

for each lecture in the course schedule. You will find that on occasion the lecturer has chosen to assign small sections in the book that they feel complement the lecture material. We have done our best to make this clear but please do not hesitate to request clarification, preferably in class where other students will benefit from your inquiry.

Assessment: We will assess your progress in this course through in-class participation, homework assignments, a book review, an “outside” experience, two midterm exams and a final exam (see below). The first two exams will be administered at the end of the modules on 1) sex and natural selection and 2) *Vibrio cholera* and public health. On the final exam you will be tested on your knowledge of the third module on global carbon cycling as well as your ability to integrate material covered throughout the course. Due to the fact that the lecturer for each module will have a different lecture and examination style, we will write exams for each module as a group to provide cohesion in the assessment process. The point breakdown for the course can be found below.

Exam I (Sept. 25)	125
Exam II (Oct. 30)	150
Final (Dec. 8, 2:00 p.m.; 75% global carbon module, 25% integrative/cumulative)	200
Homework/CRS participation/attendance (40 per module)	120
Book Review (due Nov. 9)	50
Outdoor Engagement (due Nov. 16)	15
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Total	660 points

Handing in assignments: On the day assignments are due, all hard copy (paper) work should be handed in either in class or to the Biology Department administrative assistant, Sharon Smith, in 219 CLS. Please do not submit electronic copies without prior approval.

Homework: Assignments will be made to improve your understanding of the course material. The number of assignments, the point value of each and due dates will be made at the discretion of the professor teaching the module. Be sure to pay attention during the lecture to learn how to access the assignment and when it will be due.

CRS participation and attendance: We will be using a Classroom Response System (CRS, a.k.a. iClicker) throughout this course. The CRS allows us to teach in a more interactive manner and will be used to test how well you are learning the material as we proceed through each lecture. The CRS also allows us to determine who is attending the lectures and degree of engagement.

Book analysis: As mentioned above, one of our aims in this course is to explore the integrative nature of biology and its impact on your daily life. We cannot possibly cover all biological subject areas of interest in a single semester. We therefore provide a way for you to study an area of biology that interests you through reading a popular text and providing a brief review with **reflection and commentary**. You may choose from a list of readings provided on BlackBoard. The assignment is due by the **end of the day Friday, November 9th**. Your review should demonstrate that you have read the book

but, **more importantly**, that you **have thought about what you read**. Strong critiques will be those that make connections between the book, the lecture and laboratory, and other aspects of life (including your personal perceptions and experiences) that involve biology. Reviews should be approximately two pages in length (double spaced, 1" margins, 12 point font).

Outdoor Engagement: It is difficult to understand biological concepts without experiencing the natural world. In fact, human engagement with the natural world is what drives the pursuit of biology. We therefore require each student to engage in an outdoor activity and write about it. Here are some ideas: the San Antonio Botanical Garden, SA Zoo, Witte Museum, any of the SA Natural Areas (e.g., Friedrich Park), assist a faculty member or a local biologist with field work (hint: they should be a field biologist). Your report should include: 1). a summary of your activity, and 2). revelations about the connection between the natural world and what you have learned in 1311, 1111, or both. Summaries should be at least 1 page in length (double spaced, 1" margins, 11 or 12 point font) and are due November 16th.

Biology Seminar Series: The Biology Department hosts a seminar series each semester to provide students and faculty opportunities to learn about current trends in research in the field of biology and meet and converse with scientists. The seminars are held almost every Monday 4:00-5:00 p.m. in CLS 149. Refreshments will be made available! Please join us!

Excused Absences: Excused absences from class can be remedied by turning in a one-page summary of the reading assigned for the missed lecture. The summary must be provided to the lecturer within **one week** of the missed lecture.

Regrades: We encourage you to think about the content of the homework and exams throughout the semester and come to us with clarifications; however, if you have questions about how your exam or homework were graded or need a correction made for a tallying error, the exam or homework must be brought to the professor in charge of the module **within 1 week** of the date of receipt. **NO** exam grade adjustments will be made after the one week deadline.

Assessing final grades: We will analyze the distribution of the scores for Exams I and II and set approximate grades to provide an idea of where each of your exam scores fall in the class distribution. Note that exams are worth more as the semester progresses. This is to recognize students who improve over the semester. If the final class average is not approximately 75% (or 450 points), we will curve the final grades to achieve a class average of at least 75%. After this adjustment is made, your final grade for the course will then be determined by the sum of your points for the semester divided by the total possible. For example, an A would be 95% of possible points, or 570 out of 600.

Trinity University academic integrity/honor code: All students are covered by a policy that prohibits dishonesty in academic work. The Academic Integrity Policy (AIP) covers all

students who entered Trinity before the fall of 2004. The Academic Honor Code covers all those who entered the fall of 2004 or later.

The Integrity Policy and the Code share many features: each asserts that the academic community is based on honesty and trust; each contains the same violations; each provides for a procedure to determine if a violation has occurred and what the punishment will be; each provides for an appeal process.

The main difference is that the faculty implements the AIP while the Code is implemented by the Academic Honor Council. Under the Integrity Policy, the faculty member determines whether a violation has occurred as well as the punishment for the violation (if any) within certain guidelines. Under the Code, a faculty member will (or a student may) report an alleged violation to the Academic Honor Council. It is the task of the Council to investigate, adjudicate, and assign a punishment within certain guidelines if a violation has been verified.

Students who are under the Code are required to pledge all written work that is submitted for a grade: "On my honor, I have neither given nor received any unauthorized assistance on this work" and their signature. The pledge may be abbreviated "pledged" with a signature.

Unless otherwise specified, all work submitted should be done independently. If you have any doubts about whether working together is allowed, please ask! Past exams can be used for study purposes in this course and will be made available through BlackBoard. Whether you are covered by the AIP or the Honor Code, violations of academic integrity, such as cheating or plagiarism, will lead to consequences ranging from reduced scores to failing grades in the course.

Biology 1311 Schedule - Fall 2007

Ses. #	Date	Topic	Readings
SEX AND NATURAL SELECTION			
1	A 23	Introduction to Class, Expectations and the Paradox of Sex	260-261
2	A 28	Evolution by Natural Selection, Sex, and the Tree of Life	494-512, 602, 613, 614
3	A 30	Sexual Reproduction and Reduction-Division (Meiosis)	227-238, 248-260
4	S 04	Genotypes to Phenotypes, Central Dogma, and Single Locus Inheritance	269-276, 281-282, 288-289
5	S 06	Recombination and Cross-over at the Molecular Level	BB
6	S 11	Patterns of Inheritance and Phenotypes with Two Loci	276-281, 283-293
7	S 13	Evolutionary Theories for the Benefits of Sex	260-263, 1099-1102
8	S 18	Diversity of Sex - Other Ways in Fish and Vertebrates	1102-1103, 715, 718-721, 735-745, 764-772, 910-923, 929
9	S 20	Sexual Selection and Summary	1103-1109, online
10	S 25	Exam Number 1	
CHOLERA AND PATHOGENESIS			
11	S 27	<i>Vibrio cholerae</i> and Cholera - an overview.	378-379 (Essay) [Chapter 17]
12	O 02	What are bacteria? Consideration of Morphology, Metabolic Diversity, and Ecology.	582-604 (especially 600-601) [Chapter 27]
13	O 04	Bacterial Phylogeny. Classification of Organisms. Bacterial Identity. Who was Ernst Haeckel?	556-559 [Chapter 26], 1-17 [Chapter 1], BB
14	O 09	Bacterial Ecology. Host-Parasite Interactions. Pathogenesis.	1214-1229 [Chapter 53]
15	O 11	Lipids, Membranes, G Proteins, and cAMP. Cell Cell Interactions.	103-126 [Chapter 6], 159-176 [Chapter 8]
16	O 16	From Salt to Feces. Water Balance, Electrolytes, the Gut, and Diarrhea.	955-961 [Chapter 42], 984-993 [Chapter 43]
17	O 18	Binary toxin. ctxAB genes. Bacteriophage. TCP. VPI. Mucinase. ZOT toxin. What is all this stuff?	378-379 [Chapter 17], 780-792 [Chapter 32], BB
18	O 23	Gene Expression in Bacteria. Drug design. Koch's Postulates.	362-381 [Chapter 17], 441 [Chapter 20], 584 [Chapter 27]
19	O 25	John Snow and the Broad Street Pump. Public Health. Sanitation.	BB
20	O 30	Exam Number 2	
GLOBAL CARBON CYCLING			
21	N 01	Overview of the Global Carbon Cycle	637-643; 1256-1261; Essays on pp. 224, 1239-40, 1261; Film on Reserve in the Library*
22	N 06	Photosynthesis - Converting Light Energy to Matter	202-216, Figure 35.25
23	N 08	Photosynthesis cont...	217-223, 841-842, Figure 36.15, Fig. 9.18
24	N 13	Net Primary Productivity and Earth's Biomes - Where's the carbon?	1243-1247, 1146-1164, Fig. 9.21
25	N 15	Energy Conversion - Food Pyramids and Foodwebs	1247-1252
26	N 20	Soils, Soil Inhabitants and Decomposition	856-858 (37.2); 674-677 (Chapter Intro. and 30.1); 686-687
	N 22	No Class	
		Thanksgiving	
27	N 27	Plant Mineral Nutrition, Biogeochemistry, Limiting Nutrients and Carbon Cycling	852-856; 858-868, 1232-1236 (succession), Box 36.3 (p. 845-846), 682-686, 1252-1256, Essay p. 868, Box 37.2 (p. 867)
28	N 29	Intraspecific Interactions - Population Biology	1144-1146, 1192-1210, Essay 1211, Box 52.2 (p. 1197-1198)
29	D 04	Interspecific Interactions - Community Ecology	1214-1229, 1236-1239; Box 53.1 (p. 1237); Table 53.1 (p. 1229)
30	D 08	Final Exam @ 2:00 pm	