

Lecture Syllabus

<http://herbarium.millersville.edu/101.php>

Lecture Times, Room, & Instructor

Location & Time: Caputo 210, W & F 12-1

Instructor: Dr. Christopher Hardy, Ph.D.
Office: Roddy 271

Tel: 871-4317

Office hours: W & F 9:30-11:30, R 3-4

Lecture Schedule

<u>Lecture Topic</u>	<u>Reading</u>
Week of Aug 26: Biological Chemistry	Chapter 2
Week of Sep 02: Biological Chemistry	
Week of Sep 09: Cells	Chapter 3
Week of Sep 16: Membranes	3.3; 4.5
Week of Sep 23: Enzymes	4.4
Week of Sep 30: Photosynthesis & Respiration	5.1-5.5; 6.1-6.9
Week of Oct 07: Exam 1 (Wed, Oct 09) Photosynthesis & Respiration	
Week of Oct 14: Chromosomes & Cell Division	10.1; 8.1, 8.3-8.7
Week of Oct 21: Chromosomes & Cell Division	
Week of Oct 28: Mendelian Genetics	Chapter 9; Chapter 10
Week of Nov 04: DNA, Transcription, & Translation	7.1-7.7; 8.2
Week of Nov 11: Exam 2 (Wed, Nov 13) DNA, Transcription, & Translation	
Week of Nov 18: Evolution	Chapter 12; Chapter 13; 14.6;
Week of Nov 25: No class (T-day recess)	
Week of Dec 02: Evolution	
Week of Dec 09: Finals	
Final Exams:	BIOL 101.01 = Thursday, Dec 12, 12:30-2:30 PM

Materials

- 1. Required Textbook:** From the textbook store, selected chapters from Hoefnagels M. 2018. *Biology: Concepts and Investigations*, 4th Edition. McGraw Hill Education, New York, USA. (ISBN13: 9780078024207 for whole book, but select chapters available as looseleaf in textbook store for lower cost).
- 2. Required Lab Manual:** Fall 2018 edition only, available in MU's textbook store only.
- 3. Required for Lab:** 3-ring binder or folder into which notes from lab and recitation, as well as returned quizzes and other handouts go.
- 4. Required Generally:** Scientific calculator for occasional use on lecture exams, routine use in lab and recitation.

5. Recommended: Spiral-bound notebook for notes in lecture; separate notebook or looseleaf supply for lab; 3-ring binder if you have the looseleaf version of the textbook.

Grading

A point system is employed. Final letter grades are earned on basis of percentage of total points available as follows:

A 93-100%	B- 80-82%	D+ 67-69%
A- 90-92%	C+ 77-79%	D 63-66%
B+ 87-89%	C 73-76%	D- 60-62%
B 83-86%	C- 70-72%	F <60%

*Lecture

Lecture Exam 1	100
Lecture Exam 2	100
Final Lecture Exam (1/3 cumulative)	150

**Lab & Recitation 350 (as per lab syllabus)

Total points possible 700

*You must take exams on their regularly scheduled date and time.

**Regardless of the number of points your lab/recitation instructor assigns in lab or recitation, your final lab or recitation score will be scaled to the 350 course points allotted by Dr. Hardy.

Objectives

1. Identify and name model organisms commonly used in biological research.
2. Classify organisms into domains, kingdoms or clades based on observable characteristics and understand where the organism fits into the organizational hierarchy of the biosphere.
3. Develop a hypothesis and design a controlled experiment to test its validity.
4. Conduct basic scientific experiments using standard laboratory equipment.
5. Explain the relationship between chemical structure and basic biological processes.
6. Describe different types of macromolecules found in all organisms and discuss the relationship between their structure and function.
7. Identify cells as the basic units of life and describe cell structure in prokaryotes and eukaryotes.
8. Discuss the nature of enzymes and how they affect biological reactions.
9. Describe key biochemical pathways for energy acquisition and utilization in living systems.
10. Apply principles of inheritance at molecular and organismal levels and recognize different mechanisms for reproduction.
11. Explain how DNA controls cell structure and function and transfer this information to future generations.
12. Describe the theory of evolution and the role of natural selection.

Open Labs

T & R, 6-8 pm, Roddy 275. If you have questions on the material taught in lecture or lab and don't have time to come see your professor during their office hours, we will have former students available to help you out during Open Labs on Tuesdays and Thursdays from 6-8 pm in Roddy 275. Just drop in with specific questions for help studying.

Attendance Participation Special Needs

Lab & Recitation: Attendance is required.

Participation in lab is expected.

Inform the Office of Learning Services (Lyle Hall) and your instructor immediately if you have disabilities or special needs that might affect your performance in this course.

They will do their best to accommodate you.

Honesty

Cheating or plagiarism results in a zero for the assignment or exam, or worse. There is no distinction between copying or providing answers in this regard. Millersville University's Academic Honesty Policy is found in the Undergraduate Catalog on pp 76-78 (<http://www.millersville.edu/catalogs/undergraduate/index.pdf>).

Title IX

Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment, comply with Title IX of the Education Amendments of 1972, 20 U.S.C. §1681, et seq., and act in accordance with guidance from the Office for Civil Rights, the University requires faculty members to report to the University's Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report to the person designated in the University Protection of Minors policy incidents of sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred.

Information regarding the reporting of sexual violence, and the resources that are available to victims of sexual violence, is available at <http://www.millersville.edu/sexualviolence/index.php>.