

Valdosta State University, BIOL 1107K, Sections A-G (4 Credit Hours)
Principles of Biology I – FALL 2015
Syllabus & Course Policies

Lecture: BC 1011 – MWF, 8:00-8:50

Lecture Instructor: Dr. Emily Cantonwine (Dr. Cantonwine) Office: BC 2031 Phone: (229) 333-5337

Email: egcantonwine@valdosta.edu

Office hours: Mondays 10-2 and Fridays 9:30-12. I do not make appointments during these times... just show-up.

Graduate Assistant (GA): Lorraine Dawkins

Embedded Tutors: TBA

Lab Sections: BC 1085 – A - M 9-11:50 Dr. Chambers; B - M 1-3:50 Dr. Chambers; C - T 9:30-12:20 Dr. Reece; D - W 10-12:50 Dr. Cantonwine; E - W 1-3:50 Dr. Chambers; F - R 9:30-12:20 Dr. Reece; G - R 1-3:50 Dr. Calestani

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 Freshman Biology majors.

Required Resources:

- **Biology** by OpenStax College.
- Turning Technologies Clicker NXT
- R.H. Goddard. 2011. *Methods and Investigations in Basic Biology*. Sixth Edition. Hayden-McNeil Publishing, Plymouth, MI. (Lab manual)

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 final grade)

• Lecture grade		<u>SCALE</u>
7 of 8 - the lowest of these grades will be dropped	<u>Points</u>	A ≥ 90.0%
○ Unit Exams (5)	100 each	B ≥ 80.0%
○ Cumulative Final Exam (1)	100	C ≥ 70.0%
○ Pooled Clicker Grade (1)	100	D ≥ 60.0%
○ Average Blazeview quiz grade (1)	100	F ≤ 59.99%

Total possible pts = 700 after lowest grade is dropped

Lab (25% of final grade)

- Refer to your lab syllabus for assessment details

Explanation of Lecture Assessments:

Unit Exams. A percentage score will be determined for each unit exam. 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.

Final Exam. The final exam will be cumulative, and is weighed the same as the unit exams, the pooled clicker grade, and the average quiz grade. Students may choose to not take the final, but in this case, no other grade will be dropped.

Pooled Clicker Grade. Beginning in the second week of class, lectures will include an assessment using clicker questions. Each correct answer will count 2 points, incorrect answers will count 1 point, and questions that are not answered will count 0 points. *Individual clicker assessments* will be posted to Blazeview within 48 hours following the lecture. At the end of the semester, a *Pooled Clicker Grade* will be calculated using the following equation:

$$\sum ((\text{individual clicker grades converted to a percentage}) - (\text{lowest individual clicker grade percentage} + \text{any clicker grades where the absence was excused and documented by TA})) / \# \text{ of individual clicker grades used.}$$

** The lowest individual clicker grade is dropped from the pooled grade to allow for a forgotten clicker or malfunctioning clicker. Students are therefore allowed one pass for unintended errors. It is your responsibility to fix any clicker issues in a timely manner.*

** It is your responsibility to get my approval for an excused absence and to make sure that the GA receives documentation of my approval.*

** The Pooled Clicker Grade will be the lecture grade that is dropped if you allow someone to use your clicker in your absence, or if you use someone's clicker in his or her absence.*

Average Quiz Grade. This grade will be an average of all quiz grades posted to Blazeview. There are 2 types of quizzes, pre-lecture vocabulary quizzes and post-lecture practice quizzes. When quizzes are assigned, they will be posted on Fridays and in most cases must be completed before lecture on Mondays (8 am). Refer to the tentative lecture schedule for exact due dates. You will have one attempt for each pre-lecture vocabulary quiz, and two attempts for each post-lecture quiz.

- **Pre-Lecture Vocabulary.** A list of vocabulary words related to the upcoming week's material will be posted to blazeview most Wednesdays so that the terms may be defined before the quiz is posted on Fridays. Students are expected to write or type & print the definitions of these words before attempting the quiz, and to add this work to your lecture notes for easy access during lecture as needed. I may ask to see your vocabulary lists, on occasion, as an extra credit opportunity. Again, you will have only one attempt for this quiz, and in most cases, it must be completed by Mondays at 8am.
- **Post-Lecture Practice Quizzes.** A set of questions allowing practice with the week's lecture material will be posted to Blazeview most Fridays. Again, you will have two attempts for this quiz, and in most cases, it must be completed by 8am on Monday.

Replacement Grades. There will be two "Extra Credit" opportunities to replace low quiz grades, or upon request, low individual clicker grades. No other extra credit or replacement opportunities will be provided.

All lecture grades will be posted on the Blazeview page **Principles of Biology I Section D2L CO**. Your grade can be computed at any time using the following equation (see me during office hours if you would like help with this calculation):

$$\text{Grade} = [(\text{average \% lecture grade after lowest grade is dropped}) \times 0.75] + (\text{average \% lab grade} \times 0.25)$$

Lab communications will be made using the Blazeview page **Principles of Biology I Section _ CO**.

General Rules:

Attendance Policy. Attendance is not required in lecture. The attendance policy in the laboratory is per the discretion of the laboratory instructor and may significantly impact your potential grade. Refer to the lab syllabus for details.

Assigned seats. Assigned seats will be used (beginning the second or third week of class) to keep track of student attendance for the purpose of monitoring clicker usage. **You are welcome to change seats (temporarily or permanently) during the semester, but it is your responsibility to inform the graduate assistant of this change prior to making the move; otherwise, your pooled clicker grade may be dropped if you are counted absent but your clicker is detected!**

Lecture Notes. Powerpoint slides with fill-in blanks will be provided for printing at least 24 hours before the lecture (beginning the second week of class). Students are expected to print the slides and fill in the blanks during lecture. If you miss a lecture, you may use the textbook to fill in the blanks yourself (recommended), or ask a fellow student or the embedded tutors.

Student conduct

- Arrive on time and have all the materials you need (including your clicker) when class begins.
- Your full attention should be on the course material. If this is not possible, please be respectful of your fellow students by not being disruptive.
- You do not need my permission to leave class early. Please do so in the least disruptive way.
- Disruptive students may be asked to leave the classroom. I consider listening to music, surfing the internet, obvious texting, and talking to your neighbor while material is being presented to be disruptive.

Food and Drink

- Drinks and snacks are allowed in the lecture hall 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. Drinks and snacks are not allowed in lab!

Electronic Devices

- Bring your clicker to lecture every day! Clickers will not be used in labs, unless otherwise stated by your lab instructor.
- Turn off your cell phone during class!
- Turn off your MP3 player and remove your earbuds/headphones during lecture.
- Laptops & related tools, including photographing slides, are not allowed for note taking without my permission.
- Recording devices are not permitted to be used without my permission.

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.
- October 8 is the last day for withdrawing without penalty.

Tentative Lecture Schedule, BIOL 1107K, Sections G-L, Fall 2015

Week	Subject	Chapters	Due on the due date by 8am
Aug 17	What is Biology? The cell theory; Main types of cells & organisms	1	Vocabulary I Posted Aug 21; Due Aug 24
Aug 24	Cell Structure	4	Practice quiz I & II Posted Aug 28; Due Aug 31
Aug 31	Cells Structure; EXAM 1 (Friday, Sept 4)	4	Vocabulary II Posted Sept 4; Due Wed Sept 9
Sept 7	<i>Labor day, no class (Sept 7)</i> ; Structure and Function of Plasma Membranes; Biological Macromolecules - Lipids	5.1, 3.3	Vocabulary III Practice quiz III Posted Sept 11; Due Sept 14
Sept 14	Biological Macromolecules – dehydration reactions, Proteins; The Chemical Foundation of Life	3.1, 3.3, 2	Vocabulary IV, Practice quiz IV Posted Sept 18; Due Sept 21
Sept 21	Membrane transport	5.2-5.4	
Sept 28	EXAM 2 (Monday, Sept 28) ; Metabolism	6	Vocabulary V Practice quiz V Posted Oct 2; Due Oct 5
Oct 5	Carbohydrates; hydrolysis reaction; Cellular Respiration	3.2, 3.1, 7	Vocabulary VI Practice quiz VI Posted Oct 9; Due Weds Oct 14
Oct 12	<i>Fall break, no class (Oct 12)</i> ; Cellular Respiration, Photosynthesis	7, 8	Vocabulary VII Practice quiz VII Posted Oct 16; Due Oct 19
Oct 19	Photosynthesis; Biological Macromolecules – Nucleic acids; Exam 3 (Friday, Oct 23)	8; 3.5	Vocabulary VIII Posted Oct 23; Due Oct 26
Oct 26	DNA Structure and Function; Genes and Proteins	14, 15	Practice quiz VIII Posted Oct 30; Due Nov 2
Nov 2	Cell Reproduction; Meiosis and Sexual Reproduction	10, 11	Vocabulary IX Posted Nov 6; Due Weds Nov 11
Nov 9	Exam 4 (Monday, Nov 9) ; Mendel's Experiments and Heredity	12	Vocabulary X Practice quiz IX Posted Nov 13; Due Nov 16
Nov 16	Modern Understandings of Inheritance; Cell Communication	13, 9	Practice quiz X Posted Nov 20; Due Nov 23
Nov 23	Gene Expression; <i>Thanksgiving, no class (Nov 25 & 27)</i>	16	
Nov 31	Gene Expression; Biotechnology and Genomics	17	
Dec 7	Exam 5 (Monday, Dec 7) Final Exam (Wednesday, Dec 9, 8-10am)		

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.