

## Syllabus, BIOS 100, Fall 2003, Section 20477

<b>Instructor:</b> Michael Muller	<b>Course Description:</b> Processes of cellular and organismic function: cell structure, respiration
<b>Phone:</b> 312-996-3476	photosynthesis, molecular genetics and development,
<b>Email:</b> <a href="mailto:mmuller@uic.edu">mmuller@uic.edu</a>	structure, and physiology of plants and animals.
<b>Office:</b> 3092 SEL	<u>Animals will be used in the laboratory</u>
<b>Office Hours:</b> W 1-4 pm	
<b>Lecture:</b> MWF 11:00 250 SES	
<b>Website:</b> <a href="http://www.uic.edu/classes/bios/bios100/indexf03am.htm">www.uic.edu/classes/bios/bios100/indexf03am.htm</a>	

**Textbook** Biological Sciences, 1<sup>st</sup> Edition. Freeman, 2002

**Lab Manual:** Biological Investigations, 5<sup>th</sup> Edition, Customized. Dolphin. 1999.

Week	Dates	Topic	Readings in Freeman 1 <sup>st</sup> Ed.
1	Aug 25	Course Introduction, Science as a Process	1
	27	The Chemistry of Life I	2, 3.2
	29	The Chemistry of Life II	2, 3.2
2	Sept 1	<b>Labor Day - No School</b>	
	3	Energy, ATP, and Enzymes I	2.3
	5	Energy, ATP, and Enzymes II	2.3
3	8	Cells - Structure and Function I - Cell Structures	5
	10	Cells - Structure and Function II - Organelles	5
	12	Cells - Structure and Function III - Membranes	4
4	15	Movement Across Membranes	4
	17	<b>Exam 1 - Covers Weeks 1-3 and Sept 15</b>	7
	19	Photosynthesis I	7
5	22	Photosynthesis II	7
	24	Photosynthesis III	7, 28.3
	26	Respiration and Fermentation I	6
6	29	Respiration and Fermentation II	6
	Oct 1	Respiration and Fermentation III	6
	3	DNA - the Molecule of Heredity	12
7	6	Protein Synthesis I	13
	8	Protein Synthesis II	13
	10	Genetic Control of Prokaryotes and Eukarotes I	14, 15
8	13	Genetic Control of Prokaryotes and Eukarotes II	14, 15
	15	Mitosis	8
	17	Meiosis	9
9	20	Review for Exam II - optional class	
	22	<b>Exam II - Covers Weeks 4-8</b>	
	24	Plant Biology - The Plant Body	31

10	27	Plant Biology - Plant Anatomy	31
	29	Transport in Plants	32
	31	Plant Nutrition	33
11	Nov 3	Plant Diversity and Reproduction I	28, 36
	5	Plant Diversity and Reproduction II	28, 36
	7	The Urinary System	39
12	10	The Circulatory and Respiratory System I	41
	12	<b>Exam III - Covers Weeks 9-11 (the plant stuff)</b>	
	14	The Circulatory and Respiratory System I	41
13	17	The Digestive System	
	19	The Endocrine System & Nervous System I	42, 43, 44
	21	The Endocrine System & Nervous System I	42, 43, 44
14	24	The Immune System I	46
	26	The Immune System II	46
	28	<b>Thanksgiving - No Class</b>	
15	Dec 1	The Origin of Life I	2
	3	The Origin of Life II	2
	5	<b>Exam IV - Covers Weeks 12 to 15 and Nov 7</b>	
16		<b>Final Exam - Thursday, Dec 11, 8:00 am 250 SES</b>	

Note: I reserve the right to make changes on this syllabus. Any changes will be posted on the website and on Blackboard.

## 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 and is worth a total of 100 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 four hourly examinations, you must take the final examination. The final exam is cumulative and will contain all new questions, which could possibly kill me.

Points are also earned through the completion of laboratory exercises. There are 14 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!

There will also be online “quizzes” on blackboard. These will appear to be worth a variable number of points, but we will scale these down to 30 points. You may take each quiz more than once, and we encourage you to do so. They are meant more as a review than as an actual method of assessment. You are not cheating if you take them more than once. Please do yourself a favor and take these - they are an easy way to earn 30 points and hopefully learn something!

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

500 - 560	A
450 - 499	B
400 - 449	C
350 - 399	D
0 - 349	E

These point levels are guarantees - for example, if you earn 450 points, you are guaranteed a B. I will never raise the grading scale. However, at the end of the semester, I *may* lower it. Please don't pester me too much about this - I won't know if the scale will move or not until the end of the semester.

All of your exam grades and laboratory exercise grades will be posted on the UIC Blackboard.

### Laboratory Schedule for Fall, 2003 am Lecture

Week	Dates	Topic	Chapter
1		Techniques in Microscopy	2
2		Quantitative Techniques and Statistics	5
3		Determining the Properties of an Enzymes	6
4		Cellular Structure Reflects Function	3
5		Determining How Materials Enter Cells	4
6		Photosynthesis	25
7		Measuring Cellular Respiration	7
8		Properties of Biomolecules	p. 451
9		Mitosis and Meiosis	Website
10		Plant Anatomy	23, 24
11		Plant Reproduction	26
12		Digestive, Gas Exchange, and Circulatory System	27 & 28
13		Excretory and Reproductive Systems	29
14		<b>Thanksgiving - No Labs This Week!!!</b>	
15		Paternity Determination in Whooping Cranes	p. 454

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 during weeks 12 & 13. If you have religious or ethical objections to this, please contact Michael Muller as soon as possible. An alternate exercise will be assigned.