

For Course Information Only
Syllabus will be available on the first day of class

Biology Update One
BIOC 623c
Online Fall 2009

Course Information:

Instructors: Jim Ware, M.S. (jware4@cox.net)
Lisa Rezende, Ph.D. (lrezende@email.arizona.edu)

Dates: September 21, 2009 through December 16, 2009.

You will receive 3 units of graduate credit for passing this course. This means the course involves a significant time commitment. Please see the university policy on course credit at <http://catalog.arizona.edu/2008-09/policies/enrpol.htm> or contact the instructors if you unclear about the expectations.

Learning Objectives

In participating in this class you will

- Name the four classes of biological molecules and describe the chemical basis of their structure and function
- Relate the three-dimensional structure and chemical nature of a biologically-important molecule to its biological function
- Speak fluently about the molecular basis of biological process including protein folding, enzyme catalysis, DNA replication, gene expression, transport across the cell membrane, cell communication, cell respiration, and photosynthesis.
- Exchange information with other teachers on how to best communicate the principles of cell and molecular biology to students at a variety of different grade-levels.
- Read and interrupt accounts of recent research in cell and molecular biology, and consider ways to incorporate it into the classroom.

Course Resources

- **Website:** The course web site will contain files with most course readings or links to required web sites, as well as supplemental materials and video files of the lectures.
- **Lectures:** If you have trouble viewing video files over the Internet, please consider purchasing DVDs of the lectures. Lectures begin in unit two, so if you think you will need DVDs please contact Ellie Warder (warder@U.ARIZONA.EDU) or Lisa Rezende (lrezende@email.arizona.edu) as soon as possible.

- **Textbook:** You will need a copy of the book *Biology, 8th edition* (ISBN-13: 978-0321543257) by Neil Campbell and Jane Reece . You can purchase it new or used at the bookstore or website of your choice. If you already have an older version of this book please contact Lisa Rezende (lrezende@email.arizona.edu).
- **Other materials:** Tubers and multi-colored push pens for Unit 3 can be purchased for \$6.25 from <http://www.3dmoleculardesigns.com/news2.php>.

Navigating the Course:

This is known as a “guided” online course, and the course provides a structure so that you will (hopefully) not get far behind. . **You will not be working at your own pace.** Everyone enrolled in the course will be in the same unit at the same time, so that we can engage in discussions of the material in the unit.

Each unit will consist of the following sections:

- Lesson- taped lectures by Jim Ware covering this week's material
- Reading assignments from both the textbook and outside sources
- Lecture review
- Update discussion, where you will discuss a current topic in biology that relates to the unit
- Activity and activity discussion
- Assignment, which is turned in for a grade
- Reflections
- Self-assessment quiz

Unit 6 will also include a cumulative final.

Tentative Course Schedule

Unit and Dates	Topics
Unit One: September 21 st - September 27 th (<i>note: one week unit</i>)	Introduction to Online Learning
Unit Two: September 28 th – October 11 th	Introduction to Biomolecules: Chemistry Review, Carbohydrates, and Lipids
Unit Three: October 12 th - October 25 th	Proteins and Enzymes
Unit Four: October 26 th - November 8 th	Nucleic Acids and Gene Expression
Unit Five: November 9 th - November 29 th (<i>note 3 weeks for this unit due to Thanksgiving holiday</i>)	Cell Membrane, Membrane Transport, and Cell Signaling
Unit 6: November 30 th - December 11 th	Cell Respiration and Photosynthesis

Grading

Grades will be assigned as follows: A, 90-100%; B, 80-89%; C, 70-79%, D, 60-69%, E, below 60%.

Discussion and Assignment Policies:

As there is no “face time,” online courses depend on interactions among the class participants and instructors through asynchronous discussion threads and between the instructors and the student through the completion of assignments. **Therefore, it is critical that you actively participate in all discussions and turn in assignments on time.**

Discussion will be graded mostly on participation, but the depth of your comments will also be taken into account. All questions posed for the discussion need to be addressed or points will be deducted. Responses should have more depth than “I agree.” Where appropriate, please bring in relevant examples from your experiences in the classroom or your work on the assignments. Discussion grades will be split evenly between your original post and your response to you peers. **If you post after the deadline we will deduct 25% from the score you would have received.**

No late assignments will be accepted, and no Incomplete grades will be given. In return, we pledge to get you feedback on written assignments and discussions promptly so that you will know where you stand.

Disability Resources: If you anticipate issues related to the format or requirements of the course, please contact us. We would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (520-621-3268; <http://drc.arizona.edu>) and notify us of your eligibility for reasonable accommodations. We can then work with you and the DRC staff to coordinate your accommodations.

Academic Integrity: Violations of scholastic ethics are considered serious offenses by the University of Arizona, the General Biology Program, and by your instructors. All work done for this class must be your own. You may collaborate with your colleagues on class activities and projects, but your performance on all graded work should be your own, unless you are specifically turning in a group project.. Any ideas “borrowed” from others should be plainly represented as such. Any form of cheating or plagiarism will be dealt with severely and may result in a grade of “E” for the course. For more information on the University of Arizona’s academic integrity policies, please see: <http://studpubs.web.arizona.edu/policies/cacaint.htm>

Creating a constructive class environment: *Threatening behavior is prohibited.* “Threatening behavior” means any statement, communication, conduct or gesture, including those in written form, directed toward any member of the University community that causes a reasonable apprehension of physical or emotional harm to a person or property. A student can be guilty of threatening behavior even if the person who is the object of the threat does not observe or receive it, so long as a reasonable person would interpret the maker’s statement, communication, conduct or gesture as a serious expression of intent to physically harm or emotionally damage. In the event of threatening behavior by one of the students in the course, official policies and procedures will be followed as described at <http://policy.web.arizona.edu/~policy/threaten.shtml>.

Changes to this syllabus: The information contained in this syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructors.