

# Advanced Cell Biology: Syllabus

## Advanced Cell Biology:

Biology 6090/8090  
Spring 2010

### Course Structure:

**Professors:** Dr. Maria Diakonova (3099) Office Hours: M, W 1-2 PM  
Dr. Fan Dong (3257) Office Hours: TBA

**Class meeting times:**  
Mondays and Wednesdays 5:00-7:00 pm in WO 3246.

### Text Book:

*Molecular Biology of the Cell* 5th Ed. by Bruce Alberts *et al.* is an excellent reference book, and is recommended. Most of the material for the class will come from this textbook. However, material covered in the lectures may come from external sources.

### Grades:

Grades will be based upon four examinations: Three in-class examinations and a final. The grade will consist of 20% from each of the three in-class examinations and 40% from the final examination.

### Examinations:

Examinations will be based entirely on lecture material. The final examination will consist of 50% of material from the beginning of the course and 50% of material from the rest of the course following the last in-class examination. Examinations will start and end at the specified times. You will be given two hours to complete each in-class examination and three hours to complete the final examination. If you cannot make it to an examination on the specified date and time, you must notify Dr. Diakonova or Dr. Dong at least 1 week prior to the examination date. There will be no exceptions unless the student brings in a doctor's excuse. If you feel that your examination has been graded unfairly, you must respond within one week of receiving the examination back from the professors. Inquiries after this time will **not** be honored.

### Questions:

Drs. Diakonova and Dong are available for answering questions **only** during their office hours and during class. Therefore, students are encouraged to ask questions during class. For a question on a specific topic, the students are encouraged to first ask the professor giving the lecture on that particular topic. If the student needs another perspective on that topic, they should then contact the other professor. So that the students know who is giving lectures on a specific topic, non-underlined dates in the list of topics are lectures given by Dr. Diakonova, underlined dates are lectures given by Dr. Dong.

**List of Topics:**

Introduction to Cell Biology	1/11
Techniques for studying cells and introduction to Organelles I	1/13
<b>Martin Luther King Holiday</b>	<b>1/18</b>
Techniques for studying cells and introduction to Organelles II	1/20
Membrane Structure/Function	1/25
Membrane Structure/Function	1/27*
Nuclear Structure	2/1*
Protein Sorting I	2/3
Protein Sorting II	2/8
<b>Examination I</b>	<b>2/10</b>
Mitochondria and Chloroplasts I	2/15
Mitochondria and Chloroplasts II	2/17*
Cytoskeleton I	2/22
Cytoskeleton II	2/24
Cell-Cell Interaction I	3/1
Cell-Cell Interaction II	3/3
<b>Spring Break</b>	<b>3/8</b>
<b>Spring Break</b>	<b>3/10</b>
<b>Examination II</b>	<b>3/15</b>
Cell Cycle I	<u>3/17</u>
Cell Cycle II	<u>3/22</u>
Apoptosis I	<u>3/24</u>
Apoptosis II	<u>3/29</u>
Signal Transduction I	<u>3/31</u>
Signal Transduction II	<u>4/5</u>
<b>Examination III</b>	<b>4/7</b>
Cancer I	<u>4/12</u>
Cancer II	<u>4/14</u>
Specialized Tissues and Stem Cells I	<u>4/19</u>
Specialized Tissues and Stem Cells II	<u>4/21</u>

Immune System I	4/26*
Immune System II	<u>4/28</u>
<b><i>Final Examination: From 5:00-8:00</i></b>	5/5

\*lecture given by invited speaker.