

## BIOS 41 – Biology Core I: Cellular and Molecular – Spring 2010

**Lectures (Mandatory):** Monday/Wednesday/Friday 10:10 am – 11:00 am

**Location:** Packard Lab, Auditorium R101

**Instructor:** **Professor Matthias M. Falk** Iacocca Hall, D-218  
(Due to the high number of students please contact first your assigned Teaching Assistant (TA) with questions. Questions your TA can NOT answer will be forwarded to me and answered according to my instructions).

### Recitations (Mandatory):

Section (CRN):	Time:	Location:	Assigned Teaching Assistant:
110 (13299)	Mo 12:10 – 13:00	PA208	Joshua Slee jbs208
114 (14804)	Mo 12:10 – 13:00	LL310	Walter Joseph wjj210
111 (13301)	Mo 13:10 – 14:00	PA208	Joshua Slee jbs208
115 (14805)	Mo 13:10 – 14:00	LL310	Walter Joseph wjj210
112 (13304)	Tue 12:10 – 13:00	CU317	Joyita Bhadra job409
116 (14806)	Tue 12:10 – 13:00	PA503	Amanda Dilger aed410
113 (13306)	Tue 13:10 – 14:00	CU317	Joyita Bhadra job409
117 (14807)	Tue 13:10 – 14:00	PA503	Amanda Dilger aed410

All classes will be held except if campus is officially closed (snow days) or of another emergency. To find out if campus is closed call: 610-758-6397 (NEWS) or consult LU's web site.

**Textbook:** **Essential Cell Biology, 3<sup>rd</sup> edition; Alberts et al., 2009**, Garland Sciences  
**(Required)** (ISBN # 978-0-8153-4129-1 or ...-4130-7)  
(Note that the previous 2<sup>nd</sup> edition from 2004 is outdated and will not be accepted!)

**Classroom Response System (Clickers):** **TurningPoint® Response Card RF**  
**(Required)** (Available for purchase at LU Bookstore)

**You will need to register your clicker to receive credits for your answers. Follow the following 9 steps to register your clicker by no later than Friday, January 22.**

**Clicker questions from Monday, January 25 on will count:**

1. Go to the website [student.turningtechnologies.com](http://student.turningtechnologies.com)
2. Enter your Response Card ID (six-characters under the bar code found on back of the device)
3. Enter your first name and last name in the appropriate fields
4. In "Other Field" enter your LU User ID
5. Complete security entry (repeat entries)
6. Press Next
7. Enter instructor's email address (mmf4)
8. Select the class name that you are in for this instructor and add it to the list on the right
9. Click 'Next' and confirm information. You may click 'Back' if you need to correct information

**Course accompanying Blackboard site at: <http://ci.lehigh.edu/webapps/portal/frameset.jsp>**

## LECTURE SCHEDULE:

<b>Date:</b>	<b>Lecture #:</b>	<b>Topic:</b>	<b>Reading:</b>
M 1/18	1	Course Organization (1 lecture)	--
<b>No Recitations this week</b>			
W 1/20	2	<b>Sec. 1:</b> Introduction into Cell Biology (1 lecture)	Chapters 1, (10)*
F 1/22	3	<b>Sec. 2:</b> Chemical Components of Cells (2 lectures)	Chapter 2
M 1/25	4	“	“ 2
Recitations held			
W 1/27	5	<b>Sec. 3:</b> Protein Structure & Function (2 lectures)	Chapter 4
F 1/29	6	“	“ 4
M 2/1		QUESTIONS AND ANSWERS (or Buffer Day)	
Recitations held			
W 2/3		<b>EXAM #1 (Sections 1, 2, 3)</b>	
F 2/5	7	<b>Sec. 4:</b> DNA Structure & Function/DNA Replication	Chapters 5, 6
M 2/8	8	(2 lectures)	“ 5, 6
Recitations held			
W 2/10	9	<b>Sec. 5:</b> Transcription/Translation/Gene Expression	Chapter 7 (8, 9)
F 2/12	10	(2 lectures)	“ 7 (8, 9)
M 2/15		QUESTIONS AND ANSWERS (or Buffer Day)	
Recitations held			
W 2/17		<b>EXAM #2 (Sections 4, 5)</b>	
F 2/19	11	<b>Sec. 6:</b> Membranes & Membrane Proteins (2 lectures)	Chapter 11
M 2/22	12	“	“ 11
Recitations held			
W 2/24	13	<b>Sec. 7:</b> Transport across Membranes (Channels/	Chapter 12
F 2/26	14	Pumps/Transporters) (2 lectures)	“ 12
M 3/1	15	<b>Sec. 8:</b> Translocation across Membranes (Protein Import/	Chapter 15
Recitations held			
W 3/3	16	Vesicular Trafficking/Endocytosis/Protein Degradation)	“ 15
F 3/5	17	(3 lectures) “	“ 15
<b>3/8 – 3/12 SPRING BREAK</b>			
M 3/15	18	<b>Sec. 9:</b> Mitochondria, Chloroplasts & Energy Generation	Chapters 3, 13, 14

**Recitations held !**

W	3/17		<b>EXAM #3 (Sections 6, 7, 8)</b>		
F	3/19	19	(4 lectures)	“	3, 13, 14
M	3/22	20		“	3, 13, 14
			Recitations held		
W	3/24	21		“	3, 13, 14
F	3/26	22	<b>Sec. 10: Cytoskeleton &amp; Motor Proteins (4 lectures)</b>	Chapter	17
M	3/29	23	“	“	17
			Recitations held		
W	3/31	24		“	17
F	4/2		Good Friday (no lecture)		
M	4/5	25		“	17
			Recitations held		
W	4/7		<b>EXAM #4 (Sections 9, 10)</b>		
F	4/9	26	<b>Sec. 11: Cell Signaling/Cell-Cell Communication/</b>	Chapters	16, 20
M	4/12	27	Cell-Cell Junctions (4 lectures)	“	16, 20
			Recitations held		
W	4/14	28		“	16, 20
F	4/16	29		“	16, 20
M	4/19	30	<b>Sec. 12: Extracellular Matrix (1 lecture)</b>	Chapter	20
			Recitations held		
W	4/21	31	<b>Sec. 13: Cell cycle</b>	Chapter	18
F	4/23	32	Mitosis	“	18
M	4/26	33	Apoptosis	“	18
			Recitations held		
W	4/28	34	<b>Sec. 14: Stem Cells (1 lecture)</b>	Chapter	20
F	4/30	35	<b>Sec. 15: Cancer (1 lecture) (LAST CLASS)</b>	Chapter	20
	5/4 – 12		<b>EXAM #5 (during FINALS WEEKS) (Sections 11, 12, 13, 14)</b>		

(\*Chapter numbers in brackets are topics of Genetics, Bio-Core II offered in the Fall Semester and will be taught there.)

**Course Goals:** This introductory cell biology course is geared to help you obtain a working knowledge regarding the components of a cell and their function, energy acquisition, transfer and utilization, and the organization of the major building blocks into higher-order structures.

**Grading Policy:** Exam scores from four in-class exams and one final exam scores will count equally toward your final grade. **You will need at least 4 exam grades to pass the class** (sorry, no makeup exams!). Exams will be machine-gradable multiple-choice exams.

**Clicker questions will make up 5-10% of your final grade.** Clicker questions will help to demonstrate your comprehension of the topics. You will get:  
-- **1 point/question for giving an answer (right or wrong, only possible choices will be counted)**  
-- **2 points/question for the correct answer**

**Make-up Policy: THERE ARE NO MAKE-UP EXAMS OR OTHER MAKE-UP EXERCISES. YOU NEED AT LEAST 4 EXAM GRADES TO PASS THE CLASS.**

**Rules of the Road:**

1. **You are expected to attend each lecture and to read the related material in the text BEFORE each lecture.** Also look at the corresponding materials on the accompanying interactive CD-ROM.
2. **You are also expected to look at your notes after each lecture, to again read the appropriate sections and chapters of the textbook, and to understand the material that was presented.**
3. **Attendance of Recitations is mandatory and will be checked.** Ask questions, your TAs will help you with questions, clarify things, and will give feedback to me. The recitation sessions are great for practicing potential exam questions.
4. This is a very large class. Please be considerate of others. **No hand-held communication devices (Cell Phones, iPods, etc.)**
5. **There are no extra credit or additional assignments to “rescue” grades. Make every exam and clicker question count – there are no make-up exams.**
6. If you feel that there is an error in the grading of your exam, you have to submit your exam with a written justification to your TA as to why you feel that portion of the exam should be reconsidered. **Important note – an exam will not be reconsidered after the following exam has been taken.**

**Accommodations for Students with Disabilities:** If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center 212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted. **I need to know well in advance, if you will request extra time for exams since there is another lecture scheduled in Packard Auditorium after our class.**