

**Biology 105: The Summer Session**  
**Biological Concepts: Unity**  
**Section A09C**

**Lecture Instructor: Dr. Todd Kostman**  
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**OFFICE HOURS**

M-Th 12:00 p.m.-1:00 p.m. I am happy to make appointments outside of my normal office hours-just contact me by phone or e-mail or talk to me after class.

**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 of healthcare professional program 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. 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 into 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 among others.

**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 feel that liberal education is very important and we are constantly working very hard to give you the skills and knowledge we know you need to succeed....hence gen ed courses! For instance, in Biology 105, you will not only learn about Biology and Chemistry, but you will also be encouraged to work on your critical thinking skills (via learning and application of the scientific method) and your writing skills (via lab reports). Thinking and writing are skills you will need whatever career you choose. Hopefully by the end of this semester you will hone these important skills and in addition gain basic knowledge about how cells work and how organisms evolve.

## LECTURE INFORMATION

**LECTURE SCHEDULE:** 10:10-11:40 M Tu W Th in Halsey 107.

**LECTURE TEXT:** Campbell et al.: Biology: Concepts and Connections, Sixth Edition, Pearson Cummings Custom Publishing, San Francisco, CA.

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

**LECTURE EXAMS:** We will have three lecture exams on the scheduled dates. Each exam will be worth 100 points, and consist of 50 multiple-choice questions. As you can see, missing even one lecture could have significant impact on your exam performance since each lecture represents about 12% of the material on each exam. I write all of the exam questions myself and do not take any from the book or website, but I encourage you to use the book and website questions to study for exams and quizzes.

**QUIZZES:** Over the course of the summer term there will be 8 quizzes, worth 10 points each, that will count towards your final grade. All quizzes will be given during lecture, and I may or may not warn you ahead of time that there will be a quiz. Quizzes will be regular, on-paper quizzes and not given via D2L. A quiz missed due to an unexcused absence will result in a zero for that 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 lectures or lecture exams may be confiscated and returned after the period is over.

**COURSE GRADE:** There are a total of 680 points possible for the semester (300 points from lecture exams, 100 points from lab exams, 80 points from lecture quizzes and 200 points from lab assigned by your lab instructor). I will calculate your grade by dividing the total number of points you earn over the semester by 680, 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 over the course. 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 and exam, talking or whispering to another student during an exam, and receiving text messages during an exam on an electronic device. 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 Instructors:**

Katrina Olsen  
Office: HS 44  
e-mail:olsenk10@uwosh.edu

**Laboratory meeting times:** Labs will meet each week at the assigned times (Monday/Wednesday 8-10:00 a.m. (A01L), or 8:00-10:00a.m. Tuesday and Thursday A02L) in Room 211 and be two hours in length; assume each lab will take the entire period. Labs **cannot be made-up** as there is extensive preparation necessary by our staff (actually we do the preparation as we have no staff help during the summer) for each lab.

**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 exam at the end of the semester (worth 100 points). You will also have 200 points assigned by your lab instructor for work you do in lab. Additional information regarding laboratory will be available at your first lab meeting.

**Lab Exam:** Lab exam will consist of 50 multiple choice questions, each worth 2 points.

## Lecture and Laboratory Schedule-Biology 105 Summer 2013

Date	Lecture Topic	Text Reading	Lab Exercise
June 10	Syllabus, Introduction to Biology, Basic Chemistry	1.1-1.10; 2.1-2.9	Lab 1
June 11	Bonds, Water, Chemical Reactions	2.10-2.18	
June 12	Molecules	3.1-3.7	Lab 2
June 13	Molecules	3.8-3.16	
June 17	Introduction to Cells	4.1-4.9	Lab 3
June 18	Organelles	4.10-4.23	
June 19	Membrane structure and function; Osmosis, Transport	5.1-5.9	Lab 4
June 20	Energy and Enzymes/Review for Exam I	5.10-5.16	
June 24	<b>Lecture Exam I (lectures 1-8)</b>	-----	Lab 5
June 25	Cell Respiration I	6.1-6.7	
June 26	Cellular Respiration II	6.8-6.16	Lab 6
June 27	Cellular Respiration III	6.8-6.16	
July 1	Photosynthesis I	7.1-7.6	Lab 7
July 2	Photosynthesis II	7.13-7.14	
July 3	Photosynthesis III		No Lab
July 4	No class-please use fireworks responsibly!	-----	No Lab
July 8	Cell Cycle, Mitosis, Cytokinesis	8.1-8.7	Lab 8
July 9	Meiosis, gametes, chromosomes	8.12-8.19	
July 10	Mendelian Genetics I	9.1-9.9	Start Lab 9 (isolate plasmids)
July 11	Review for Exam II	-----	
July 15	<b>Lecture Exam II (lectures 9-17)</b>		Continue 9 (do transformation)
July 16	Mendelian Genetics II	9.11-9.23	
July 17	Mendelian Genetics III		
July 18	DNA I: Replication	10.1-10.6	Lab 10: Genetics
July 22	DNA II: Transcription and Translation	10.7-10.15	Finish 9 (analyze plates)
July 23	DNA III: Mutations, viruses, and DNA manipulation	10.16-10.23	
July 24	Gene Regulation	11.1-11.17	Lab 11
July 25	Evolution I: Darwin and Natural Selection	13.1-13.8	
July 29	Evolution II: Hardy Weinberg; microevolution	13.9-13.18	Lab Exam (Labs 1-10)
July 30	Evolution III: Speciation	14.1-14.10	
July 31	Evolution IV: Evolutionary History	14.11-15.5	No labs
Aug. 1	<b>Exam III (lectures 18-27)</b>	-----	no labs