

Required text: Campbell & Reece, Biology, 9th Ed. Pearson/Benjamin Cummings, 2011, Custom Version for Massasoit Community College. (The full version text is also acceptable)

Additional: http://web.whrsd.org/faculty/Stephansky_Mark/MCC_Bio/MCCindex.html

Course Description: This course introduces basic principles of biology. Topics include scientific method, evolution, cellular and subcellular structure, basic cell chemistry, transport across cell membranes, mitosis, meiosis, metabolism, photosynthesis, DNA structure and replication, protein synthesis, and patterns of inheritance. This course is required as a prerequisite for most other four-credit Biology courses.

This class meets for four hours each **Tuesday** night from 5:30pm – 9:40pm. Lecture: 1.75 hours; Laboratory: 2 hours

Course Objectives:

At the successful completion of this course each student will have a basic understanding of cell structure and function and of genetics. Each student will also develop the following laboratory skills: laboratory safety procedures, understanding the scientific method as a problem solving technique and the use of a compound microscope as an observation tool. Course outcomes may be retrieved here:

http://www.massasoit.mass.edu/acad_depts/sci_math/biology/bio_outcomes/BioPrn_matrix.pdf

Attendance:

You are expected to attend all classes and laboratory sessions. Each Tuesday night class is the equivalent of almost a week's worth of weekday classes. Students find that missing just one class becomes very difficult to make up. Attendance will be taken each week. Please note that the attendance policy as stated in the Massasoit Community College catalog will be followed. **There are no make-up lab sessions. Furthermore, there are no scheduled make-up lecture exams.**

Teaching Methods:

Students are expected to come to class prepared to actively participate in classroom discussion. Students should spend a minimum of two study hours for each hour of class per week (therefore, a minimum of 8 hours of home study per week). Students are encouraged to seek additional help, if necessary, from the instructor or by using the resources of the ARC. The ARC, 508-588-9100 ext 1801, provides free tutors and study groups. Class lectures may be augmented by the use of handouts, PowerPoint, Prezi and video presentations.

Accommodations Statement:

Students with disabilities who believe that they may need accommodations in the classroom are encouraged to contact a disability counselor on campus as soon as possible. Students at the Brockton Campus with learning disabilities should contact Andrea Henry, at extension 1805. Students with physical disabilities at the Brockton Campus should contact Mary Berg, at extension 1425.

Course Policy and Requirements:

- During the course, four hourly exams will be given. See the syllabus for specific dates.
- Exams will cover material from the lectures, textbook, and outside readings. Each exam is worth 15% of your final grade. **There are no scheduled make-up lecture exams.**
- You will participate in laboratory sessions. Laboratory handouts will be provided by the instructor. These labs may follow lecture or may be integrated within the lecture. A calculator may be helpful. Labs are worth 25% of your grade. **There are no make-up lab sessions.**
- **Cell Phone Usage:** When in class I ask that you turn any noise-emitting device on your person to its vibrate or silent feature. Texting and other cell phone-related activity are never appropriate during class. Your fellow students really don't like it when you're not paying attention, so please give the class your entire attention or leave.

Your grade will be distributed as follows:

In Class Tests (Best 3 out of 4)	45%
Laboratory Work (Lowest dropped)	25%
Guided Reading Assignments	10%
Final Exam	20%

Letter grades are assigned as designated below

A	94-100	C	74-76
A-	90-93	C-	70-73
B+	87-89	D+	67-69
B	84-86	D	64-66

B- 80-84 D- 60-63
C+ 77-79 F < 60

<u>Day</u>	<u>Chapter</u>	<u>Topic</u>
Jan. 24	Introduction Chapter 1 Lab	Nature of Science/Exploring Life Scientific Measurements
Jan. 31	Chapters 2-3 Lab	The Chemical Context of Life; Water and the Fitness of the Environment The Water Molecule
Feb. 7	Chapters 4 Lab	Carbon and the Molecular Diversity of Life Molecular Modeling
Feb. 14	Test 1 Lab	Chapter's 1-4 Introduction to the Microscope
Feb. 21	Chapter 5 Lab	The Structure and Function of Macromolecules Cell Diversity Part I
Feb. 28	Chapter 6 Lab	A Tour of the Cell Cell Diversity Part II
Mar. 6	Chapter 7 Lab Test 2	Membrane Structure and Function Diffusion & Osmosis Chapter's 5-7 (Take home exam--due on March 20)
Mar. 20	Chapter 8 Lab	An Introduction to Enzymes and Metabolism; Enzyme Folding
Mar. 27	Chapter 9 Lab	Cellular Respiration: Harvesting Chemical Energy Aerobic Respiration - version A
Apr. 3	Chapter 10 Lab	Photosynthesis Photosynthesis
Apr. 10	Chapter 12 Test 3	The Cell Cycle Chapter's 8-10
Apr. 17	Chapter's 13, 14 Lab	Meiosis and Sexual Life Cycles, Mendel and the Gene Idea Cell Cycle & Mitosis; Meiosis
Apr. 24	Chapter 14-15 Lab	Mendel and the Gene Idea, The Chromosomal Basis of Inheritance Mendelian Genetics Problem set, Human Variation (take home Lab – Due May 1)
May 1	Test 4 Chapter's 16-17 Lab	Chapter's 12-15 The Molecular Basis of Inheritance, From Gene to Protein Protein Synthesis
May 8	Chapter 17; Handouts Lab	From Gene to Protein; DNA Technology and Genomics Gel Electrophoresis; Final Exam Review
May 15	Final Exam	Cumulative, with emphasis on Chapters 16, 17, Biotechnology