

BIOL 1107: Principles of Biology I
Department of Biology, College of Math and Science
Valdosta State University
Fall 2022, Syllabus and Course Policies

Lecture: Bailey Science Center, Room 1011 – Tuesday and Thursday 3:30-4:45 PM

Section C: CRN# 83330 (3 credit hours)

Instructor: Eric Chambers (Dr. Chambers) Office: BSC 2214 Phone: 229-249-2736

Email: ewchambers@valdosta.edu

Office Hours: Tuesday and Thursday 1:00-2:15 PM; by appointment

Peer Alliance (PAL) Facilitator: Julia Higdon, jrhigdon@valdosta.edu; former student who attends lectures and assists students as a learning coach to master and apply concepts covered in class by holding additional tutoring sessions.

Required Materials: This course is participating in the Day 1 Textbook Savings Program. Your course materials may be accessed digitally through your Blazeview account on the first day of class. An optional print copy of the book is available at the campus bookstore if you wish to purchase it. Your course material charge is included in your student bill and guarantees the lowest cost available for course materials.

1. **Textbook:** We will be using a textbook, Biology 2e, provided by OpenStax, a 501(c)(3) nonprofit charitable corporation associated with Rice University in Texas. You will be able to access the digital version of this textbook through a link in Blazeview. You can also access this textbook outside of Blazeview using this link:
<https://openstax.org/details/books/biology-2e>
2. **Achieve on-Line learning system:** This is an online learning system through Macmillan publishing that is integrated into Blazeview. It offers assessment tools and content to support you in your learning and understanding of the material. There will be weekly online assessments that you will complete to assist you in learning the material and preparing for exams. The OpenStax digital textbook is integrated into the Achieve platform. All of this is easily accessible through the Blazeview LMS.
3. **iClicker Cloud rapid response system:** This semester we will be using the iClicker student engagement system. This is integrated into the Achieve learning system and there will be a nominal add-on charge in order to purchase a one semester subscription. The iClicker system allows you to engage directly with the course content during lecture by allowing you to complete student polls that quiz you on the material being covered in lecture in real time. The iClicker Cloud allows you to participate using your mobile phone, laptop, or tablet device. Instructions on how to register for this system will be given in the first lecture.

Course Description: Prerequisites: Co-requisite: **BIOL 1107L** and for biology majors, **BIOL 1100**. 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 structure, function, metabolism, and reproduction; cell signaling; and gene regulation in bacteria and eukaryotes.

Course goals: The purpose of this course is to provide you with a broad introduction to the study of biology. The course is introductory and topical in nature, but upon completion of this course you will be prepared for advanced specialized courses in biology. It will also provide you with a background to better understand many of the technological issues and challenges confronting our nation and the world.

This course will assist you in developing communication skills as well as information processing skills. These abilities are critical for all students, both those who wish to attend professional school (medical, dental, etc.) and graduate school as well as those who will move directly into the job market following graduation. Your critical thinking skills will be enhanced through analysis of lab exercises, class assignments, and test questions.

Educational outcomes: Listed at the end of syllabus

| Assessments: | <u>Possible Points</u> | Percentage |
|------------------------------|------------------------|------------|
| ○ Unit Exams (4) | 400 | 57.1% |
| ○ Final Exam | 100 | 14.3% |
| ○ iClicker Questions | 100 | 14.3% |
| ○ Achieve HW (10 of 14) | 100 | 14.3% |
| ○ Extra Credit | 40 | 5.7% |
| TOTAL POSSIBLE POINTS | | 700 |

To determine your lecture grade, divide the total points earned by the total possible points and divide by 100.

Table 1.

| <u>Exam 1</u> | <u>Exam 2</u> | <u>Exam 3</u> | <u>Exam 4</u> | <u>Exam 5</u> | <u>iClicker questions</u> | <u>Achieve HW</u> | <u>Final Exam</u> | <u>Extra Credit</u> | <u>Total</u> |
|---------------|---------------|---------------|---------------|---------------|---------------------------|-------------------|-------------------|---------------------|--------------|
| | | | | | | | | | |
| <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>40</u> | <u>700</u> |

Fill in the empty cells with your exam and assignment scores.

Explanation of Lecture Assignments:

Lecture Exams: Students will have 75 minutes to complete each exam

A total of 4-unit exams will be given during the semester. The dates are included in the tentative schedule at the end of the syllabus. All exams will be in a multiple-choice format. I will only allow make-up exams for university-related reasons or approved medical/personal issues. If you become ill or an emergency arises, please email me within 24 hours of the exam. If you know you will miss an exam for a university-related reason, please contact me ahead of time to discuss an appropriate date for scheduling your make-up exam.

iClicker Cloud Polling Questions: In this course we will utilize iClicker Cloud polling technology to increase class engagement during lecture. Polling questions will provide you a chance to receive immediate feedback on your understanding and interpretation of important biological principles. Polling questions will begin the third week of class.

The number of iClicker questions will vary per lecture. You will receive 2 points for each poll question that you answer correctly and 1 point for an incorrect response. You will receive 0 points if you do not respond during class or if you miss class. A 50% or higher score will earn you full credit (100%) for the assessment. Please allow 1-week for the grade change to occur in BV. If you earn <50%, or if you missed the lecture due to an excused or unexcused reason, you can turn in your assessment remotely (for up to 4 lectures) as follows: (1) Complete an alternate assignment of critical thinking questions that will be assigned to you. These will be free response questions on principles covered in lecture that day. These assignments will be uploaded to a drop box in Blazeview by the assigned due date. This alternate assignment will only be allowed for up to 4 missed lectures.

It is **your** responsibility to remember your device (phone, laptop, tablet) and to make sure it is charged. **Do not come up to me after class to tell me you were in class, or to give me a piece of paper with the responses. You only earn the points by responding using the web-based system! You are responsible for troubleshooting any technical issue you are experiencing, and you should immediately reach out to iClick technical support if you have issues. I will also be available to assist you after you reach out to them.**

I will provide you with a link for iClicker Cloud in Blazeview and we will discuss how to set up an account during the first lecture.

Achieve HW: There will be 13 graded HW assignments administered through the Achieve learning platform. The due dates will be announced in class and posted to the Calendar in Blazeview. The lowest 3 scores will be dropped from your final homework grade. These assignments are open notes and you are given two opportunities to answer each question. Question formats will be varied and will include multiple choice, labeling, ranking, and other types of questions. It is very important that you organize your schedule so that you know when each assignment is due and that you give yourself sufficient time to complete each assignment.

Grade Scale: For Biology majors a grade of C or higher is required for this course.

A 90-100% (630-700 points)
B 80-89% (560-629 points)
C 70-79% (490-559 points)
D 60-69% (420-489 points)
F < 60% (0-419 points)

Notes on grading: Students should note that a grade of "A" in this course represents an exemplary command of the material covered. To obtain this grade of excellence, it is recommended that students study daily and clarify with their instructor any problems regarding course information, as they arise.

Biology Tutoring: The Academic Support Center (ASC) at Valdosta State University is located on the second floor of the Odum Library. The ASC provides free peer tutoring in core curriculum courses, including biology, chemistry, math, writing, and foreign languages. The ASC also provides periodic workshops covering topics such as time management and study skill development. Call 333-7570 to make an appointment, or visit their website at <https://www.valdosta.edu/asc/>

Academic conduct: Cheating and plagiarism will not be tolerated and may result in a failing grade for the assignment, exam or the class.

Lecture Conduct:

Arrive on time

- Turn off/silence cell phones during class and lab.
- Remove headphones and earbuds while in lecture, lab, and during exams.
- Don't talk during lecture except during active learning exercises or asking a question
- Avoid leaving class early—leave via the second-floor doors if you need to leave early

Procedure for exams:

- No books, electronic devices, or notebooks will be allowed during exams and students using such items will be asked to leave and will receive a zero for the exam.
- No talking will be allowed during the exam, but students are permitted to ask the instructor questions.
- Each student will be given an exam to be completed and handed back to the instructor.
- Students must bring a pencil and will take the exam during the stated lecture time only.
- **NOTE:** You will have the class time only to complete each lecture exam.

Student identification: Students should have in their possession at all times their VSU student identification card. Because of the large size of the class this semester we will be checking student ID or another form of picture ID during exams.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibits the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given over the telephone or over email because positive identification can't be made.

Non-Discrimination and Title IX Statement: Valdosta State University (VSU) upholds all applicable laws and policies regarding discrimination on the basis of race, color, sex (including sexual harassment and pregnancy), sexual orientation, gender identity or expression, national origin, religion, age, veteran status, political affiliation, or disability. The University prohibits specific forms of behavior that violate Title IX of the Education Amendments of 1972. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs and activities that receive federal funding. VSU considers sex discrimination in any form to be a serious offense. Title IX refers to all forms of sex discrimination committed against others, including but not limited to: sexual harassment, sexual assault, sexual misconduct, and sexual violence by other employees, students or third parties and gender inequity or unfair treatment based on an individual's sex/gender. The designated Title IX Coordinator for VSU is Mr. Darius Thomas. To view the full policy or to report an incident visit: <https://www.valdosta.edu/administration/student-affairs/title-ix/>

Accommodations Statement: Students with disabilities who are experiencing barriers in this course may contact the Access Office (<https://www.valdosta.edu/student/disability/>) for assistance in determining and implementing reasonable accommodations. The Access Office is located in University Center Room 4136 Entrance 5. The phone numbers are 229-245-2498 (V), 229-375-5871. For more information, please visit VSU's Access Office or email: access@valdosta.edu. To request reasonable accommodations for pregnancy and childbirth, contact Christina Kidd, Student Conduct Coordinator at chkidd@valdosta.edu. Please note, you will be required to provide documentation from an appropriately licensed medical professional indicating the requested accommodations are medically necessary.

Campus Gun Carry Statement (HB 280): If you choose to carry a concealed weapon on campus, you are responsible for knowing and following the law. Refer here for FAQ: <https://www.valdosta.edu/administration/finance-admin/police/campuscarry/>

***Key Dates :**

Aug. 15, 2022– First day of class

Aug. 18, 2022 - Registration for Fall semester ends (11:59 pm)

Sept. 5, 2022 – Labor Day Holiday (University closed/no classes)

Oct. 5, 2022 – In-progress grades due (5:00 PM)

Oct. 6, 2022 – Official midterm; Students can view In-progress grades

Oct. 10-11, 2022 – Fall break

Oct. 13, 2022 – Withdrawal deadline for full-term VSU courses Fall 2021

Nov. 22, 2022 – Last day for on-campus classes before Thanksgiving break

Nov. 23-25, 2022 – Thanksgiving Holidays (University closed/no classes)

Dec. 6-9, 2022 – Final Exams; BIOL 1107 Final Exam: Friday, December 9, 2:45-4:45 PM

Tentative Lecture Schedule, BIOL 1107, Section C, Fall 2022

| Date | Topics | Chapter |
|---------------------|--|--------------------------|
| August 16 | Syllabus; Introduction to Biology | Syllabus, 1.1 |
| August 18 | Introduction to Biology; Understanding Evolution | 1.2; 18.1 |
| August 23 | Chemical Foundation of Life | 2.1,2.3, 3.1 |
| August 25 | Biological macromolecules | 3.2, 3.3 |
| August 30 | Biological macromolecules | 3.4, 3.5 |
| September 1 | Cell structure | 4.1; 4.2 |
| September 5 | Labor Day – No class | ----- |
| September 8 | Cell structure | 4.3, 4.4 |
| September 13 | Exam #1 | 1, 2, 3, and 18.1 |
| September 15 | Plasma membranes | 5.1, 5.2 |
| September 20 | Plasma membranes | 5.3, 5.4 |
| September 22 | Metabolism | 6.1, 6.2, 6.3 |
| September 27 | Metabolism | 6.4, 6.5 |
| September 29 | Cellular respiration | 7.1; 7.2; 7.3 |
| October 4 | Cellular respiration | 7.4, 7.5 |
| October 6 | Photosynthesis | 8.1, 8.2 |
| October 11 | Fall Break - No Class | ----- |
| October 13 | Exam #2 | 4, 5, 6, and 7 |
| October 18 | Photosynthesis; Cell reproduction | 8.3; 10.1 |
| October 20 | Cell reproduction | 10.2, 10.3, 10.5 |
| October 25 | Meiosis and Sexual Reproduction | 11.1, 11.2 |
| October 27 | Genetics Mendels experiments and Heredity | 12.1, 12.2 |
| November 3 | DNA structure and function | 14.1, 14.2, 14.3 |
| November 5 | DNA structure and function | 14.4, 14.5, 14.6 |
| November 8 | Exam #3 | 8, 10, 11, 12 |
| November 10 | Genes and Proteins | 15.1, 15.2, 15.3 |
| November 15 | Genes and Proteins | 15.4, 15.5 |
| November 17 | Gene expression | 16.1, 16.2, 16.3 |
| November 22 | Gene expression | 16.4, 16.5, 16.6 |
| November 24 | No Class-Thanksgiving Break | ----- |
| November 29 | Review or catch up | |
| December 1 | Exam #4 | 14, 15, 16 |
| December 9 | Final Exam 2:45-4:45 pm | Cumulative exam |

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 computers 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.
9. 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.

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.