

Date	Lecture Topic	Readings	Laboratory	Week
1/28 (M) <b>G</b>	1. Origin of Life; Aspects of living systems	Chapts. 1,4	Cell structure and diversity	1
1/30 (W) <b>G</b>	2. Monomers and polymers	Chapts. 2,3		
2/4 (M) <b>G</b>	3. Structure of the cell membrane: Cell communication	Chapt. 7	Biological monomers and polymers	2
2/6 (W) <b>G</b>	4. Permeability and transport	Chapt. 8		
2/11 (M) <b>G</b>	5. Internal membranes	Chapt. 7, 12	Amino acids and proteins	3
2/13 (W) <b>G</b>	6. Cytoskeleton	Chapt. 15		
2/20 (W) <b>H</b>	7. Enzymes and energetics	Chapts.5, 6	Molecular transport <b>LAB WRITE UP 1</b>	4
2/25 (M) <b>G</b>	<b>EXAMINATION 1</b> (Lecs. 1-6)			
2/27 (W) <b>G</b>	8. Anaerobic energy production	Chapt. 9	Enzyme activity	5
3/3 (M) <b>G</b>	9. Mitochondria and aerobic energy production	Chapt. 10		
3/5 (W) <b>G</b>	10. Photosynthesis	Chapt. 11	Respiration	6
3/10 (M) <b>G</b>	11. Metabolic regulation	Chapt. 14		
3/12 (W)	<b>EXAMINATION 2</b> (Lecs. 7-11)		Photosynthesis	7
3/17 (M) <b>G</b>	12. Nature of genetic material	Chapt. 18		
3/19 (W) <b>G</b>	13. Replication and repair of DNA	Chapt. 19	<b>LAB EXAM 1</b> Metabolic requirements and auxotrophic mutants	8
3/26 (W) <b>G</b>	14. Cell cycle, mitosis and meiosis	Chapt 19,20		
3/31 (M) <b>G</b>	15. Transcription	Chapt. 21	Cell Division <b>LAB WRITE UP 2</b>	9
4/2 (W) <b>G</b>	16. Genetic code and translation	Chapt. 22		
4/7 (M) <b>G</b>	17. Recombinant DNA techniques	pp. 633-648	<i>Isolation of Plasmid DNA</i>	10
4/9 (W)	<b>EXAMINATION 3</b> (Lecs. 12-17)			
4/14 (M) <b>G</b>	18. Regulation of gene expression 1	Chapt. 23 prokaryotes	Characterization of Plasmid DNA	11
4/16 (W) <b>G</b>	19. Regulation of gene expression 2	Chapt. 23 eukaryotes		
4/28 (M) <b>S</b>	20. HIV and AIDS	Handout	Gene Expression	12
4/30 (W) <b>He</b>	21. Cell potentials and nervous conduction	Chapt. 13		
5/5 (M) <b>P</b>	22. Apoptosis	pp.419-422	Motility <b>LAB WRITE UP 3</b>	13
5/7 (W) <b>S</b>	23. Immune systems 1	Handout		
5/12 (M) <b>G</b>	24. Immune systems 2	Handout	<b>LAB EXAM 2</b>	14
5/14 (W) <b>G</b>	25. Cancer	Chapt. 24		

TEXTBOOK:Becker, W., Kleinsmith, L. J., and Hardin, J., The World of the Cell, 6th Ed., Benjamin/Cumming, Pub. LABORATORY MANUAL:LABORATORY MANUAL FOR CELL AND MOLECULAR BIOLOGY, Bio 209 6th ed., Burgess Publishing Co. 2000

RULES: Absence from more than two laboratory sessions will lead to my submitting a drop card for the student. Students who miss a lab and wish to make it up that week may request permission of the lab instructor of the section they wish to attend. Attendance must be verified by the instructor. Spring Break **4/21 - 4/27**

**NO MAKE UP EXAMS WILL BE GIVEN**, He=Hendrix, S= Samms, H= Hubbard, G=Guyden, P=Pezzano

## Course Outcomes

Upon completion of this course, the students will:

1. be able to understand what a cell is
2. know what the building blocks are and how they polymerize to produce the macromolecules that function within the cell
3. be able to understand how the cell and its organelles maintain integrity through membrane production and usage
4. be able to understand how the cell builds and maintains its structure
5. be able to understand how the cell obtains and uses energy (both plant and animal cell)
6. be able to understand the structure and function of the nucleus and DNA
7. be able to understand the nature of genetic material, how it replicates and is repaired
8. be able to understand the genetic code, transcription and translation
9. be able to recognize new methods used for recombinant DNA technology
10. be able to understand what genes are and how their expression is regulated
11. learn how scientists study
  - HIV and AIDS
  - Neurobiology
  - Apoptosis
  - The Immune System
  - Cancer

## Academic Integrity

The CUNY Policy on plagiarism says the following about plagiarism (the CUNY Policy can be found in Appendix B.3 of the CCNY Undergraduate Bulletin 2007 -2009): “Plagiarism is the act of presenting another person’s ideas, research or writings as your own. The following are some examples of plagiarism, but by no means is it an exhaustive list:

1. Copying another person’s actual words without the use of quotation marks and footnotes attributing the words to their source.
2. Presenting another person’s ideas or theories in your own words without acknowledging the source.
3. Using information that is not common knowledge without acknowledging the source.
4. Failing to acknowledge collaborators on homework and laboratory assignments.
5. Internet plagiarism includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the internet without citing the source, and “cutting and pasting” from various sources without proper attribution.

The City College Faculty Senate has approved a procedure for addressing violations of academic integrity, which can also be found in Appendix B.3 of the CCNY Undergraduate Bulletin.”

Be aware that if we suspect plagiarism **we will follow this procedure, no exceptions made**; i.e. we will report you to the Academic Integrity Official. Disciplinary sanctions range from failing the class to expulsion from the college.