

Course Syllabus Biol. 1406.12 Spring 2011

Department: Biology **Course Title:** General Biology I (majors) **Name:** BIOL_1406_12
Start Date: 01/18/2011 **End Date:** 05/12/2011 **Modality:** FACE-TO-FACE
Credits: 4
Instructor's Name: Clovis Stacey **OC Email:** cstacey@odessa.edu
Instructor's Office: WH 130 **OC Phone #:** (432) 335-6543

Course Description: This course is a study of the organizational aspects of cells from molecular to organismic levels. Students learn to understand and interpret terms and discover principles covering cell anatomy, cell biochemistry, cellular respiration, photosynthesis, cell reproduction, evolution, ecology, and genetics. In laboratory activities students learn to perform basic mathematical calculations of converting between the metric and English systems of measurement, acquire experimental data and apply reason to the interpretation of principles underlying the observations including cause and effect relationships. Designed as a transferable lab science course for science majors. Lab fee required.

Prerequisites/Corequisites: Pass reading on THEA or COMPASS and be eligible for College Algebra by passing math on THEA or COMPASS or by passing the developmental math sequence.

Scans: 1, 3, 6, 9

Course Objectives:

1. Learner will be able to identify the significant concepts of the atom and how it forms bonds with other atoms to form molecules, the difference between inorganic molecules and organic molecules and recognize the various forms of each and the significance of these forms as they relate to living organisms and identify the 4 macromolecular molecules found common to living organisms and their units of structure as well as their functions important for life.
2. Learner will be able to understand the cell in terms of its anatomical structure and the functions of each structure and understand the processes by which substances move into and out of the cell.
3. Learner will be able to explain energy production and utilization by the different forms of cells which are common to our planet.
4. Learner will be able to understand the heredity of life and the alterations which occur in it's structure and the consequences of these alterations.
5. Learner will be able to recognize the importance of evolution to the continuity of living forms and the various forms of support for evolution.
6. Learner will be able to understand the various concepts of ecology required to have a rudimentary grasp of its aspects.

Required Readings/Materials: *Campbell Biology*. 9th edition, by N. A. Campbell, J. B. Reece, L. A. Urry, M. L. Cain, S. A. Wasserman, P. V. Minorsky, and R. B. Jackson; Pearson, 2010; ISBN-10: 0321558235, ISBN- 13: 9780321558237

Grading Policy: The learners semester grade for the course is determined by calculating the below percentiles for each area, and then adding the percentiles for each area together for a percentage out of 100:

Lecture test grades = 70% Lab test grades = 30%

A= 89.5 – 100
B = 79.5 - 89.49
C = 69.5 - 79.49
D = 59.5 - 69.49
F = <59.5

Special Needs: Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Learning Resource Center (Library): The Library, known as the Learning Resources Center, provides research assistance via the LRC's catalog (print books, videos, e-books) and databases (journal and magazine articles). Research guides covering specific subject areas, tutorials, and the "Ask a Librarian" service provide additional help.

Student E-mail: Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Student Portal: Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support: For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies: For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or students' and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).

Department Specific Information:

1. Last Day to drop the class with a "W" is Thursday, April 14, 2011.
2. Cell phones must be turned off while the student is in the classroom.

Tentative Lecture Schedule

Jan.	17	No Classes (MLK Holiday)
	18	Introduction to the class: Overview of class and class policies
	20	Ch. 1: Themes in the Study of Life
	25	Ch. 1 continued;
	27	Ch. 2: The Chemical Context of Life
Feb.	01	Ch. 2 Continued
	03	Ch. 3: Water and Life
	08	Ch. 3 Continued
	10	Test 1 (Ch. 1 - 3)
	15	Review Test 1; Ch. 4: Carbon and the Molecular Diversity of Life
	17	Ch. 4 Continued
	22	Ch. 5: The Structure and Function of Large Biological Molecules
	24	Ch. 5 Continued
Mar.	01	Ch. 6: A Tour of the Cell
	03	Ch. 6 Continued
	08	Ch. 7: Membrane Structure and Function
	10	Ch. 7 Continued
	14–18	No Classes (Spring Break)
	22	Test 2 (Ch. 4 - 7)
	24	Review Test 2; Ch. 8: An Introduction to Metabolism
	29	Ch. 8 Continued
	31	Ch. 9: Cell Respiration and Fermentation
Apr.	05	Ch. 9 Continued
	07	Ch. 9 Continued
	12	Ch. 10: Photosynthesis
	14	Ch. 10 Continued
	19	Test 3 (Ch. 8 – 10)
	21	Test 3 Review; Ch. 14: Mendel and the Gene Idea
	26	Ch. 14 Continued
	28	Ch. 15: The Chromosomal Basis of Inheritance
May	03	Ch. 15 Continued
	05	Test 4 (Ch. 14 & 15)
	12	Final Exam, Thursday, Time: 8:00-10:30 am, Room: WH 111

TENTATIVE LABORATORY SCHEDULE Biology 1406 Spring 2011

LABORATORY MANUAL: Biology 10th ed. Laboratory Manual, by Sylvia S. Mader, WCB McGraw-Hill

LABORATORY ATTENDANCE: The laboratory portion of this course is mandatory.

TESTING: There are four lab exams at 100 pts. each. A deduction is given for misspelling.

WEEK OF	LABORATORY EXERCISE
Jan. 18	No Lab
24	Measurement (2)
31	Metrics (handout)
Feb 07	Microscopy (2)
14	QUIZ I (metrics handout, 2); Basic Chemistry (handout)
21	Chemical Composition of Cells (3)
28	Cell Structure and Function (4)
Mar 07	QUIZ II (Basic Chemistry Handout ,3,4) ; Enzymes (5)
14	No Lab (Springbreak)
21	Cellular Respiration (7)
28	Photosynthesis (6)
Apr. 04	QUIZ III (5,6,7) ; Mitosis (8)
11	Meiosis (8)
18	Mendelian Genetics (handout)
25	Human Genetics (10)
May 02	QUIZ IV (8, 10, handout)