

Biological Principles: Unity (Biol 105)

Section C09C ♦ Fall 2013

Lecturer: Dr. Thomas G. Lammers
E-mail: lammers@uwosh.edu
Phone: 424-1002

Office: 9C Halsey (The Herbarium)
Office Hours: MW 10:30 AM – 12:30 PM
Tu 8:00 AM – 12:30 PM

Biology 105 is a part of the **liberal arts** curriculum. The Association of American Colleges and Universities uses the term “liberal education” to refer to a philosophy of education that empowers individuals with broad knowledge and transferable skills, and that cultivates social responsibility and a strong sense of ethics and values. In pursuing that philosophy, our specific goal is to provide you with basic knowledge about life and how it operates. For some (majors in the sciences, nursing or kinesiology), this is a precursor to further science coursework. For others, it is part of your general education and your sole contact with such material. Biology is in the news every day: medicine, environmentalism, genetic engineering, evolution, wildlife biology, invasive species, etc. To understand the implications of all this, you need to know the basics of biology. If studying *life* isn't germane to the average student's life, *what is?*

This course consists of several **lecture** sections of ca. 200 students. I teach this one sections; different professors teach the rest. Those lecturers conduct their sections independently of me, with *completely* different syllabi and exams and even textbooks. In addition to lecture, there are numerous **laboratory** sections of 30 students each. Although your final grade in this course is based on your achievement in lecture and lab together, the labs are taught by someone other than me. Your lab instructor will provide you with specific information on policies under his or her jurisdiction, *e.g.*, attendance, grading, office hours, etc. All concerns with *lab* work should be addressed to this lab instructor. At semester's end, he or she will report to me your grade in lab, which I will then factor in to your final course grade.

HOW YOU WILL BE EVALUATED

- (1) **LECTURE EXAMS.** There will be four, each consisting of 50 multiple-choice questions worth one point each. This totals 200 points. These exams are machine-scored so *you will need to bring sharpened #2 pencils on exam days!* Though each exam emphasizes a certain block of lectures and textbook chapters, the nature of the course (*i.e.*, each new topic builds on prior knowledge) means that *each* exam is in effect comprehensive. *You must master material on one exam to do well on the next!* Note that at the end of each lecture, I will give you a list of questions in the textbook that are germane to the material covered that day; these will serve as an example of what to expect on exams. If you answer these questions (the answers are in Appendix 3), you will be glad you did.
- (2) **LABORATORY WORK.** I will ask your lab instructors to provide me with a total of 100 pts. based on work you perform under their jurisdiction. This may take the form of lab reports, quizzes, work sheets, etc., at their discretion.

These are the *sole means* by which to accrue points. There are no “bonus points”, there are no “extra credit” projects that may be performed to compensate for grade deficiencies. The work assigned gives you more than enough opportunity to demonstrate what you can do.

The final letter grade reported to the Registrar's Office will be based on the total number of points that you earn, according to the following scale. *This grade scale is absolutely rigid. It will not change*, irrespective of class performance. **Do not expect** to be “bumped up” a grade if you are “close”, as cushions are built in. (*E.g.*, 179 points is 59.66%, less than the 60% supposedly needed to minimally pass the course.)

0-178	0-59%	F	179-184	60-61%	D-	185-202	62-67%	D
203-208	68-69%	D+	209-214	70-71%	C-	215-232	72-77%	C
233-238	78-79%	C+	239-244	80-81%	B-	245-262	82-87%	B
263-268	88-89%	B+	269-274	90-91%	A-	275-300	92-100%	A

Those of you in the Nursing or Kinesiology tracks, please bear in mind that if you do not earn *at least* 215 points in this course (*i.e.*, a C or better), you will not be permitted to enroll in Human Anatomy (Bio 211) or Human Physiology (Bio 212). To avoid unpleasant surprises at semester's end, please track your performance with the following “score card.” By dividing your cumulative points by the possible points to date, you will know how you are doing in class at any time.

If you are in a program or co-curricular activity that requires my signature confirming your current grade in the course, you will have to *bring the form to my office*, as I do not carry my records of grades to the lecture hall with me.

<i>Points from:</i>	<i>Possible on this item:</i>	<i>Cumulative points possible:</i>	<i>My points on this item:</i>	<i>My cumulative points:</i>
Lecture Exam I	50	50		
Lecture Exam II	50	100		
Lecture Exam III	50	150		
Lecture Exam IV	50	200		
Lab grade *	100	300		
TOTAL	300	300		

* Your lab instructors will tell you how they plan to score your lab work. They have been told to report to me at semester's end your grade based on 100 points, but individual instructors might have you earn more or fewer points, and then scale it down arithmetically.

CONTACTING ME

I want you to feel free to contact me about *anything* that concerns you about the lecture portion of this course. The best way to do so is via e-mail. For many common questions, the best answer often is to be found in some file I have on my computer; obviously, this makes telephone or personal queries less efficient for both of us.

Except for questions about the day's lecture content, right before or right after lecture is a *terrible* time to ask me about course matters. I have no access to my files and records there, and will invariably forget what you have told or asked me by the time I return to my office across campus. Most likely, I will end up asking you to e-mail me anyway.

Some e-mail tips: I get a huge amount of spam, virus attempts, offers for pharmaceuticals, Nigerian money scams, etc. *Do not* send me e-mail with no subject line. Most get caught in my spam filter and deleted unread. Similarly, don't send me e-mail with a non-informative subject line like "hey" or "hi" or "wassup?" I delete all such things unread. Please put something *useful* in the subject line, such as "Biol 105 question" or some such.

MY EXPECTATIONS OF YOU

You will attend every lecture meeting. Because it is a large lecture, you will be tempted on occasion to skip. You will think your absence will not be noticed, that because I don't take attendance, it won't affect your grade. True, I won't notice and true, attendance *per se* is not factored into your grade. But there *is* an extremely strong correlation between attendance and course grade. It is *extremely* difficult for you to earn a good grade if you are not here for each and every meeting. No matter how boring I am, no matter how little you think you get out of lecture, you will get far *less* out of *not* attending. The assigned lecture period is your *only* opportunity to get essential information. If you *must* miss class, it is *your* responsibility to get notes from a fellow student and to consult with me via e-mail or during office hours to clarify anything you don't understand.

You will be present for every scheduled exam. If you know in advance that you absolutely must miss an exam due to a *documented* conflict (e.g., sanctioned university activity, military service, medical procedure, court appearance), *contact me as soon as you know of the conflict*. If an emergency arises at the last minute (e.g., grievous illness or injury, death of a loved one, arrest), *contact me as soon as possible after the missed exam*. If these conditions are not met, you will receive an irrevocable zero for that exam. If you meet these conditions, you will be permitted to take a make-up exam.

You will evince high standards of personal integrity in all that you do. Cheating is defined as any attempt, successful or otherwise, to pass off the work of another as your own. On an exam, it explicitly includes any attempt to obtain information from *anywhere* other than your own mind. Speaking during an exam is forbidden, as is looking about the room. Cheating is no joke. It is morally indistinguishable from robbing a liquor store or embezzling company funds. It reflects shamefully on the cheater, his/her family, and his/her high school. No grade is worth a black mark on your self-respect. Not everyone can be an outstanding student, but everyone *can* maintain a high standard of dignity and personal honor. I hereby serve legal notice that anyone determined to be in violation of this standard will be prosecuted to the full extent permitted under the provisions of Chapter UWS14 of the Wisconsin Administrative Code, and that I will in all cases seek the maximum penalty allowed, *i.e.*, expulsion from the university.

DATE	No.	TOPIC	READING
04 Sep	1	How to Be a College Student	
06 Sep	Initial Baseline Assessment		
<i>≧ no lab this week ≦</i>			
09 Sep	2	Introduction to Science	1.1 – 1.7
11 Sep	3	The Nature of Science	1.8 – 1.11
13 Sep	4	Chemistry & Life I	2
	<i>Lab 1</i>	<i>Scientific Method</i>	
16 Sep	5	Chemistry & Life II	3.1 – 3.10
18 Sep	6	Chemistry & Life III	3.11 – 3.16
20 Sep	7	Cells	4
	<i>Lab 2</i>	<i>Manipulating Metabolism</i>	
23 Sep	8	Energy	5.10 – 5.12
25 Sep	9	Enzymes	5.13 – 5.16
27 Sep	10	Membranes	5.1 – 5.9
	<i>Lab 3</i>	<i>Molecules</i>	
30 Sep	1-10	<i>Synthesis & Recapitulation</i>	1-5
02 Oct	1-10	Lecture Exam I	1-5
04 Oct	11	Respiration I	6.1 – 6.5
	<i>Lab 4</i>	<i>Proteins and Enzymes</i>	
07 Oct	12	Respiration II	6.6 – 6.11
09 Oct	13	Respiration III	6.12 – 6.16
11 Oct	<i>≧ no lecture today ≦</i>		
	<i>Lab 5</i>	<i>Osmosis</i>	
14 Oct	14	Photosynthesis I	7.1 – 7.2, 7.6
16 Oct	15	Photosynthesis II	7.3 – 7.5, 7.7 – 7.11
18 Oct	16	Photosynthesis III	7.12 – 7.14
	<i>Lab 6</i>	<i>Respiration</i>	
21 Oct	17	Cell Division I	8.1 – 8.10
23 Oct	18	Cell Division II	8.11 – 8.23
25 Oct	11-18	<i>Synthesis & Recapitulation</i>	6-8
	<i>Lab 7</i> <i>Lab 8.1</i>	<i>Photosynthesis</i> <i>Mendelian Genetics</i>	

28 Oct	11-18	Lecture Exam II	6-8
30 Oct	19	Genetics I	9.1 – 9.4, 9.6 – 9.10
01 Nov	20	Genetics II	9.11 – 9.15, 9.20 – 9.23
	<i>Lab 8.2</i> <i>Lab 9.1</i>	<i>Mendelian Genetics</i> <i>Genetic Engineering</i>	
04 Nov	21	Genetics III	9.5, 9.16 – 9.19
06 Nov	22	Molecular Genetics I	10.1 – 10.5
08 Nov	23	Molecular Genetics II	10.6 – 10.10
	<i>Lab 8.3</i> <i>Lab 9.2</i>	<i>Mendelian Genetics</i> <i>Genetic Engineering</i>	
11 Nov	24	Molecular Genetics III	10.11 – 10.16, 11.1– 11.7
13 Nov	19-24	<i>Synthesis & Recapitulation</i>	9-11
15 Nov	19-24	Lecture Exam III	9-11
	<i>Lab 8.4</i> <i>Lab 9.3</i>	<i>Mendelian Genetics</i> <i>Genetic Engineering</i>	
18 Nov	25	Biotechnology	12
20 Nov	26	Evolution I	13.1 – 13.6
22 Nov	27	Evolution II	13.7 – 13.10
	<i>Lab 8.5</i> <i>Lab 9.4</i>	<i>Mendelian Genetics</i> <i>Genetic Engineering</i>	
25 Nov	28	Evolution III	13.11 – 13.17
<i>≧ no lab this week ≦</i>			
02 Dec	29	Evolution IV	14
04 Dec	30	Evolution V	15
06 Dec	31	Evolution VI	16
	<i>Lab 10</i>	<i>Evolution and Speciation</i>	
09 Dec	25-31	<i>Synthesis & Recapitulation</i>	12-16
11 Dec	25-31	Lecture Exam IV	12-16
13 Dec	Administrative Adjustments Day		
<i>≧ no lab this week ≦</i>			

Need more help? The [Reading Study Center](#) in 201 Nursing Education (424-1031) is an all-university service whose mission is to facilitate development of efficient college-level learning strategies in students of all abilities. Strategies for improved textbook study, time management, note taking, and test taking are taught through both credit courses and non-credit services. For more information, visit: www.uwosh.edu/programs/readingstudycenter.

Students with disabilities Students with disabilities are welcome in this course. Please contact your lab instructor and me in the first week of class so that we may arrange all possible accommodation regarding classroom attendance, testing, etc.