BIOL 161-A1 General Biology I Lab

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GENERAL BIOLOGY I LAB (BIOL 161-A1) SUMMER 2015
(Satisfies 1d, 1e, 3a, 3b, 9a, 9b, 9c, 9d of NSTA Science Standards)

INSTRUCTOR: Kathy Tehrani  OFFICE: Albers 105A  TELEPHONE: 513-745-3494  E-MAIL: tehranik@xavier.edu

Class location: Lindner 201  Class Time: MW 5:50-8:20

Course Objectives

This laboratory course, which supplements General Biology I lecture (BIOL 160), is designed to provide students with hands-on experience for the principles learned in lecture. This will be achieved by carrying out observations and experiments. Furthermore, students will gain experience using laboratory equipment, such as the compound light microscope, and spectrophotometers. Additionally, students will gain experience in understanding and evaluating a scientific paper.

Learning Outcomes

By the end of this course the successful student will understand:

1. Components, functions, and proper use of the compound light microscope
2. Components and functions of prokaryotic and eukaryotic cells, including cell membrane, cell wall, ribosomes, and various eukaryotic organelles
3. Major chemical components of living organisms
4. Basic principles of fermentation and photosynthesis
5. Mitosis, meiosis, and gametogenesis
6. Mendelian genetics
7. Composition and functions of animal tissues
8. Major components and functions of the digestive, respiratory, circulatory, cardiovascular, urogenital, and nervous systems
9. Components of scientific experiment (independent, dependent, and controlled variables), and how to design a scientific experiment
10. How a scientific paper is designed, organized, and written
11. How to become familiar and analyze a scientific paper

Attendance Policy

Attendance is mandatory. Unexcused absences will affect your grade, because of missed tests, and/or assignments. Also, being late to class will hurt your grade. In other words, don’t miss any lab, don’t be late, and attend the section for which you are registered.

Excused Absences – An absence is considered excused only if it meets either of the two following criteria:

1. ILLNESS/EMERGENCIES. An absence is considered excused if it is due to an illness or an emergency. However, you will need to convince your instructor that the absence was indeed due to an illness or an emergency.
2. UNIVERSITY-SPONSORED EVENTS. An absence is also considered excused if it is due to a university-sponsored event (e.g., you are part of a team and the team is traveling at the time). You will need to provide evidence, however, that the event was university-sponsored.
Resources For Studying

The following resources will be available to help students succeed in this course:

1. Review materials, models, photos, and other helpful items will be available in the lab until the day before each test to help you to prepare for each test. Furthermore, photos of some of the material may be posted on Canvas for your convenience.

2. The Learning Assistance Center runs study groups for General Biology; call 745-3280 for information or go there to sign up. Tutors are available for students who need individual help.

Conduct

- No talking while the instructor is talking
- No use of cell phones (for any purpose)
- Computer use limited to lab work
- Leave lab clean and organized
- Return everything you use to its proper location

Academic Honesty

Academic Honesty (From the 2006-2008 Xavier University Catalog, page 54): “The pursuit of truth demands high standards of personal honesty. Academic and professional life requires a trust based upon integrity of the written and spoken word. Accordingly, violations of certain standards of ethical behavior will not be tolerated at Xavier University. These include theft, cheating, plagiarism, and unauthorized assistance in assignments and tests...(and) the falsification of results and material submitted in reports. All work submitted for academic evaluation must be the student’s own. Certainly, the activities of other scholars will influence all students. However, the direct and unattributed use of another's efforts is prohibited, as is the use of any work untruthfully submitted as one’s own. Penalties for violations of this policy may include one or more of the following: a zero for that assignment or test, a grade of F in the course, and expulsion from the University.”

Grades

Your grade for the course will be calculated in the following way:

1. Tests (3): 90% of your final grade
2. Article analysis and graphing assignments: 10% of your final grade

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

Please note: You will need at least a grade of C- in this course in order to enroll in some upper Biology courses at Xavier University.
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<td>May 20</td>
<td>Identifying Biological Molecules</td>
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