Foundations of Biology
BIOL 101.01 Fall 2017

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. Tel: 871-4317
Office: Roddy 271 Office hours: M 2:30-4, W & F 10-11:45

Lecture Schedule

Lecture Topic		Reading
Week of Aug 28:	Biological Chemistry	Chapter 2
Week of Sep 04:	Biological Chemistry	
Week of Sep 11:	Cells	Chapter 3
Week of Sep 18:	Membranes	3.3; 4.5
Week of Sep 25:	Enzymes	4.4
Week of Oct 02:	Photosynthesis & Respiration	5.1-5.5; Chapter 6
Week of Oct 09:	**Exam 1 (Wed, Oct 11)** Photosynthesis & Respiration	
Week of Oct 16:	Chromosomes & Cell Division	8.1, 8.3-8.7; 10.1
Week of Oct 23:	Chromosomes & Cell Division	
Week of Oct 30:	Mendelian Genetics	Chapter 9; Chapter 10
Week of Nov 06:	DNA, Transcription, & Translation	Chapter 7; 8.2
Week of Nov 13:	**Exam 2 (Wed, Nov 15)** DNA, Transcription, & Translation	
Week of Nov 20:	No class (T-day recess)	
Week of Nov 27:	Evolution	Chapter 12; Chapter 13; 14.6;
Week of Dec 04:	Evolution	
Week of Dec 11:	Finals	
Final Exams:	BIOL 101.01 = **Thursday, Dec 14, 12:30-2:30 PM**	

Materials

1. **Required** Lecture Text: From the text book store, selected chapters from Hoefnagels, M. 2015. Biology: Concepts and Investigations, 3rd Edition. McGraw Hill. (ISBN-13: 978-0073525549, but select chapters available in textbook store)
2. **Required** Lab Manual, Fall 2017 edition only: Available for purchase only in the textbook store.
3. **Required** for lab and lecture: Scientific calculator (not a phone) for use in lab, recitation, and occasionally lecture.
4. **Required** Lab Binder: A 3-ring binder into which go notes from lab and recitation, as well as lab manuals and other handouts.

5. Recommended for lab: Looseleaf paper for notes.

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.

Special Needs 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 as appropriate.

Attendance Lecture: You are responsible for all material covered, whether or not you are present in lecture.
Lab & Recitation: Required. Details in your lab/recitation syllabus.

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 2017-2016 Undergraduate Catalog on pp 71-73 (http://www.millersville.edu/catalogs/undergraduate/index.pdf).

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.

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.