Biology 105
Biological Concepts: Unity
Section B09C
Spring 2013

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OFFICE HOURS

MWF 10:10-11:10 a.m. I am happy to make appointments outside of my normal office hours-just contact me by e-mail.

COURSE DESCRIPTION

Biology 105 is the introductory course for all Biology courses on this campus, serving as a general education course for many and the first step towards the nursing or other professional programs for others. It is assumed you are entering this course with no real background in Biology. The main focus of the course is to examine the characteristics shared by all living organisms (hence "Unity" in the title. This boils down to the bulk of the course being an introductory cell biology course. We begin by studying basic chemistry, then move on to biological molecules and how they interact, then onto cells and cell structure, how cells make and use energy, how they reproduce, and finally how cells and organisms evolve. Throughout the course I will be tying the material to real-life examples about how Biology relates to your everyday life (and it really, really does). I hope you leave the course with a better understanding of basic biology that enables you to make informed decisions about your life and current political issues such as genetically modified organisms and stem cell research.

Statement on Liberal Education

As part of your education at UW Oshkosh, you are asked to take a number of courses that are lumped under the term "General Education" (soon to be University Studies). What we want you to gain from these courses is what is commonly called a "Liberal Arts" education. Liberal Arts is defined in a number of ways, but I feel the best definition is "a set of skills and knowledge that make you a well-rounded individual capable of becoming a competent citizen of the world." Don't treat general education courses, such as this one, as merely things to be taken to "get them out of the way." We as an institution and I as an instructor feel that liberal education is very important and we are constantly working to give you the skills and knowledge we know you need to be successful....hence general education courses! For instance, in Biology 105, you will not only learn about basic Biology and Chemistry, but you will work on your **critical thinking skills** (via learning and application of the scientific method) your **written communication skills** (via lab reports), and your **knowledge of the physical and natural world**. Critical thinking and writing are skills you need no matter what career you choose, and knowing about the world you live and work in is basic knowledge everyone should be exposed to.

LECTURE INFORMATION

***LECTURE SCHEDULE*:** 1:50-2:50 a.m. MWF in Halsey Science 106.

Lecture Text: Reece et al.: Biology: Concepts and Connections, Seventh Edition, Pearson Cummings Custom Publishing, San Francisco, CA.

Lecture Format: Lectures will be presented via Powerpoint. I will frequently refer to the figures, so you should bring your text to class and make note of any figures from the text that I specifically reference.

Lecture exams: We will have four lecture exams on the scheduled dates (please see the lecture/lab schedule). Each exam will be worth 100 points, and consist of 50 multiple-choice questions. I write all exam questions based on the material I present in lecture. The comprehensive final will consist of a set of **new** multiple choice questions drawn from the material on lecture exams 1-4.

Lab exam: We will have one lab exam during the final week of the semester, covering all of the lab material from the semester. It will be worth 100 points and consist of 50 multiple choice questions.

Make-up exam*:* If you miss a lecture exam, I will offer a make-up exam during the last week of the semester. The exam will be comprehensive in nature and you will have to take it at the Testing Center in Polk. Your grade on the make-up exam will replace the zero you received for the missed exam. You must get permission from me in advance to take the make-up exam.

Lecture Quizzes: There will be a total of ten lecture quizzes over the course of the semester. They will be worth 10 points each and be variable in format...short answer, fill in, or multiple choice. Lecture Quizzes will be given via D2L or in-class. For the in-class quizzes, I may or may not announce when they will occur. For D2L, I will announce in lecture when each D2L quiz will be posted (I will not send e-mails regarding D2L quizzes, so your best option is to come to class so that you will know when one is open). If you miss a quiz, either in-class or D2L it cannot be made up, unless you have what I would call a valid excuse. If I determine that you do not have a valid excuse, you will receive a zero for the quiz.

Cell Phones: All cell phones must be turned off during lecture and laboratory time. If you must leave it on in case of an EMERGENCY call (i.e. life or death), set it to vibrate. Cell phones going off during lecture will cause me to embarrass you in the hopes that you remember to turn it off in the future.

Other electronic devices: Items such as iPods, iPhones, Discmen and so forth cannot be listened to during lectures and especially during exams, so turn them off and take the earphones/earbuds out.

E-mail policy: Part of being a student and on the way to being a professional is learning how to communicate like a professional. Along those lines, any e-mail sent to me must be addressed to either Dr. Kostman or T-Bone, and must be written in complete sentences, use proper grammar, and not contain any text speak. I reserve the right to not respond to e-mails that do not meet these criteria. If I do not respond, go back and check the message you sent for violations.

How to be successful in Biology 105: Over the past 13 years, I have taught this course twenty-one times. During this time, I have come up with what I think are some pretty solid ideas on how to study and how to be successful in the course. This is advice that I give students when they come to my office after the first exam with questions on how they can improve their performance. Not all of these items will work for every person, but some of them will work for you. For each college class you take, you will need to figure out a different way of studying and preparing for the class.

1. COME TO CLASS.
2. COME TO CLASS.
3. Take good notes.
4. Re-write or type your notes from each lecture.
5. Form a study group.
6. Answer the questions on the study guides I post.
7. Go to SI sessions.
8. Get a group of students together and sign up for time with a CAR tutor.
9. Ask me questions, in person, during office hours, after class, or by e-mail.
10. Ask your lab instructor questions.
11. Explain the material to family and friends.
12. Use active learning techniques-just reading and re-reading your notes will not do it.
13. Use the questions in the chapters to test your knowledge of the material.

CAR (Center for Academic Resources)

The Center for Academic Resources (CAR) provides free tutoring for students in most undergraduate classes on campus. CAR is located in the Student Success Center, Suite 102. Check the Tutoring List page on CAR's website (www.uwosh.edu/car) for a list of tutors. Due to the volume of students in Biology 105 and budgetary constraints, individual tutoring for Biology 105 students **will not** be available during Spring semester 2013. However, small group tutoring will be available. Please contact CAR or visit their website for more information.

SI (Supplemental Instruction)
This course has a supplemental instructor, Ms. Ashley Wieczorek. She will be providing more information on the days/times and locations of the SI sessions she will be leading.

Grading:

Course grade*:* There are a total of 900 points possible for the semester (500 points from lecture exams, 100 points from 10 lecture quizzes, 100 points from one lab exam, and 200 points from lab as assigned by lab instructor). I will calculate your grade by dividing the total number of points you earn over the semester by 900, which will yield a percentage. This percentage will be converted into a letter grade using the scale below:

GRADING SCALE:

93-100% = A
90-92% = A-
87-89% = B+
83-86% = B
80-82%=B-
77-79% = C+
73-76% = C
70-72%=C-
67-69%=D+
63-66% = D
60-62%=D-
<60% = F

Accessing Grades and Class Information
I have set up this course on the D2L site and will post all grades there. In addition, I will also post messages to the class, sample exams, and review sheets. If you have any questions or problems using the site please see me.

Statement on Academic Dishonesty
Students are referred to the University of Wisconsin Oshkosh Student Discipline Code as detailed in specific provisions of Chapter 14 of the State of Wisconsin Administrative Code. Any student(s) found in violation of any aspect of the above Code (as defined in sections UWS 14.02 and 14.03) will receive a sanction as detailed in UWS 14.05 and 14.06. Examples of violations include: looking at another student's exam or answer sheet and copying the answers during an exam, talking or whispering to another student during an exam, receiving text messages during an exam on an electronic device, or listening to answers or information recorded on an electronic via earphones during an exam. Sanctions range from a grade of zero for the assignment in question to an oral reprimand to expulsion from the University of Wisconsin Oshkosh. Students have the right to request a hearing and to appeal sanctions (as defined in UWS 14.08-14.10).

LABORATORY INFORMATION

Laboratory Instructor(s): Each laboratory instructor will provide their contact information and office hours in their lab syllabus, which they will post on the D2L site for your lab section. Your lab instructors will be: Andrew Bosma (B11 and B12 L); Dr, Bea Holton (B09, B10, and B13L); Dr. Toivo Kallas (B14L); and Dr. Bob Pillsbury (B08L)

Laboratory meeting times: Labs will meet every week at the assigned times in Halsey 211.

LABORATORY TEXT: **BIO 105: Concepts in Biology: Unity: *Laboratory Manual*. Bring it** (along with lecture text) to every laboratory meeting.

Laboratory Grade: You will have 200 points assigned by your lab instructor for work done in lab, and this may be in the form of lab reports, quizzes, or other assignments as given by your lab instructor. Please see your lab syllabus, as posted or distributed by your lab instructor, for details on how your 200 lab points will be assigned.

Lecture and Laboratory Schedule-Biology 105 Spring 2013 Section B09C

Lecture #	Date	Lecture Topic	Text Reading	Lab Topic
1	Jan. 28	Syllabus, Overview of Science and Biology	1	No Labs
2	Jan. 30	Basic Chemistry: Elements, Atoms, and Bonds	2.1-2.8	
3	Feb. 1	Water, Chemical Reactions	2.9-2.14	
4	Feb. 4	Molecules	3.1-3.7	Exercise 1
5	Feb. 6	Molecules	3.8-3.16	
6	Feb. 8	Introduction to Cells	4.1-4.4	
7	Feb. 11	Organelles	4.5-4.12	Exercise 2
8	Feb. 13	Organelles/ Membrane Structure and Function	4.13-4.20; 5.1-5.4	
9	Feb. 15	Membrane Transport	5.5-5.9	
10	Feb. 18	Energy and Enzymes	5.10-5.13	Exercise 3
*	Feb. 20	Review for Exam 1	*	
*	Feb. 22	**Lecture Exam I (lectures 1-9)**		
11	Feb. 25	Cell Respiration I	6.3-6.8	Exercise 4
12	Feb. 27	Cellular Respiration II	6.9-6.6.16	
13	March 1	Photosynthesis I	7.1-7.5	
14	March 4	Photosynthesis II	7.6.-7.9	Exercise 5
15	March 6	Photosynthesis III	7.10-7.13	
16	March 8	Prokaryotic Cell Division, Cell Cycle, Cancer	8.1-8.8.8	
17	March 11	Mitosis, Meiosis	8.10-8.8.17	Exercise 6
*	March 13	Review for Exam II	*	
*	March 15	**Lecture Exam II (lectures 10-17)**	*	
*	March 18-22	Spring Break		
18	March 25	Chromosome Structure	8.18-8.23	Exercise 7
19	March 27	Mendelian Genetics I	9.1-9.7	
20	March 29	Mendelian Genetics II	9.8-9.15	
21	April 1	Mendelian Genetics III	9.16-9.23	Exercise 8, 9a
22	April 3	DNA I: History and Replication	10.1-10.5	
23	April 5	DNA II: Replication	10.6-10.9	

24	April 8	DNA III: Translation	10.10-10.16	Exercise 9b
*	April 10	Review for Exam III	*	
*	April 12	L**ecture Exam III (lectures 18-24)**	*	
25	April 15	DNA IV: Genetics and Viruses	10.17-10.23	Exercise 9c
26	April 17	Gene regulation I	11.1-11.4	
27	April 19	Gene regulation II	11.5-11.10	
29	April 22	Cloning and Genetic Basis of Cancer	11.12-11.18	Exercise 10
30	April 24	Evolution I: History and Darwin	13.1-13.10	
	April 26	Evolution II: variation and natural selection	13.11-13.18	
31	April 29	Evolution III: Speciation and Evolutionary History	14.1-14.13	Exercises 9d, 11
32	May 1	Evolution IV: Evolutionary History	15.1-15.5	
*	May 3	Review for Lecture Exam IV, Lab and Comprehensive Exams		
*	May 6	**Lecture Exam IV (25-32)**	*	No Labs
*	May 8	**Lab Exam 1**	*	
	May 10	**Comprehensive Final Exam**	*	