

Biology 1107L: Principles of Biology I Laboratory

Department of Biology, College of Science and Mathematics, Valdosta State University
Summer 2024 Laboratory Syllabus

Instructor: Mr. Joshua I. Brown

Section: A

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Office hours: M&W 12:00 – 2:00 or by appointment

Course Description: A laboratory course designed to accompany BIOL 1107 lecture, with exercises dealing with the cellular nature of life.

Pre- or Corequisite: BIOL 1107 Unifying Principles of Biology I. Note a grade of C or higher is required in both lecture and lab.

This is a Core IMPACTS course that is part of the Technology, Mathematics & Sciences area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I ask scientific questions or use data, mathematics, or technology to understand the universe?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Inquiry and Analysis
- Problem-Solving
- Teamwork

Course Objectives: Upon completion of this course the student should be able to:

1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions

2. Understand basic biological chemistry from elements to organic compounds to macromolecules.
3. Demonstrate an understanding of the cellular basis of life.
4. Relate the structure and the function of DNA/RNA to the development of form and function of the organism and to heredity
5. Understand energy transformation in biological systems through the study of photosynthesis and other metabolic reactions

Required material: R. H. Goddard. *Methods and Investigations in Basic Biology* (Custom VSU manual). 7th Edition. ISBN: 978-1-5339-4342-2 (but if you find a copy of the 6th edition, you should be fine).

Grading:

Grade component	Total points
Lab Quizzes	120
Lab reports	60
Participation	120
Class total	300

Desired Grade	Scale
A	270 – 300
B	240 - 269
C	210 - 239
D	180 – 209
F	0 - 179

Quizzes: There are a total of 12 lab quizzes throughout this semester. They will be comprised of material from the lab we just did and material for the upcoming lab. It is important that you read the manual ahead of time to be prepared for the activity of the day. Each quiz will be worth 10 points.

Lab reports: There will be two lab reports required during the semester. They will be worth 30 points each. We will discuss these more in depth when they come up.

Participation: This is a hands-on class, and it is important you attend to get the experience necessary to do well in subsequent biology courses. I will be taking attendance this summer, however, showing up does not guarantee that you will get points for participation. You must actively be involved in the lab work to receive a grade for the day. If I see you being passive and letting your group members do all the work, you will receive a zero. Each day of participation is worth 10 points.

LATE WORK WILL NOT BE ACCEPTED. I strongly recommend you do not wait until the last minute to take quizzes/turn in assignments. If you are having technical difficulties an hour before the due date, there is not much I can do to fix the situation in the given time.

This is a summer course, so things move a bit faster than normal...twice as fast to be specific. It is important you realize this and adjust accordingly.

Attendance Policy: Laboratory attendance is mandatory. Students who miss 3 or more labs, with or without a documented excuse, cannot receive a lab grade above a 60% (D) for the course.

If students must be absent due to a quarantine or isolation requirement for COVID-19, they must report this situation via the COVID Self Reporting Link in MyVSU and through the Dean of Students Office. Report any other type of absence as well to the Dean of Student Office, which will send an absentee notice by email to all your instructors.

Given that this is an actual lab that requires you to physically be here to get valuable experience and data, it is imperative that you try to come every week. Missing lab will affect your post quizzes and potentially your assignments as you are not there to gather your data. Being absent **does not** excuse you from any work done that week. You are still responsible for any quizzes and assignments.

I will not be taking attendance for a grade, but I will be monitoring it as to abide by the university policy.

Lab Conduct:

- Please arrive on time. Being late may cause you to miss the lab.
- No eating or drinking in the lab is allowed.

- Dress appropriately

- You must take care of lab equipment. Notify the instructor if something is not working properly or if something breaks during the course of the lab.

- It is your responsibility to properly use the microscope. At the conclusion of the lab I will check each scope to make sure that it was put away properly. Please notify me if the microscope is not functioning properly.

- I recommend you do not use your cell phones during class

Make up labs: Unfortunately, there will be no make up labs for this course. The activity we do on Monday will be taken down to setup for the activity we do on Wednesday.

Communication: The best way to contact me is through VSU email (Joshuabrown@valdosta.edu). I try to respond as soon as possible. If you do not get a response within 24 hours don't hesitate to send a POLITE reminder to me about it.

You can try to reach me through BlazeVIEW but I do not recommend it. I do not get notifications from it and am likely to miss a message for a prolonged period of time.

Please be professional and courteous..." You can catch more flies with honey than vinegar".

NO CHEATING!

You are here to be assessed on YOUR work. You are only doing yourself a disservice by cheating as you will have a harder time in upper division courses. Plagiarism is a form of cheating. You cannot copy someone else's work and pass it off as your own.

Incidents of cheating or plagiarism will result in an automatic F for the course and referral to The Office of Student Conduct for disciplinary action. For VSU's Academic Integrity Code please see <http://www.valdosta.edu/administration/student-affairs/student-conduct-office/> For VSU's Academic Honesty policies and procedure please see <http://www.valdosta.edu/academics/academic-affairs/vp-office/academic-honesty-policies-and-procedures.php>

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. Call 333-7570 to make an appointment, or visit their website at <https://www.valdosta.edu/asc/>

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.

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.

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: Maggie Viverette, Director of the Office of Social Equity, titleix@valdosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.

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/>

Tentative Lab Schedule

Class	Date	Topic
1	6/12	Ex 1: Course intro and Science
2	6/17	Ex 2: Basic light microscopy
None	6/19	Holiday – NO CLASS
3	6/24	Ex 3: Observation of living cells
4	6/26	Ex 5: Cellular water relations
5	7/1	Ex 6: Basic techniques biochem
6	7/3	Ex 7: Protein extraction & quant.
7	7/8	EX 8: Enzymology
8	7/10	Ex 10: Photosynthesis
9	7/15	Ex 11: Cellular reproduction
10	7/17	Ex 13: Gel electrophoresis/DNA
11	7/22	Ex 16: Bioinformatics
12	7/24	Ex 15: PGLO
13	7/29	Ex 15: Complete PGLO

This syllabus is subject to changed at the discretion of the instructor.