

# Biology 1107L: Principles of Biology I Laboratory

Department of Biology, College of Science and Mathematics, Valdosta State University  
Fall 2020 Laboratory Syllabus

**Instructor:** Mr. Joshua I. Brown  
**Room Number:** Bailey Science Center 1083  
**Contact: Office:** BSC 2209  
**Phone:** (229) 219-3615  
**e-mail:** Joshuabrown@valdosta.edu  
**Office hours:** Mon 12:00 – 1:30  
Tues 1:00 – 2:30  
Th 12:00 – 1:00

**Sections:** G (CRN 83337) Tuesday 9:30 – 12:20  
J (CRN 83340) Wednesday 9:00 – 11:50  
L (CRN 83342) Wednesday 12:00 – 2:50  
Q (CRN 83347) Thursday 2:00 – 4:50  
R (CRN 83348) Friday 11:00 – 1:50

**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.

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

- Exhibit a broad perspective on the principles unifying various biological disciplines from evolution to molecular biology (DBEO 2 & 5);
- Understand basic biological chemistry from elements to organic compounds to macromolecules;
- Comprehend basic principles of biology at the cellular level to include structure, function, metabolism, communication, reproduction, molecular biology, and gene expression (DBEO 3 & 4);
- Perform, analyze, interpret and report laboratory experiments (DBEO 1);
- Develop and test a hypothesis using experimental microscopy and quantitative skills acquired in the laboratory (DBEO 1 & 5).

These objectives support the Department of Biology Educational Outcomes # 1-5 listed above (DBEO 1-5) and the University General Educational Outcomes # 5 as listed in the VSU Undergraduate Catalogue

## Required Materials:

- R. H. Goddard. *Methods and Investigations in Basic Biology* (Custom VSU manual). 6<sup>th</sup> Edition.

## Grading:

Lab Quizzes (100 points): Quizzes will be administered online each week via BlazeVIEW. They will be 10 questions in length and will be a mixture of multiple choice and true/false questions. The quizzes will be open book. You may refer to your lab notebook and/or lab manual, but you are not allowed to consult with other students in the lab. Quiz questions and responses will be randomized and shuffled so that each

quiz is unique. Quizzes will open immediately following the conclusion of a lab session and you will have until 11:59 PM of the night before you next lab to complete the quiz. I will post a quiz schedule on BlazeVIEW.

Lab assignments (100 points): There will be two major lab assignments each worth 50 points. More details will be provided as the semester progresses.

Homework (60 points): Throughout the semester I will assign short homework assignments.

Attendance (40 points): I will take attendance in our face to face sessions.

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|--------------------------------|----------------------------|
| • Quizzes (100 points)         | <b>A:</b> 270 – 300 points |
| • Lab assignments (100 points) | <b>B:</b> 240 – 269 points |
| • Homework (60)                | <b>C:</b> 210 – 239 points |
| • Attendance (40)              | <b>D:</b> 180 – 209 points |
|                                | <b>F:</b> 0 – 179 points   |

**Total:** 300 points

To determine your lab grade, divide the total points earned by the total possible points (300) and then multiply by 100.

#### **Attendance Policy:**

Attendance in lab is mandatory. Students who miss 3 or more labs will receive an F in the course as per University policy. You can be excused from up to 2 labs for legitimate reasons but if any absences beyond those two excused absences would lead to a failing. If you are absent from lab, please contact me within 24 hours with the reason. Unfortunately, make up labs will not be permitted this semester as we must follow strict occupancy limitations. The only exception is missing the online lab sessions. Those can be made up.

Athletes and other University representatives: Please let me know in advance if you will be missing a lab due to an away game or other required event. You will need to make arrangements with me for you to attend an alternative lab section.

#### **Lab Conduct:**

- Please arrive on time.
- No eating or drinking in the lab is allowed.
- 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.
- You will be assigned a microscope. 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.

- Cell phones are not to be used in lab. This means no texting during the lab unless I give permission for cell phones to be out.

## **NO CHEATING!**

### **Face Covering:**

As the Blazer Creed articulates, members of the VSU community are expected to live by the high standards of civility, integrity, and citizenship and embrace their responsibility as a member of the Blazer community. In recognition of this responsibility, and in response to the best available science and current guidance from the Centers for Disease Control and Prevention and the Georgia Department of Public Health, **EVERY STUDENT MUST WEAR A FACE COVERING THAT COVERS THEIR NOSE AND MOUTH AT ALL TIMES WHILE IN ANY CAMPUS BUILDING, INCLUDING IN THIS CLASSROOM.** This requirement is intended to protect the health and safety of all VSU students, the instructor, and the entire university community. Anyone attending class without a face covering will be asked to put one on or leave. Students should also be sure they maintain a distance of at least six feet away from their fellow students and instructor and are seated in a seat that is designated to ensure that distance. In order to attend the face to face lab sessions **ALL STUDENTS MUST WEAR THE APPROPRIATE FACE COVERINGS AND FOLLOW PROPER SOCIAL DISTANCING GUIDELINES SET BY THE UNIVERISTY.** If a student does not have a face covering, one will be provided to them. If a student refuses to wear a face covering, they will be asked to leave the room immediately. Students who refuse to wear face coverings appropriately or adhere to other stated requirements may face disciplinary action for Code of Conduct violations.

### **Coronavirus Resources for Students:**

VSU cares about student success both on and offline, and a variety of resources are available to help students both academically and personally during the Fall 2020 semester.

One of the best resources is VSU's Coronavirus FAQ page located at <https://www.valdosta.edu/health-advisory/faq.php>. Information is available there about a variety of topics in VSU's return-to-campus plan. A website devoted to the health and wellness of VSU students can be seen at <https://www.valdosta.edu/administration/finance-admin/campus-wellness/student-resources.php>.

You can find information, including how you can access the Brightspace Pulse app that will allow you to view BlazeVIEW on your smartphone at <https://www.d2l.com/products/pulse/>. In BlazeVIEW, all VSU students have a course with guides for how to use tools in BlazeVIEW; search for "VSU BlazeVIEW Student Tutorial 2020."

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](mailto: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](mailto: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/>

### **Lab structure:**

We are in unusual times this semester, as such, we have to adjust the regular structure of these labs in order to adhere to the guidelines set forth by the University while also giving all students an opportunity to attend classes required for their major.

This semester, it has been decided that each class will be divided into two sessions; A & B for the times we meet face to face. Session A will come to class for the first hour and a thirty minutes while session B will come for the second hour and thirty minutes. I will randomly assign which students will be in either session.

The labs are broken into four different modules:

- Module 1: Scientific Method, Microscopy, & Independent Research Project.
- Module 2: Cell Biology
- Module 3: Enzymology
- Module 4: Molecular Biology

### **Tentative Lab Schedule:**

Lab module	Week F2F: A 1 <sup>st</sup> half B 2 <sup>nd</sup> half	Topic:	Location
--	Aug.17	Syllabus and Course Introduction	F2F
1	Aug. 24	Exercise 1: Introduction to the Use of the Scientific Method	Online
1	Aug 31	Exercise 2: Basic Light Microscopy Exercise 3: Light Microscopy Observations of cells and organisms	F2F
--	Sept. 7	Labor Day Week- <b>NO LABS</b>	
1	Sept. 14	Exercise 4: Proposal and Set Up for Independent Microscopy Project	Online
2	Sept. 21	Exercise 4 Cont'd: Data Collection for Independent Microscopy Project	F2F
2	Sept. 28	Exercise 5: Cellular Water Relations	Online
2	Oct 5	Exercise 6: Protein extraction & Quantification from living tissues	Online
3	Oct. 12	Exercise 7: Enzymology Lab: basics of $\alpha$ -amylase activity	F2F
3	Oct. 19	Exercise 8: Enzyme Regulation: Investigation of the effects of temperature and pH on $\alpha$ -amylase activity	Online
3	Oct. 26	Exercise 9: Photosynthesis	Online
4	Nov. 2	Exercise 10: Cell Reproduction: Mitosis, Meiosis and Cytokinesis	Online
4	Nov. 9	Handout: Crime Scene, RFLP & Gel Electrophoresis	F2F
4	Nov. 16	Exercise 14: Transformation of pGLO plasmid into bacteria	Online
--	Nov. 23	Thanksgiving Break- <b>NO LABS</b>	

### Important Semester Dates

First Class Day	Monday, August 17, 2020
Labor Day Holiday	Monday, September 7, 2020
Midterm	Thursday, October 8, 2020
Last day to withdraw	Thursday, October 15, 2020
Last On-Campus Class Day	Tuesday, November 24, 2020
Thanksgiving Break	Wednesday, November 25-Friday, November 27, 2020
Final Exam/Project Preparation and Virtual Review	Monday, November 30-Monday, December 7, 2020
Final Exams	Tuesday, December 8-Friday, December 11, 2020
Fall Commencement	Saturday, December 12, 2020
Final Grades Due	Monday, December 14, 2020