

BIOS 100: Biology of Cells and Organisms (13990)**MWF 11:00 AM, LC F01**

Instructor: Michael Muller
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Office: 3092 SEL
Office Hours: MW 9-11 pm (and by appt)

Course Description: Processes of cellular and organismic function: cell structure, respiration, photosynthesis, molecular genetics and development, structure, and physiology of plants and animals.
Animals may be used in the laboratory

Textbooks: BIOLOGICAL SCIENCE, 3rd Edition, by Freeman. (Prentice Hall, 2008).
 CELLS AND ORGANISMS, 3rd Edition, by Muller (Hayden/McNeil, 2008)
 iClicker (yes, not a textbook, but still required)

PHOTOGRAPHIC ATLAS FOR BIOLOGY LABORATORY, by Van der Graaff & Crawley (Morton) - Optional

Website: <http://www.uic.edu/classes/bios/bios100/summer2009>
<http://blackboard.uic.edu>

Lecture Syllabus

Week	Date	Topic	Chapter
1	6/15	Course Introduction / Learning as a Process	1
	6/17	Science as a Process / Chemistry of Life I	2, 3, 4, 5
	6/19	Chemistry of Life II	2, 3, 4, 5
2	6/22	Energy, ATP, and Enzymes	3.4
	6/24	Cells - Structure and Function	6, 7, 8
	6/26	Cells - Membranes and Osmosis	6, 7, 8
3	6/29	Photosynthesis I	10
	7/1	Exam I - Covers Material from 6/15 to 6/26	
	7/3	No Lecture, Independence Day Observation	
4	7/6	Photosynthesis II and Cell Respiration I	10, 9
	7/8	Cellular Respiration II	9
	7/10	DNA - The Molecule of Heredity	14
5	7/13	Protein Synthesis	16
	7/15	Control of Genetic Systems in Prokaryotes and Eukaryotes	15, 17
	7/17	Examination II - Covers Material from 7/3 to 7/15	
6	7/20	Techniques of Molecular Biology	Online
	7/22	Chromosomes, Mitosis, Meiosis	11, 12
	7/24	Plants - Structure and Function	35
7	7/27	Plants - Reproduction and Diversity	40
	7/29	Animal Systems - Circulation, Respiration, Digestion	43, 44
	7/31	Animal Systems - Urinary, Immune	42, 49
8	8/3	Animal Systems - Nervous, Endocrine	46, 47
	8/5	Examination III - Covers Material from 7/21 to 8/43	
	8/7	Cumulative Final Exam - 11:00 - 1:00 - Location TBA	

Grading

Points in BIOS 100 may be earned in both the laboratory and for lecture examinations. Each hourly examination is comprised of 50 multiple-choice questions, each worth two points. The final examination is optional - if you choose to take the final, we will drop the lowest exam score. Note that there is no penalty for taking the final examination - if this is your lowest score, we will drop the final examination score. If you miss one of the three hourly examinations, you must take the final examination. The final exam is cumulative and will contain all new questions. **No Makeup Exams will be given!**

Points are also earned through the completion of laboratory exercises. There are thirteen laboratory exercises, each worth 10 points. You will be allowed to drop your lowest laboratory grade. If you miss a lab, you will be allowed to make it up only during the week in which it is offered. No makeups will be allowed after the labs are taken down for the week!

Finally, we will be doing clicker exercises in class. You can earn up to 15 points from these. Note you must be present in lecture with an iClicker to earn these points.

The final grade will be determined by the following grading scale:

A: 390 - 435
B: 345 - 389
C: 300 - 344
D: 255 - 299
E: 0 - 254

News, announcements, and other supplemental information will be provided on the website and the blackboard site. The URL is:

www.uic.edu/classes/bios/bios100/summer2009
blackboard.uic.edu

Be sure you check this website out as it provides much information regarding both the lecture and the laboratory portions of the course.

Other Notes

Due to complications that have occurred in the past, I am forced to make the following clarifications

- In laboratory, you are frequently working in groups. However, all assignments are individual efforts, not group efforts. We encourage you to discuss your answers before hand, but all work submitted must be your own. If I suspect lab exercises were copied, all parties involved will receive zero credit. No discussion
- All laboratory assignments must be initialed by your TA before you leave. Assignments submitted without TA initials will receive zero credit
- We are not responsible for lost exam scantrons - if your scantron becomes lost, you will not receive a grade for that exam and must take the optional final. Life is hard and unfair.
- Blackboard is meant to be a place where you can find out your scores on labs and exams. However, it does not drop the lowest exam or labs, so if you want to know your score, you must do this. See, your math teacher was right, you will need to use this skill every now and then.
- If you are taking more than one class, check early to see if there is a final exam conflict.
- You may only have ONE MAKE-UP laboratory per semester - if you need to make up more than one lab, you must have prior approval from me. We have had people abuse this make up policy in the past and now have to take a harder stance on this.

Laboratory Schedule for Summer, 2009

Week	Dates	Topic	Chapter
1	June 18-19	A: Techniques in Microscopy	2
		B: Quantitative Techniques and Statistics	1
2	June 23-26	A: Cellular Structure Reflects Function	3
		B: Determining the Properties of the Enzyme	5
3	June 30 - July 3	A & B: Diffusion and Osmosis	6
		No Lab/Discussion Thurs July 2 & Fri July 3	
4	July 7-10	A: Form and Function in Photosynthesis	13
		B: Cellular Respiration	7
5	July 14-17	A: Mitosis & Meiosis	8
		B: Paternity Determination in Whooping Cranes	9
6	July 21-24	A: Plant Anatomy	14
		B: Plant Reproduction & Diversity	15
7	July 28 - 31	A & B: Digestive, Gas Exchange, and Circulatory Systems	10 & 11
		A & B: Excretory & Reproductive Systems	12
8	Aug 4-7	Grade Review	
		No Lab or Discussion Aug 6-7 - Final Exams!	----

How Do I Read the Lab Syllabus? (Where the heck does my lab meet?)

There are two labs offered every week. If you look at the lab syllabus, you will see that some of the labs are labeled "Lab Code A" while the other labs are labeled "Lab Code B." If your lab is scheduled to meet in 3086 SEL (sections 13986, 13987, and 13988), you will do the "A" lab on Tuesday or Wednesday in 3086 SEL and then do the "B" lab on Thursday or Friday in 3100 SEL. If your labs are scheduled to meet in 3100 SEL (sections 13980, 13983), you will do the "B" lab on Wednesday in 3100 SEL and then do the "A" lab on Friday in 3086 SEL. If the lab code says A & B, then you meet in the room in which your first lab was held (the "A" lab people in 3086 SEL, the "B" lab people in 3100 SEL).

Be sure that you understand how the summer laboratory schedule operates so that you do not prepare for the wrong lab!

Note: Some of the laboratories will be using stains and chemicals which can damage clothing, so please dress accordingly to laboratory. Neither UIC nor the Biology Department will assume any responsibility for damaged clothing. Also, there will be a fetal pig dissection. If you have religious or ethical objections to this, please contact Michael Muller as soon as possible. An alternate exercise will be assigned.

Your TA Information

Section	Time	A/B	TA	Info
13986	T/R 9-12	A	Bianca	bvinti1@uic.edu
13988	W/F 8-11	A	Jenny	jzambr3@uic.edu
13983	WF 8-11	B	Paul	pgulez2@uic.edu
13987	W/F 1-4	A	Jenny	jzambr3@uic.edu
13980	W/F 1-4	B	Paul	pgulez2@uic.edu