

Fundamentals of Biology I
BSC 1010C CRN 26629
Spring 2014

INSTRUCTOR: Dr. Leesa L. Sward

OFFICE: Room 249

OFFICE HOURS: Class meeting weeks: Friday: 7:00a-8:30a; 11:15p -1:00pm; 3:45p-4:45p Non class meeting weeks M, T, W, R, F: virtual hours 8:30am- 9:30 am; other times by appointment

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CLASS MEETS: 1:00p-3:45p; Friday 1/10; 1/17; 1/31; 2/21; 2/28; 3/21; 3/28; 4/18; 4/25; Room 221; Winter Park Campus; Credits: 4; (Class 3; Lab 3)

REQUIRED TEXT: Biology: Volume I second custom edition for Valencia College (with student access code) from Reece, *et. al.* Campbell Biology, 9th Edition (2011). Benjamin/Cummings.

This textbook comes with access to MasteringBiology. This course is a hybrid course and much of your work will be completed on MasteringBiology. Register for MasteringBiology through our Blackboard course only.

Blackboard 9.1: This is a Blackboard hybrid class, the website can be accessed by logging on to <http://learn.valenciacollege.edu> You will use your Atlas account ID and password to access the course syllabus, labs, exams,

COURSE DESCRIPTION: FUNDAMENTALS OF BIOLOGY I Prerequisite: Satisfactory completion of all mandated courses in reading, mathematics, English, and English for Academic Purposes.

Introduction to fundamental biological principles emphasizing common attributes of all living organisms. Unifying concepts include chemical structure of living matter, structure and function of the cell, specialized cells, major metabolic functions, control systems, reproduction, genetics, evolution and ecology. Prerequisite for advanced biology courses. (Special Fee: \$62.00)

The lab is an integral component of this course and is designed to reinforce and extend the course material within this hybrid class setting. Even though some of the labs are online, they still require the procedures of scientific inquiry. **Labs and online lecture materials are designed to complement each other and are not mutually exclusive of each other.**

LEARNING OUTCOMES FOR COMBINED LECTURE/LAB FUNDAMENTALS OF BIOLOGY I:

The following learning outcomes describe what students should know and/or be able to do with their new knowledge at the end of this course.

Learning Outcomes	Assessments/Activities	Valencia's Core Competencies
Students will describe the fundamental characteristics of living organisms	Lab activities Exams Online assignments	Think, Communicate, Act
Students will describe the fundamentals of molecular structure and molecule functions in living organisms.	Lab Activities Exams Online assignments	Think, Communicate, Act
Students will describe the fundamentals of structure, function, and evolution of eukaryote and prokaryote cells.	Lab activities Exams Online assignments	Think, Communicate, Act

Students will describe the integrative structure and function of cells in the structure and function of eukaryote organisms.	Lab Activities Exams Online assignments	Think, Communicate, Act
Students will describe the fundamentals of the molecular and cellular basis of metabolism and relationships to ecology and evolution.	Lab Activities Online assignments Exams	Think, Communicate, Act
Students will describe the fundamentals of asexual and sexual reproduction at the cellular and organismal level and the genetic and evolutionary significance.	Lab Activities Online assignments Exams	Think, Communicate, Act
Students will describe genes and the fundamentals of the processes and patterns of inheritance in eukaryote organisms.	Lab Activities Online assignments Exams	Think, Communicate, Act
Students will describe or model the fundamentals of eukaryote molecular genetics to include: structure and function of DNA, RNA, and ribosomes pertaining to the expression of our genes into polypeptide phenotypes.	Lab Activities Online assignments Exams	Think, Communicate, Act

COMPETENCIES:

Valencia faculty defined four interrelated competencies (Value, Think, Communicate, Act) that prepare students to succeed in the world community. These competencies are outlined in the College catalog. This course will further develop your mastery of these core competencies through classroom lecture and discussion, group work, and class activities.

WITHDRAWAL DEADLINE: The deadline for withdrawing from this class with a grade of W is Friday, March. 21, 2014. Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of “W.” A student is not permitted to withdraw after the withdrawal deadline. A faculty member MAY withdraw a student up to the beginning of the final exam period for violation of the class attendance policy. A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of “W.” Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of “F.” For a complete policy and procedure overview on Valencia Policy 4-07 please go to: <http://valenciacollege.edu/generalcounsel/policydetail.cfm?RecordID=75>.

EVACUATION: Please make note of evacuation route from your classroom in case of emergency. Interpret all audible alarms as valid and act accordingly.

GRADING SCALE:

The final grade will be determined as a percentage of total possible points earned. Letter grades will be assigned according to the following scale:

A=90-100% C=70-79% F=Below 60%
B=80-89% D=60-69%

GRADE COMPOSITION: (approximate point values—subject to change)

1. Labs (7 x TBA pts =)
2. Lab Exams: Mid-term (100pts); Lab Final (100pts)
3. Mastering Biology Science Method, Chemistry, Math (7 x 10 pts = 70pts)
4. Mastering Biology Quizzes (16x 20pts =320 pts)
5. Mastering Biology Activities (16 x 12pts = 192pts)
6. Chapter Exams: (4 x100 = 400); Final Exam (100pts)

GRADING POLICIES:

If a student completes the final exams, the grade earned for the course will be recorded with the registrar. If a student decides to withdraw prior to completion of the final exam, it is the student's responsibility to complete official procedures through the registrar's office.

1. All assignments must be completed before each class.
2. No late or missed exams accepted
3. There are no makeup labs.
4. No Late work accepted.

ACADEMIC HONESTY:

1. Each student is expected to be in compliance with the college catalog and student handbook.
2. Any student who cheats on any assignment will receive a zero and may be subject to withdrawal from the class.
3. Students are expected to do their own work for all ONLINE assignments (MasteringBiology and Exams)

ATTENDANCE:

1. Students are expected to attend all classes.
2. Missed exams and lab assignments cannot be made up.

HANDOUTS:

1. Some supplemental material will be handed out during class. All other materials will be posted on Blackboard.
2. If you are absent from the class when handouts are distributed, make arrangements to get them from another student or access them from Blackboard

CLASS ETIQUETTE/STUDENT CODE OF CONDUCT (See posting in classroom)

1. All cell phones must be silent during class.
2. Be respectful of others' right to learn.
3. Respect your classmates' right to have opinions that differ from your own.

SPECIAL NEEDS:

1. Students with disabilities who qualify for academic accommodations must provide a letter from the office for **Students with Disabilities (OSD)** and discuss specific needs with the professor, preferably during the first two weeks of class. The office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (Winter Park Campus, room 203; (407-582-6887).
2. Please follow the college policy relating to children on campus and make arrangements for childcare outside of classrooms or labs.
3. Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. **BayCare Behavioral Health Student Assistance Program (SAP)** services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

CHAPTER AND FINAL EXAMS:

All exams will be administered in Valencia College testing centers. Make sure to check testing center days and hours of operation before you plan to take your exam. You will need to bring your Valencia ID to be allowed to take any exam. You must take each exam during the assigned time period. Plan ahead, the dates of all exams are in the syllabus. If you fail to take your exam(s) you will receive a zero for the exam(s). No make ups for missed exams.

Exams may include multiple choice, matching, fill in the blank, labeling, or short answer questions. Review material can be found in the content area of our Blackboard course.

The Final Exam is cumulative. If you score higher on the final exam than one of the previous 4 lecture exams, the low score will be replaced by the final exam grade.

Blackboard 9.1:

This is our college online tool for accessing and managing our class communication and assignments. Once you have logged on to Blackboard with your Atlas user name and password you can access our class. When you click on our class you will be in the content area. The content area contains each weeks work.

In Class Labs: You can access these labs on Blackboard. Print out the lab and complete the pre-lab section before you come to class. The remainder of the lab is to be completed in class and then handed in at the end of class. Labs will be graded for accuracy and completeness.

Student Grade Sheet

Coursework	Due Date	Possible points	Points earned
Lab 1: Scientific Measurement	1/10		
Chapter 1 Activity Mastering Biology	1/16		
Chapter 1 Mastering Biology: Review Science Method, Chemistry and Math	1/16		
Chapter 1 Quiz Mastering Biology	1/16		
Chapter 2 Activity Mastering Biology	1/16		
Chapter 2 Mastering Biology: Review Science Method, Chemistry, and Math	1/16		
Chapter 2 Quiz Mastering Biology	1/16		
Lab 2: Atoms and Molecules	1/17		
Chapter 3 Activity Mastering Biology	1/23		
Chapter 3 Mastering Biology: Review Science Method, Chemistry, and Math	1/23		
Chapter 3 Quiz Mastering Biology	1/23		
Chapter 4 Activity Mastering Biology	1/30		
Chapter 4 Mastering Biology: Review Science Method, Chemistry, and Math	1/30		
Chapter 4 Quiz Mastering Biology	1/30		
Lab 3: Microscope and Cell	1/31		
Exam 1 (chapters 1-4)	2/3		
Chapter 5 Activity Mastering Biology	2/6		
Chapter 5 Mastering Biology: Review Science Method, Chemistry, and Math	2/6		
Chapter 5 Quiz Mastering Biology	2/6		
Chapter 6 Activity Mastering Biology	2/13		
Chapter 6 Quiz Mastering Biology	2/13		
Chapter 7 Activity Mastering Biology	2/13		
Chapter 7 Quiz Mastering Biology	2/13		
Exam 2 (chapters 5-7)	2/17		
Chapter 8 Activity Mastering Biology	2/20		
Chapter 8 Mastering Biology: Review Science Method, Chemistry, and Math	2/20		
Chapter 8 Quiz Mastering Biology	2/20		
Lab 4: Diffusion, membranes, enzymes Lab	2/21		
Lab Mid term (covers labs 1-4 and chapters 1-8 MB Review Science work)	2/24		
Chapter 9 Activity Mastering Biology	2/27		
Chapter 9 Quiz Mastering Biology	2/27		
Chapter 10 Activity Mastering Biology	2/27		
Chapter 10 Quiz Mastering Biology	2/27		
Lab 5: Cellular Respiration and Photosynthesis	2/28		
Exam 3 (chapters 8-10)	3/10		
Chapter 12 Activity Mastering Biology	3/13		
Chapter 12 Quiz Mastering Biology	3/13		
Chapter 13 Activity Mastering Biology	3/20		
Chapter 13 Quiz Mastering Biology	3/20		
Lab 6: Mitosis and Meiosis	3/21		
Chapter 14 Activity Mastering Biology	3/27		
Chapter 14 Quiz Mastering Biology	3/27		
Lab 7: Genetics	3/28		
Chapter 15 Activity Mastering Biology	4/3		
Chapter 15 Quiz Mastering Biology	4/3		
Exam 4 (chapters 12-15)	4/7		
Chapter 16 Activity Mastering Biology	4/10		
Chapter 16 Mastering Biology: Review Science Method, Chemistry, and Math	4/10		
Chapter 16 Quiz Mastering Biology	4/10		
Chapter 17 Activity Mastering Biology	4/17		
Chapter 17 Quiz Mastering Biology	4/17		
Lab 8: Genes to Proteins	4/18		
Final Lab Exam (labs 5-8 and chapter 16 MB Review Science work)	4/25		
Final Exam (cumulative chapter content)	4/25		
		Total	

Tentative Schedule

Date		Chapters	Labs	Exams	
Jan. 10		Class meets in room 105 and/or 221	Introduction to class; Register for MasteringBiology Complete Measurement Lab	Lab 1: Measurement completed in class; (instructor will provide copy of lab)	
Jan. 11-16	Week 1	Online	Chapters 1 and 2		
Jan. 17		Class meets		Lab 2: Atoms and Molecules	
Jan. 18-24	Week 2	Online	Chapter 3		
Jan. 25-30	Week 3	Online	Chapter 4		
Jan. 31		Class meets		Lab 3: Microscope and cell	
Feb 1-7	Week 4	Online	Chapter 5		Exam 1 due Feb. 3
Feb 8-14	Week 5	Online	Chapters 6 and 7		
Feb. 15-20	Week 6	Online	Chapter 8		Exam 2 due Feb. 17
Feb. 21		Class meets		Lab 4: Diffusion, membranes, and enzymes	
Feb. 22-27	Week 7	Online	Chapters 9 and 10		Lab Mid term exam due Feb. 24
Feb. 28		Class meets		Lab 5: Cell Respiration and Photosynthesis	
Mar. 2-8	Week 8		Spring Break		
Mar 10-14	Week 9	Online	Chapters 12		Exam 3 due Mar. 11
Mar. 15-20	Week 10	Online	Chapter 13		
Mar. 21		Class meets		Lab 6: Mitosis and Meiosis	
Mar. 22-27	Week 11	Online	Chapter 14		
Mar. 28		Class meets		Lab 7: Genetics	
Mar 29-Apr. 4	Week 12	Online	Chapter 15		
Apr. 5-11	Week 13	Online	Chapter 16		Exam 4 due Apr. 7
Apr. 12-17	Week 14	Online	Chapter 17		
Apr. 18		Class meets		Lab 8: Genes to Proteins	
Apr. 19-24	Week 15	Online	Review for Final Exams		
Apr. 25			Final Exam is cumulative (review sheet is available on Blackboard) Final Lab Exam (labs 5-8) Both exams are online and need to be taken in a Valencia College testing center before 8pm April 25 th .		