance records to determine grades that are 'borderline' at the end of the quarter. I *strongly* encourage questions and comments during class, labs, and other activities.

Class Preparation and Assignments: In just one quarter, we will cover *all* of the fundamental concepts of biology. Because of the intense breadth and depth of this course, you should expect to spend one-two hours preparing for every hour of class time, depending on your previous experiences. Each week, there will be assigned reading from the textbook (between two and four chapters), self-quizzes on the web, and take-home worksheets. Students are expected to complete the reading assignments and self-quizzes online BEFORE class. This allows us to utilize our class time for exploration and discussion of the material and supplementary activities, rather than just introductory lectures. On Thursdays, I will distribute worksheets to be completed outside of class and handed in at the *beginning of class* on Tuesdays. These assignments will contain primarily concept and application-based questions and they will be cumulative.

Laboratories: The lab activities are designed to help you understand and apply the skills and concepts we have covered in the classroom and to give you hands-on experience with the scientific process. Attendance and participation is absolutely *required* on scheduled lab days. No make-up labs will be allowed. Labs for this course will be held on Tuesdays. Lab handouts will be distributed or posted on the web and you are expected to *read the handouts carefully* before lab. You are expected to keep a lab notebook, in the same way that laboratory scientists do. Proper format and record-keeping techniques will be discussed during the first lab period. Lab notebooks will be checked weekly, so be sure to take notes as you go!

Group Activities and Discussions: I have incorporated a number of activities, designed to support the class and lab material, into the syllabus. These activities include, but are not limited to, short videos, web exercises, molecular modeling, and guest speakers. Thursdays will be our scheduled discussion day. The discussions will be based on a reading assignment related to a current 'hot topic' in biology. Communication is a very important part of science—these discussion groups will give you experience in oral scientific communication. Each discussion will be lead by a group of 2-3 students, starting next week. Discussion leaders will be responsible for presenting background information and highlighting the important concepts and issues related to the topic using visual aids and/or hand-outs. On the day of discussion, the discussion leaders must submit a list of references used in their presentation. The class will take a short reading quiz before the beginning of each discussion section. Participation is expected and may include questions, comments, opinions, debate, bringing in supplementary articles, etc.

Research Paper: Each student will be required to compose a 3-5 page research paper (double-spaced, 12 pt. font) on the topic of their choice. This exercise is designed to familiarize students with the scientific resources that are available to the public and to help students develop critical thinking and scientific writing skills. If you have trouble finding an interesting topic or reliable resources, I am happy to help. There are several deadlines for this assignment throughout the quarter (see the attached class schedule). When scientific manuscripts are submitted for publication, there are several stages of review and editing of the manuscript. The first stage is to submit a rough draft to colleagues to edit for content, grammar, and spelling. For you, this step will include submitting your paper to the NSCC Loft Writing Center. The second stage is called 'peer review,' which means that two peer scientists (in this case, your classmates) will anonymously 'review' your paper and make critical comments on the content and format. All students are *required* participate in the peer review process. Following peer review, you will have an opportunity to make changes to your manuscript and address the comments of your peers and then submit the final version to the editor (i.e. your instructor) for publication.

Field Activities: The Pacific Northwest is rich with biological treasures. To encourage you to explore these treasures, you are each required to do an independent field trip and come prepared (with photos, brochures, notes, etc) to share your experience at 'Show and Tell' (see schedule).

Instructor Expectations and Advice: I recognize that every student has a different educational background and different personal and career goals. As your instructor, I simply expect *honesty, effort and a willingness to learn*. This is a challenging topic and there is a lot of material to cover, but I have tried to design the curriculum to make it a fun and interactive experience for us all. The best advice I can give you is to use your resources! You have an excellent textbook with lots of extra resources. I also encourage you to take advantage of my office hours or contact me to make an appointment. I welcome any comments or feedback you have regarding the material or the teaching methods used in the class. I will distribute an informal mid-term evaluation by week 4-5 to give you a chance to tell me things that can be improved.

Grading:

Take-home Assignments	55%
Research Paper	15%
Laboratory Notebooks	15%
Discussion:	
Oral Presentation	5%
Quizzes	5%
Field trip/Show & Tell	5%

NSCC Grade Scale:

4.0-3.5 A/A-	90-100%
3.4-2.9 B+/B	80-89%
2.8-2.2 B-/C+	70-79%
2.1-1.5 C/C-	60-69%
1.4-0.9 D+/D	50-59%
0.8-0.0 D-/E	<50%