

Valdosta State University, BIOL 1107K, Sections M, N, O, P, Q, R (4 Credit Hours)
Principles of Biology I – Fall 2011
Syllabus & Course Policies

Lecture: BC 1011 – Mondays & Wednesdays – 3:30-4:45

Lab: BC 2071

Section M, Tuesdays 9:30-11:20
Section N, Tuesdays 2:00-4:50
Section O, Wednesdays 8:00-10:50
Section P, Thursdays 9:00-11:50
Section Q, Thursdays 1:00-3:50
Section R, Fridays 8:00-10:50

Lab instructor

Dr. Cantonwine
Dr. Cantonwine
Dr. Calestani
Dr. Calestani
Dr. Bielmeyer
Dr. Calestani

A syllabus for the laboratory portion of this course will be provided by your lab instructor on the first day of lab.

Lecture Instructor: Dr. Emily Cantonwine (Dr. Cantonwine)

Office: BC 2031 or BC 2040 during office hours. See below.

Phone: (229) 333-5337

Email: egcantonwine@valdosta.edu (Responses to email and Blazeview mail will occur during office hours only)

Office hours: Mondays, Wednesdays, & Thursdays 12:30-1:30 in room BC 2040, or by appointment. To make an appointment, send an email to my valdosta.edu account with “appointment” in the subject line. I will respond at first convenience.

Lecture Graduate Assistant: Katie Beasley (Ms. Beasley)

GA Email: klbeasley@valdosta.edu

GA Office hours: The week after each exam, Ms. Beasley will be in BC 2040 during my office hours to go over exams and review grades. Ms. Beasley will also be available during office hours upon request, if you need help computing your grade.

Welcome to Principles of Biology I. This is the first course in a series designed to help you develop a strong foundation in the biological sciences to build on throughout your studies at VSU and beyond.

BIOL 1107 Course Description. An introduction to the principles of biology for science majors, with an emphasis on the cellular nature of life. Concepts covered include the origin and early evolution of cellular life; cell structure, function, metabolism, and reproduction; cell signaling; and gene regulation in bacteria and eukaryotes.

There are no prerequisites for this course. BIOL 1100 is a co-requisite for Biology majors.

Required Resources:

- Sadava, D., Hillis, D.M., Heller, & Berenbaum, M.R. 2009. LIFE: The Science of Biology. Ninth Edition. Sinauer Associates, Inc., Sunderland, MA, and W.H. Freeman & Co., Gordonsville, VA.
- R.H. Goddard. 2011. Methods and Investigations in Basic Biology. Fifth Edition. Hayden-McNeil Publishing, Plymouth, MI. (Lab manual)
- Turning Technologies Clicker NXT

Learning Goal

Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

Course Objectives and Outcomes (refer to Outcome section at end of syllabus for more information)

By the end of this course, students will be able to

- 1) answer questions that demonstrate an understanding of fundamental concepts of biology, including the scientific method and experimental design; cellular structure, function, metabolism, and reproduction; the nature of the gene and its action; and the mechanisms of evolution (GEO 5; BEO 1-4)
- 2) perform a variety of standard lab techniques used in biological research (GEO 5)
- 3) use critical thinking skills and written communication skills to present the results and conclusions of data collected in the lab in standard scientific writing format (GEO 4 & 7; BEO 1)

Assessments:

Lecture (75% of grade):
Unit Exams (4): 100 points each
Clicker Grade: percentage score
Cumulative Final Exam: 100 points
Lab (25% of grade):
TBA in lab
Bonus (+10%)
Homework (7): 100 pt total

The lowest unit exam or
clicker grade will be dropped

SCALE

A ≥ 90.0%
B ≥ 80.0%
C ≥ 70.0%
D ≥ 60.0%
F ≤ 59.99%

Explanation of Lecture Assessments:

Unit Exams. Each unit examination is worth 100 points. There are no make-up exams, regardless of excuse. If you miss an exam, this will be the grade that is dropped. Students may not take exams early, with the exception of students with a university-related or religious excuse. The unit exams are not cumulative.

Clicker Grade. Beginning the second week of class, each lecture will include clicker questions. Correct answers will count 2 points, incorrect answers will count 1 point, and questions that are not answered will count 0 points. The total number of questions, and therefore potential points (2 points × # questions), will vary each lecture; therefore, your clicker grades will be posted as percentages. If the clicker grade is lower than the lowest unit exam grade, this grade will be dropped. If you use someone else's clicker or allow someone to use your clicker (meaning you do not attend class or you "click" for someone who is not present), your clicker grade will be the grade that is dropped.

Final Exam. The final exam is worth 100 points and is cumulative. All students are required to take the final exam. This grade may not be dropped!

Bonus Homework (HW) - There will be 7 HW assignments throughout the semester, each worth 10 points. HW will be assigned as a pdf file on Blazeview. These assignments will be posted no later than Friday at 5:00pm and will be due the following Wednesday to Ms. Beasley by the beginning of class (3:30). You may turn HW in early to the HW box that is located on the counter outside my office door. If you are late turning in your HW the following points will be deducted: -1 point if 1 to 5 minutes late, and - 2 points if 6 to 10 minutes late. No HW will be accepted after 3:40pm, per the discretion of Ms. Beasley. Your HW must be handwritten on the assignment printout, unless otherwise stated. This bonus opportunity may be terminated for any reason.

All lecture grades will be posted on the Blazeview cross-listed page **Arts and Sciences Cross-Listed - FA2011-BIOL-1107K-M_N_O_P_Q_and_R**. Your grade can be computed at anytime using the following equation:

$$\text{Grade} = ((\text{average percent exam grade} + \text{average percent clicker grade} - \text{lowest droppable grade}) \times 0.75) + (\text{average percent lab grade} \times 0.25) + ((\text{average percent HW grade}) \times 0.1)$$

Percent averages are computed by adding up all earned points, dividing by all possible points, and multiplying this value by 100. Calculate your lecture, lab*, homework, and clicker grades separately before plugging the values into the grade equation above. *Remember that your lab grade may be computed differently depending on your lab instructor. Refer to the lab syllabus for more information.

General Rules for the Lecture Hall:

Attendance Policy. Attendance will be monitored using clickers, and a head count will be taken to insure that the number of clickers does not exceed the number of students in the classroom.

Student conduct

- Enter the classroom through one of the doors leading to the seating area. Do not enter or exit through the stage doors. Due to construction, please use the doors on the right side of the room.
- Arrive on time and have all the materials you need when class begins.
- I expect your full attention to be on the course material. If this is not possible, please be respectful of your fellow students and do not be disruptive.
- You do not need my permission to leave class early. Please do so in the least disruptive way as possible. For example, if you know you have to leave early, sit near the door.
- Disruptive students may be asked to leave the classroom. I consider listening to music, surfing the internet, and obvious texting to be disruptive.

Food and Drink

- Drinks and snacks are allowed as long as their consumption and storage are not a disturbance to yourself or other students. Each student must clean up after him or herself; otherwise, this privilege will be revoked.

Electronic Devices

- Bring your clicker to lecture every day! Clickers will not be used in labs.
- Turn off your cell phone during class!
- Turn off your MP3 player and remove your earbuds/headphones during lecture.
- Laptops & related tools are allowed for note taking as long as its use is not disruptive (see above).

Special Needs: If you have need for special arrangements to allow you to meet the requirements of this course, please contact the Access Office for Students with Disabilities in Nevins Hall, 245-2498. Also, please discuss this need with me before the end of the second week of class.

Academic Integrity: I follow the Academic Honesty Policies and Procedures of the University and the Department of Biology's Policy on Plagiarism. For more information, refer to www.valdosta.edu/academic/AcademicHonestyPoliciesandProcedures.shtml and www.valdosta.edu/biology/documents/biologyplagiarism.doc. "Academic Integrity/ Honesty" means performing all academic work without plagiarism, cheating, lying, tampering, stealing, receiving unauthorized or illegitimate assistance from any other person, or using any source of information that is not common knowledge.

Important information:

- For Biology majors, a grade of C or higher is required in this course before additional biology courses can be attempted.
- Midterm, October 6th, is the last day for withdrawing without penalty.

Tentative Lecture Schedule, BIOL 1107, sections M, N, O, P, Q, R Fall Semester 2011

Week	Subject	Chapters	HW Due Wednesdays by 3:30
Aug 15	Introduction to Biology; Chemistry of Life	1, 2	
Aug 22	Clicker training (Aug 22); Chemistry of Life; Proteins, Carbohydrates, and Lipids	2, 3	HW 1 assigned
Aug 29	Nucleic Acids; Cells	4, 5	
Sept 5	<i>Labor Day (Sept 5); EXAM 1 (Chapters 1-4 on Sept 7)</i>		
Sept 12	Cells; Cell membrane	5, 6	HW 2 assigned
Sept 19	The Cell Cycle & Cell Division (mitosis, apoptosis, & cancer cells)	11.1-11.3, 11.6-11.7	HW 3 assigned
Sept 26	Cell Signaling & Communication	7	
Oct 3	EXAM 2 (Chapters 5, 6, 7, 11.1-11.3, 11.6-11.7 on Oct 3); Energy, Enzymes, & Metab.	8	
Oct 10	Pathways that harvest chemical energy;	9	HW 4 assigned
Oct 17	Photosynthesis	10	HW 5 assigned
Oct 24	<i>Fall Break (Oct 24); Chapter 8-10 Review</i>	8-10	
Oct 31	EXAM 3 (Chapters 8-10 on Oct 31); The Cell Cycle & Cell Division (meiosis)	11.4-11.5	
Nov 7	Inheritance, Genes, & Chromosomes; DNA & Its Role in Heredity	12, 13	HW 6 assigned
Nov 14	From DNA to Protein	14	HW 7 assigned
Nov 21	Gene Mutation and Molecular Medicine; <i>Thanksgiving (Nov 23)</i>	15	
Nov 28	Regulation of Gene Expression Recombinant DNA and Biotechnology	16, 18	
Dec 5	EXAM 4 (Chapters 12-16 & 18 on Dec 5); Final Exam (Cumulative on Dec 9 5-7pm)		

Valdosta State University General Educational Outcomes (GEO)

1. Students will demonstrate understanding of the society of the United States and its ideals.
2. Students will demonstrate cross-cultural perspectives and knowledge of other societies.
3. Students will use computer and information technology when appropriate.
4. Students will express themselves clearly, logically and precisely in writing and in speaking, and they will demonstrate competence in reading and listening.
5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices.
6. Students will demonstrate knowledge of diverse cultural heritages in the arts, the humanities, and the social sciences.
7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written and visual materials.
8. Students will demonstrate knowledge of principles of ethics and their employment in the analysis and resolution of moral problems.

Department of Biology Educational Outcomes (BEO)

1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral format used in peer-reviewed journals and at scientific meetings.
2. Describe the evolutionary process responsible for biological diversity, explain the phylogenetic relationships among the other taxa of life, and provide illustrative examples.
3. Demonstrate an understanding of the cellular basis of life.
4. Relate the structure and function of DNA/RNA to the development of form and function of the organism and to heredity
5. Interpret ecological data pertaining to the behavior of the individual organism in its natural environment; to the structure and function of populations, communities, and ecosystems; and to human impacts on these systems and the environment.