

**Fall 2007**  
**Three Rivers Community College**  
**Norwich, Connecticut**

Syllabus  
General Biology I  
4 Credits

BIO K121

Lecture: CRN 30018  
MW 9:30 – 10:50  
Lecture: CRN 30019  
MW 12:30 – 1:50  
Room: Mohegan 213

Lab: CRN 30023  
T 9 – 12  
Lab: CRN 30024  
T 1 – 4  
Lab: CRN 30022  
F: 9 - 12  
Room: Mohegan 212

Instructor: Tina Mendeloff, Associate Professor, Natural Science  
Office: Shop Wing  
Phone: 892 – 5706  
Email: [tmendeloff@trcc.commnet.edu](mailto:tmendeloff@trcc.commnet.edu)  
Website: <http://www.freewebs.com/threeriversbiology/>

Office Hours: MW 2 – 3, F 12 –1 and by appointment

## Required Texts

- Biology by Sylvia Mader, McGraw-Hill Publisher, 9<sup>th</sup> Edition, 2007, Customized for Three Rivers  
*Bring your text to all classes and labs.*
- Biology Lab Manual by Sylvia Mader, McGraw-Hill Publisher, 9<sup>th</sup> Edition, 2007  
Some labs or parts of labs will be based on hand-outs that you will be given prior to the lab.

**Course Description:** This course is an introduction to the major principles and concepts of modern biology. Topics to be covered include molecular and cellular biology, cell division, cellular transport systems, cellular metabolism, specialization and differentiation of both plant and animal cells and modern genetics.

**Course Rationale:** The rationale of this course is to aid the student in developing an understanding of (1) biological science as it may be related to other disciplines, (2) life processes and interrelationships between man and other organisms, (3) the interdependence of all life forms and the natural laws operating that ensure the stability of life and (4) current biological concerns such as pollution, overpopulation, and genetic engineering.

## Attendance

Instructional staff assigned to all sections of credit-bearing courses at Three Rivers are required to take attendance at each class meeting and retain records of attendance for at least three calendar years. The manner in which attendance is taken is determined by the professional discretion of the instructor. In certain instances attendance records are furnished to the Financial Aid Office and the International Student Advisor.

## Course Objectives

The student will:

- Be able to describe the requirements of life
- Be able to describe the characteristics of life shared by all organisms
- Be able to describe the scientific method through examples
- Be able to identify the principle elements that make up the body and give their chemical symbols
- Demonstrate knowledge of atomic structure and its relationship to the interaction of atoms to form molecules
- Demonstrate knowledge of ionic, covalent, and hydrogen bonds and give examples of each
- Be able to describe the types of organic and inorganic compounds found in the body
- Be able to define pH in terms of hydrogen ion concentration and be able to identify any given pH as acid, alkaline or neutral; describe how pH changes are minimized by buffers
- Demonstrate knowledge of cell organelles and their functions
- Demonstrate knowledge of various mechanisms of active and passive transport relative to the plasma membrane
- Demonstrate knowledge of mitosis and meiosis
- Demonstrate knowledge of the types of tissues and their functions in both plants and animals
- Be able to define anabolic and catabolic metabolism
- Be able to explain the photosynthetic process
- Be able to define the term enzyme and explain the composition, classification and function of enzymes
- Be able to explain the role of genes in inheritance and how they are passed from one generation to the next
- Demonstrate knowledge of the Mendelian laws of genetics
- Demonstrate knowledge of the various forms of gene interaction
- Be able to discuss some common forms of human genetic disease
- Be able to explain the role of DNA and RNA in inheritance

## **Course Outline**

- I. The Cell, Chapters 2 - 8
  - A. Basic Chemistry
  - B. The Chemistry of Organic Molecules
  - C. Cell Structure and Function
  - D. Membrane Structure and Function
  - E. Metabolism: Energy and Enzymes
  - F. Photosynthesis
  - G. Cellular Respiration
  
- II. The Genetic Basis of Life, Chapters 9 – 16
  - A. The Cell Cycle and Cellular Reproduction
  - B. Meiosis and Sexual Reproduction
  - C. Mendelian Patterns of Inheritance
  - D. Chromosomal Patterns of Inheritance
  - E. DNA Structure and Functions

## **Methods of Evaluation**

### 1. Lecture Quizzes

You will have four lecture quizzes, each with a maximum of 20 multiple choice and/or true-false questions. The lowest of the four grades will be dropped. The remaining three grades will be averaged and count as one lecture exam grade.

I use Scantron answer forms (bubble sheets) for quizzes. **BRING #2 PENCILS AND ERASERS ON QUIZ DAYS.**

### 2. Lecture Exams

You will have four lecture exams, each with a maximum of 100 multiple choice and/or true-false questions. The five lecture exam grades will be averaged and count as 75% of your grade for the course.

I use Scantron answer forms (bubble sheets) for exams. **BRING #2 PENCILS AND ERASERS ON EXAM DAYS.**

### 3. Lab Practicals

You will have four lab practicals, each with a maximum of 50 short answer questions. The four lab practical grades will be averaged and count as 25% of your grade for the course.

All quizzes, exams, and lab tests (practicals) will be scaled.

Lecture Schedule:

MON August 27

TUES August 28

WED August 29

FRI August 31

MON September 3 LABOR DAY, COLLEGE CLOSED

WED September 5

MON September 10

WED September 12 **QUIZ I**

MON September 17

WED September 19 **EXAM I**

MON September 24

WED September 26

MON October 1

WED October 3

MON October 8 COLUMBUS DAY, NO CLASSES

WED October 10

MON October 15

WED October 17

MON October 22

WED October 24

MON October 29

WED October 31

MON November 5

WED November 7

MON November 12

WED November 14

MON November 19

WED November 21 SUPPLEMENTAL SESSION  
**We Will Be Having Class**

MON November 26

WED November 28

MON December 3 LAST DAY TO WITHDRAW

WED December 5

MON December 10 LAST DAY OF CLASSES

WED December 12 SUPPLEMENTAL SESSION  
**We Will Be Having Class**

MON December 17 SUPPLEMENTAL SESSION  
**We Will Be Having Class**

WED December 19 LAST DAY OF THE SEMESTER  
***EXAM IV***

Lab Schedule, TUESDAYS (MW 12:30 Lecture):

September 4

September 11

September 18

September 25

October 2

October 9

October 16

October 23

October 30

November 6

November 13

November 20 NO LAB

November 27

December 4

December 11 SUPPLEMENTAL  
***LAB TEST IV***



Lab Schedule, FRIDAYS (MW 9:30 Lecture):

September 7

September 14

September 21

September 28

October 5

October 12

October 19

October 26

November 2

November 9

November 16

November 23 THANKSGIVING BREAK, COLLEGE CLOSED

November 30

December 7

December 14 SUPPLEMENTAL  
***LAB TEST IV***

Make-ups for all exams, quizzes and lab tests (practicals) will be determined on an individual basis. ***If you do not call or email me you must take the make-up on the day you return to class.*** The rationale for allowing a make-up is based on fairness to the rest of the class in terms of amount of time for study.

**Final Grade Scale:**

92.56 – 100 = A

89.56 – 92.55 = A-

85.56 – 89.55 = B+

82.56 – 85.55 = B

79.56 – 82.55 = B-

75.56 – 79.55 = C+

72.56 – 75.55 = C

69.56 – 72.55 = C-

65.56 – 69.55 = D+

62.56 – 65.55 = D

59.56 – 62.55 = D-

0.00 – 59.55 = F

**Academic Integrity Policy**

Academic integrity is essential for a useful education. Failure to act with integrity severely limits a person's ability to succeed in the classroom and beyond. Academic dishonesty erodes the legitimacy of every degree awarded by the college. In this class and in the course of your academic career, present only your best work, clearly document the sources of the material you use from others, and act at all times with honor.

Please see Three River's catalog and/or website for a fuller explanation of the school's academic integrity policy.

**College Withdrawal Policy**

Students have the option of withdrawing from a course prior to the 11<sup>th</sup> week of class without the instructor's signature and prior to the 14<sup>th</sup> week of class (April 23<sup>rd</sup>) with the instructor's or advisor's signature. A student must initiate the withdrawal by calling 892-5756 or submitting a withdrawal form to the Registrar's Office.

## **Disabilities Statement**

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Disabilities Counseling Services at 383-5240. To avoid any delay in the receipt of accommodations, you should contact a counselor as soon as possible. Please note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the disabilities counselor.

## **Cellular Phones and Beepers**

Cellular phones and beepers are allowed in class only if they are turned off or to *silent* mode. Under no circumstances are phones to be answered or text messaging done in class *nor should the student disrupt the class by leaving to answer the phone.*

When there are extenuating circumstances that require a student to be available by phone or beeper, the student must speak to the instructor prior to the class so that together they can arrive at an agreement.