

BIOLOGY 1010: General Biology

Spring Semester 2015

Instructor: Bryan Stevens

Office Hours: Wed 12 – 1 or by appointment

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Lecture: T/Th 1:00 – 2:15 Science 109 (Biology 1010-04, CRN 24873) 3 credits
(See Syllabus for topical coverage)

About This Course: This course is an introduction to fundamental biological principles and concepts designed for students who are not biology majors. The course fulfills the general education graduation requirements in the Life Sciences.

General Education Objectives: These objectives are common to all life science courses at Dixie State College.

- Students will explain and apply major concepts of a view of life, the cell, and the genetic basis of life.
- Students will demonstrate knowledge of the process of science including asking testable questions, using inductive and deductive reasoning in forming hypotheses and in making reliable predictions.
- Students will explain the methods of science, and distinguish among the natural sciences, liberal arts (humanities and fine arts, and social and behavioral sciences), and pseudoscience.
- Students will compute ratios, proportions, percentages, decimals, fractions, frequencies, and elementary statistics.

Specific Course Objectives: Upon successful completion of the assignments, laboratory, exams, and quizzes in this course, the student will:

- demonstrate the ability to reason scientifically.
- apply scientific methods in problem solving.
- create and critique experimental design.
- distinguish between true science and pseudoscience.
- describe the basic chemical composition of living organisms.
- relate chemical properties to physiological functions in living organisms.
- describe various cellular structures and their functions.
- follow the breakdown of a glucose molecule through metabolic pathways.
- compare energy-acquiring and energy-releasing pathways in metabolism.
- describe the movement of chromosomes during cell division (mitosis and meiosis).
- describe patterns of inheritance in Mendelian genetics.
- perform monohybrid and dihybrid genetic crosses.
- solve basic genetics and inheritance problems.
- describe the structure and function of DNA.
- describe the process by which genes are expressed as protein products.
- gain an insight into genetic engineering and associated ethical arguments.
- describe the processes of evolution, having gained a knowledge of basic genetics.
- realize that evolution is more than a powerful theory; evolution is a fact.
- describe the principles of population ecology and community interactions.

- discuss the impact of overpopulation on biotic and abiotic components of the biosphere.
- build a strong basic foundation of biological principles in order to support more advanced concepts.

Required Textbook: *Campbell Essential Biology*, Fifth Edition. Eric J. Simaon, et al. Pearson Publishing. 2013.

Other Required Class Materials: The following items will be provided by you:

- a. 4 SCANTRON test forms [the bluish-green Form No. 882-ES].
- b. No. 2 pencils with good erasers for recording examination answers.
- c. Notebook or other suitable paper for class notes. A three-ring loose-leaf binder is recommended because it will hold class notes, and various handouts.

NOTE: A 10% penalty will be assessed if you fill out a quiz or assignment with red/pink pen or red/pink pencil. Use #2 pencil or blue/black ink please.

DSU POLICIES, PROCEDURES, AND SEMESTER DATES

Click on this link - <http://www.dixie.edu/reg/syllabus/> - for comprehensive information on the Semester Dates, the Final Exam Schedule, University resources such as the library, Disability Resource Center, IT Student Help Desk, Online Writing Lab, Testing Center, Tutoring Center, and Writing Center. In addition, please review DSU policies and statements with regards to Academic Integrity, Disruptive Behavior and Absences related to university functions.

If you are a student with a medical, psychological, or learning disability or think you might have a disability and would like accommodations, contact the Disability Resource Center (652-7516) in the North Plaza. The Disability Resource Center (<http://dixie.edu/drcenter/>) will determine eligibility of the student requesting special services and determine the appropriate accommodations related to their disability.

A Word About Cellular Phones, Picture Phones, Pagers, PDAs, and Text Messaging: The use of electronic communications devices is strictly forbidden during class lectures and exams!

Please Do Not Bring Your Young Children To Class. Too often children cause disruption during class because they are fidgety, get bored, and have short attention spans. It is against college policy to bring children to class. Please try to find other arrangements.

Examinations: 3 examinations (100 points each) will be given during the course, PLUS a **comprehensive** final exam worth 150 points. Exams will cover material studied from the beginning of the course or the previous exam. You should study both the text and your lecture notes. Early exams will NOT be given, and late exams [given only in an emergency] will have a 10% penalty assessed. Any late exam may be different and more difficult than the one taken at the regularly scheduled time. Inform the instructor whenever illness (you may be asked to provide a doctor's signed note) or emergency occurs, especially if an exam is scheduled – BEFORE the scheduled exam date, if possible. Routine make-up exams will NOT be given in this course. In the case of an open book exam, if ample time (two or more weeks) is provided in which to take the exam, the exam must be completed by the given deadline. NO

EXCEPTIONS!! This includes unexpected illness. Don't procrastinate until the last minute on open book exams.

One final note: Make certain that you do your own work. Please do not copy the work of others. Besides not helping you, this practice is illegal – it is called plagiarism. Students who copy assignments, whether suspected or apparent, or who permit another or others to copy, will receive NO credit for the assignment.

Grading Policy: Grades will be based on a total of 650 points possible, as follows:

Examinations (3 worth 100 points each)	300 points
Project	200 points
Final examination	150 points

You may expect the following grade according to your total points earned:

A = 94-100%	C = 74-76.9%
A- = 90-93.9%	C- = 70-73.9%
B+ = 87-89.9%	D+ = 67-69.9%
B = 84-86.9%	D = 64-66.9%
B- = 80-83.9%	D- = 60-63.9%
C+ = 77-79.9%	F = < 60%

Grades will NOT be based on the curve. If everyone earns an "A," everyone gets an "A." The percentages or total points as outlined above may be decreased but will NOT be increased.

Extra Credit: The only extra credit available in this course is as follows:

There is no extra credit. Do not come to me toward the end of the semester and ask if there is anything you can do to get extra credit (writing a report and such). The answer is **NO**. Spend your time wisely studying the assigned material.

LECTURE SCHEDULE and READING ASSIGNMENTS
BIOL 1010: General Biology
Spring Semester, 2015

		Date		
Class begins	Jan.	13	T	Syllabus/Intro to course
*Exam 1	Feb.	10	T	Unit 1 - Intro/Cells
*Exam 2	March	5	Th	Unit 2 - Genetics
*Exam 3	April	9	Th	Unit 3 – Evolution/Diversity
May 7 Thursday		FINAL EXAM - 12:30 – 2:30 pm		

Comprehensive (150 points) covering Units 1 – 4

Note: It is intended that the topics will be discussed on the dates indicated. However, some topics may overlap the dates according to time and circumstances.

Disclaimer: The instructor has no intention of discussing all textbook information in class – there is insufficient time. Nevertheless, you are held accountable for the information, whether discussed or not discussed, unless otherwise announced.

***Schedule may change at instructor's discretion**

