

**Biology 105**  
**Biological Concepts: Unity**  
**Section A09C**  
**Fall 2011**

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**OFFICE HOURS**

MWF 9-10 a.m. I am happy to make appointments outside of my normal office hours-just contact me by phone or 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 the “Unity” in the title). The bulk of the course is thus 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”. 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 gen ed 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...hence gen ed 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:** 10:20-11:20 a.m. MWF in Halsey 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 12 to 13 questions taken from the four lecture exams.

**Make-up exam:** If you miss a lecture exam (unexcused), 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. Five Lecture Quizzes will be given via D2L and you will have two days to take them. The other five lecture quizzes will be given in class at random times, and you must be present in order to take the quiz. I will announce in lecture when the D2L quizzes will be posted. If you miss a quiz it cannot be made up, unless you have a valid excuse (and I determine if it is valid or not). In class quizzes cannot be made up unless you are deathly ill or have a serious accident or other really good reason for not being in class.

**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 me for violations.

### **Grading:**

**Course grade:** There are a total of 900 points possible for the semester (500 points from lecture exams, 100 points from lab exams, 100 points from 10 lecture quizzes and 200 points from lab). 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: A01L: Charley-Johnson; A02L: Bosma; A03L: Dorn; A04L: Nelson; A05L:Charley-Johnson; A06L: Nelson; A07L: Olsen.

**Laboratory meeting times:** Labs will meet each 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:** Your lab grade will consist of 300 total points. You will have one laboratory exams (worth 100 points). The lab exam will be taken in the lecture room during the normal lecture time during the final week of the semester. You will also 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 assigned by your lab instructor. Please see the lab syllabus, as posted by your lab instructor, for details on how your 200 lab points will be assigned.

### Lecture and Laboratory Schedule-Biology 105 Fall 2011 Section A09C

Lecture #	Date	Lecture Topic	Text Reading	Lab Topic
1	Sept. 7	Syllabus, Overview of Science and Biology	1	No Labs
2	Sept. 9	Basic Chemistry: Elements, Atoms, and Bonds	2.1-2.8	
3	Sept. 12	Water, Chemical Reactions	2.9-2.14	Exercise 1
4	Sept. 14	Molecules	3.1-3.7	
5	Sept. 16	Molecules	3.8-3.16	
6	Sept. 19	Introduction to Cells	4.1-4.4	Exercise 2
7	Sept. 21	Organelles	4.5-4.12	
8	Sept. 23	Organelles/ Membrane structure and function	4.13-4.20; 5.1-5.4	
9	Sept. 26	Transport	5.5-5.9	Exercise 3
*	Sept. 28	Review for Exam I	*	
*	Sept. 30	<b>Lecture Exam I (lectures 1-9)</b>	*	
10	Oct. 3	Energy and Enzymes	5.10-5.13	Exercise 4
11	Oct. 5	Cell Respiration I	6.1-6.4	
12	Oct. 7	Cellular Respiration II	6.5-6.6.10	
13	Oct. 10	Cellular Respiration III	6.11-6.16	Exercise 5
14	Oct. 12	Photosynthesis I	7.1-7.5	
15	Oct. 14	Photosynthesis II	7.6.-7.9	
16	Oct. 17	Photosynthesis III	7.10-7.13	Exercise 6
17	Oct. 19	Prokaryotic Cell Division, Cell Cycle, Cancer	8.1-8.8.8	
18	Oct. 21	Mitosis, Meiosis	8.10-8.8.17	
*	Oct. 24	Review for Exam II	*	Exercise 7, Exercise 8.1
*	Oct. 26	<b>Lecture Exam II (lectures 10-18)</b>		
19	Oct. 28	Chromosome Structure	8.18-8.23	
20	Oct. 31	Mendelian Genetics I	9.1-9.7	Exercise 8.2, 9.1
21	Nov. 2	Mendelian Genetics II	9.8-9.15	
22	Nov. 4	Mendelian Genetics III	9.16-9.23	

23	Nov. 7	DNA I: History and Replication	10.1-10.5	Exercise 8.3, Exercise 9.2
24	Nov. 9	DNA II: Replication	10.6-10.9	
25	Nov. 11	DNA III: Transcription and Translation	10.10-10.16	
26	Nov. 14	DNA IV: Genetics and Viruses	10.17-10.23	Exercise 8.4, Exercise 9.3
*	Nov. 16	Review for Exam III		
*	Nov. 18	<b>Lecture Exam III (lectures 19-26)</b>		
27	Nov. 21	Gene regulation I	11.1-11.4	No Labs
*	Nov. 22-27	Thanksgiving	*	
28	Nov. 28	Gene regulation II	11.5-11.10	Exercise 8.5, Exercise 9.4
29	Nov. 30	Cloning and Genetic Basis of Cancer	11.12-11.18	
30	Dec. 2	Evolution I: History and Darwin	13.1-13.10	
30	Dec. 5	Evolution II: variation and natural selection	13.11-13.18	Exercise 10
31	Dec. 7	Evolution III: Speciation and Evolutionary History	14.1-14.13; 15.1-15.5	
32	Dec. 9	Wrap-up, Review, SOS	*	
*	Dec. 12	<b>Lecture Exam IV (27-32)</b>	*	No Labs
*	Dec. 14	<b>Lab Exam I (labs 1-10)</b>	*	
*	Dec. 16	<b>Comprehensive Final Exam</b>	*	