

Valdosta State University, BIOL 1107, Section A

(3 Credit Hours)

Principles of Biology I – Spring 2020

Syllabus & Course Policies

For Science, Math,
and Exercise
Physiology Majors

Lecture: BC 1011 - MWF, 9:00-9:50 am

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

Office: BC 2031, Phone: (229) 333-5337

Email: egcantonwine@valdosta.edu

Office hours: BC 2031, MWF 10:00-10:15 & TWR 2:00-3:00

Graduate Assistant (GA): Emily Evans, eevans@valdosta.edu

Supplemental Instructor: Tod Butenschon, thbutenschon@valdosta.edu

Welcome to Principles of Biology I. This is the first course in a series of courses at VSU designed to develop a strong foundation in the biological sciences.

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 1107 lab is a co-requisite for students who have not already completed that course and BIOL 1100 is a co-requisite for Freshman Biology majors (offered Fall semesters only)

Required Resources:

9781934931523	Turning Technologies QT Clicker Device & Turn Tech 1yr Acct	Turning Technologies	Required
9781319025311	Life: The Science of Biology (w/eBook + Access)	Sadava	11th
9781319126193	Life (LoosePgs)(w/LaunchPad Access)	Sadava	11th
9781319125714	Life: Biology (w/LaunchPad Acc)	Sadava	11th

} Choose one version

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:

<u>Assessments</u>	<u>Points</u>	<u>SCALE*</u>
○ Unit Exams (5)	100 each (500 total)	A ≥ 90.0%
○ Clicker + Homework Grade	50 + 50 (100 total)	B ≥ 80.0%
○ Final Exam	replacement points (100)	C ≥ 70.0%
<u>TOTAL POINTS COUNTED</u>	<u>600</u>	D ≥ 59.0%
Extra Credit Video	30	F < 59.0%
Participation Bonus – see below		

* Final grades will be rounded to nearest point (ex. 89.50 = 90) ONLY for students who 1) **NEVER use an unapproved smart device**, and 2) **have no more than 4 excused or unexcused absences, tardies, or “lecture breaks” (leaving lecture and returning, or leaving early)**. **University-related absences are not included in this tally.**

Monitoring and computing your grade. All grades will be posted to Blazeview. Your grade can be computed at any time [**Grade = points earned/possible points x 100**] using details explained below.

Explanation of Assessments:

Unit Exams. Students will have 50 minutes to complete each exam. If you wake up late on exam day, come to the classroom. As long as this happens only once, you can complete the exam. If you completely miss the exam, see me ASAP to schedule a make-up. Make-up exams will be a mix of multiple choice and short answer questions. If you know you will miss an exam for a university-related reason, please schedule the make-up before the exam date - you may take the original exam early, or the make-up exam afterwards.

Clicker Grade. Beginning the second or third 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. To participate, students must be counted as present (see Attendance/Tardy Policy). *Individual clicker assessments* will be posted to Blazeview following the lecture. At the end of the semester, your *Clicker Grade* will be calculated as the average percentage after the lowest clicker score is dropped / 2. *It is your responsibility to get my approval for an excused absence and to make sure that the GA receives documentation of your excuse & my approval. If you allow someone to use your clicker in your absence, or if you use someone’s clicker in his or her absence, you will receive a zero for the clicker grade.*

Homework Grade. For each assigned Chapter, students will have the option of completing one of two types of homework assignments, 1) defining vocabulary words and completing a vocabulary quiz on Blazeview, or 2) completing the Learning Curve adaptive reading quiz on LaunchPad. Any student electing to take the vocabulary quiz, must **hand write the vocabulary words** and have Dr. Cantonwine or the GA **check this work before 5:00pm on the day the quiz is due**; otherwise, the vocabulary quiz will not count. If you fail to get your words checked in time, the only way to earn the grade is to do the Learning Curve quiz. If you choose to do both of the quizzes, the one with the highest score will count. See the tentative schedule for expected due dates, and check Blazeview Announcements to see if any due dates change. **Of the 13 quizzes, only 10 will count.** This grade will be calculated as the average percentage of the 10 highest chapter scores / 2.

Final Exam. The final exam grade is worth 100 points and will replace the lowest unit exam grade or the clicker + homework grade. If you are happy with your grade prior to the final exam, you do not need to take the final. The final is cumulative.

Extra Credit. There will be 30 possible extra credit points. The extra credit quizzes will be posted to the Assessment section of Blazeview. Check BV announcements to see when the quizzes open and close. If cheating is suspected, the extra credit opportunity will be taken away from the entire class. **NO ANSWER SHARING!**

Course Policies, Procedures, & Expectations: Respect for the learning environment is expected.

This means 1) attend class regularly and arrive on time, 2) pay attention and take notes, 3) keep disruptive behavior to a minimum, and 4) avoid unnecessary distractions.

Attendance/Tardy Policy. Attendance is not required, but it is rewarded via the clicker grade & scale curve. You will be counted present if you are sitting in your assigned seat at the beginning of class when the GA takes the photograph. If you arrive late (after the photograph), sign in at one of the second floor entrances so you can get clicker credit. If you enter or leave the classroom during lecture, please use the second floor doors. When lectures are provided online-only, student attendance will be recorded for those who watch the entire recording.

Assigned seats. Assigned seats will be used (beginning the second week of class) to keep track of student attendance for the purpose of monitoring attendance and clicker usage. *You are welcome to change seats (temporarily or permanently) during the semester, but it is your responsibility to inform the graduate assistant (or me) 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!*

Cellphone, Smart Device, Laptop policy. The use of cellphones, laptops and other smart devices are not permitted during lecture without prior approval. If you need access to one of these devices for a personal reason, you may sit in one of the reserved seats near the back of the room. *Speak with the GA (or me) before class begins for approval and temporary seat assignment.*

Food and drink policy. Drinks and snacks are allowed as long as they can be consumed quietly and without distracting others. Breakfast is not acceptable!

Office hours and emails. The best time to come to my office is during office hours. Just show up. If my office hours do not work for you, please come by at your convenience to see if I am free to meet. I can usually find time for you! But if not, we will set-up an appointment. **I do not set-up appointments via email. If you ask over email, I will tell you to come by. I do not respond to emails that ask when my office hours are, or where my office is. This information is on this syllabus.**

Concealed Carry: Firearms are not permitted in BIOL 1107 lecture because the course includes some students who are still in high school.

Title IX Statement: Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: titleix@valosta.edu

Access Statement: Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.

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 to move on.
- Midterm is the last day to withdraw from the course.

Tentative Lecture Schedule, BIOL 1107K, Section A, Spring 2020

Week of	Subject	Chapters	Homework due 11:59pm on the following dates
Jan 13	Syllabus Living organisms are similar Evolution	Introduction 1.1 Evolution	
Jan 20	<i>MLK Jr. Day – No Class</i> Investigating life through experiments Cellular structure & function	No Class 1.2 5.1-5.3	HW Ch.1 (due Weds)
Jan 27	Cellular structure & function Extracellular structure & evolution of eukaryotic cells Cellular membrane structure & function	5.3 5.4-5.5 6.1	HW Ch.5 (due Monday)
Feb 3	EXAM 1 (Monday, Feb 3 - Chapters 1 & 5) Basic chemistry Macromolecule intro & lipids	EXAM 1 2.1-2.3 3.1 & 3.4	HW Ch. 2 (due Weds)
Feb 10	Proteins Carbohydrates Cell membrane adhesion & recognition, Passive transport	3.2 3.3 6.2-6.3	HW Ch.3 (due Monday)
Feb 17	Active transport Catch-up or Review Ch. 2.1-2.3, 3 & 6 Energy, Enzymes, & Metabolism	6.4-6.5 Catch-up or Review 8.1-8.3	HW Ch. 6 (due Monday)
Feb 24	EXAM 2 (Monday, Feb 24, Chapters 2.1-2.3, 3 & 6) Enzymes, & Metabolism cont. Glycolysis & Krebs cycle	EXAM 2 8.2-8.5 9.1-9.2	HW Ch.8 (due Weds)
March 2	Cellular respiration cont. Cellular respiration cont. Photosynthesis part 1	9.3-9.5 9.1-9.5 10.1-10.3	HW Ch.9 (due Monday)
March 9	Photosynthesis part 2 Catch-up or Review Ch. 8-10 EXAM 3 (Friday, March 13, Ch. 8-10)	10.5 Catch-up or Review EXAM 3	HW Ch.10 (due Monday)
March 16	- SPRING BREAK -	-----	-----
March 23	Nucleic acids; DNA and its role in heredity From DNA to protein (transcription) From DNA to protein (translation)	4.1, 13.1-13.2 14.2-14.4 14.5-14.6	HW Ch.14 (due Monday) HW Ch.13 (due Friday)
March 30	The cell cycle – mitosis & cytokinesis DNA replication Sexual life cycle – meiosis	11.1, 11.3 13.3 11.4-11.5	HW Ch.11 (due Monday)
April 6	Catch-up or Review EXAM 4 (Weds, April 8, Ch 4.1, 11, 13, 14) Basic Mendelian Genetics	Catch-up or Review EXAM 4 12.1	
April 13	Mutations Mutations and diseases How mutations are analyzed & PCR	15.1 15.2 15.3 & 13.5	HW Ch.15 (due Monday)
April 20	Genetic disease screening & treatment Cell communication Communication & multicellularity (Recorded Lecture – watch 100% for attendance credit)	15.4-15.5 7.1-7.2 7.3-7.5	HW Ch.7 (due Monday)
April 27	Putting it all together – Cancer, part 1 (Recorded Lecture – watch 100% for attendance credit) Putting it all together – Cancer, part 2 EXAM 5 (Friday, May 1, Ch.12.1, 15, 7, 11.2 & 11.7)	11.2 & 11.7 11.7 EXAM 5	
May 4	Review for Final Final Exam (Friday, May8, 8:00-10:00am)	FINAL EXAM	