

**BIOS 100: Biology of Cells and Organisms (13990)****MWF 11:00 AM, LC F04**

**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, 2<sup>nd</sup> Edition, by Freeman. (Prentice Hall, 2005).  
 CELLS AND ORGANISMS, 2<sup>nd</sup> Edition, by Muller (Hayden/McNeil, 2005)  
 PHOTOGRAPHIC ATLAS FOR BIOLOGY LABORATORY, by Van der Graaff & Crawley (Morton) - Optional

**Website:** <http://www.uic.edu/classes/bios/bios100/summer2007>  
<http://blackboard.uic.edu>

**Lecture Syllabus**

Week	Date	Topic	Chapter
1	5/28	<b>Memorial Day - No Class!</b>	
	5/30	Course Introduction, Science as a Process	1
	6/1	Chemistry of Life I	2, 3, 4, 5
2	6/4	Chemistry of Life II	2, 3, 4, 5
	6/6	Energy, ATP, and Enzymes	3.4
	6/8	Cells, the Fundamental Unit of Life	6, 7, 8
3	6/11	Cells - Structure and Function	6, 7, 8
	6/13	<b>Examination I - Covers Material from 5/30 to 6/11</b>	
	6/15	Photosynthesis I	10
4	6/18	Photosynthesis II and Cell Respiration I	10, 9
	6/20	Cellular Respiration II	9
	6/22	DNA - The Molecule of Heredity	14
5	6/25	Protein Synthesis	16
	6/27	Control of Genetic Systems in Prokaryotes and Eukaryotes	15, 17
	6/29	Chromosomes, Mitosis, Meiosis	11, 12
6	7/2	<b>Examination II - Covers Material from 6/17 to 7/1</b>	
	7/4	<b>Independence Day - No Class!</b>	
	7/6	Plants - Structure and Function	35
7	7/9	Plants - Reproduction and Diversity	40
	7/11	Animal Systems - Circulation, Respiration, Digestion	43, 44
	7/13	Animal Systems - Urinary, Immune	42, 49
8	7/16	Animal Systems - Nervous, Endocrine	46, 47
	7/18	<b>Examination III - Covers Material from 7/6 to 7/16</b>	
	7/20	<b>Cumulative Final Exam - 11:00 - 1:00 - LC F04</b>	

## **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 two 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!

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

- A: 375 - 420
- B: 330 - 374
- C: 285 - 329
- D: 240 - 289
- E: 0 - 249

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/summer2007](http://www.uic.edu/classes/bios/bios100/summer2007)  
[blackboard.uic.edu](http://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.
- The pig labs are not graded like other labs - I will explain it in more detail in lecture.
- 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, 2006

Week	Dates	Topic	Chapter
1	May 29 June 1	<b>No Labs May 31 &amp; Jun 1 - Lab begins June 2 &amp; 3</b>	----
		A & B: Techniques in Microscopy	2
2	June 5 - June 8	A: Cellular Structure Reflects Function	3
		B: Quantitative Techniques and Statistics	1
3	June 12 - June 15	A: Determining the Properties of the Enzyme	5
		B: Diffusion and Osmosis	6
4	June 19 - June 22	A: Form and Function in Photosynthesis	13
		B: Cellular Respiration	7
5	June 26 - June 29	A: Mitosis & Meiosis	8
		B: Paternity Determination in Whooping Cranes	9
6	July 3 - July 6	<b>No Lab or Discussion July 3 &amp; 4</b>	
		A & B: Plant Anatomy	14
7	July 10 - July 13	A & B: Plant Reproduction & Diversity	15
		A & B: Digestive, Gas Exchange, and Circulatory Systems	10 & 11
8	July 17 - July 20	A & B: Excretory & Reproductive Systems	12
		<b>No Lab or Discussion July 19 &amp; 20 - Final Exams!</b>	----

#### 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 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 13978, 13980, 13983), you will do the "B" lab on Tuesday or Wednesday in 3100 SEL and then do the "A" lab on Thursday or 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	Sara	smarch2@uic.edu
13978	T/R 9-12	B	Melissa	mtalab1@uic.edu
13988	W/F 8-11	A	Sara	smarch2@uic.edu
13983	WF 8-11	B	Colleen	plavin1@uic.edu
13987	W/F 1-4	A	Colleen	plavin1@uic.edu
13980	W/F 1-4	B	Melissa	mtalab1@uic.edu