

**BIOL 1107L: Principles of Biology Laboratory I (0-3-1)**  
**Valdosta State University, Biology Department, College of Science & Math**  
**Fall 2022: Laboratory Syllabus**

**Instructor:** Dr. John G. Phillips (he/him)  
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**Office (Student) hours:** **Monday 4:00 PM – 5:00 PM**      **Wednesday 11:00 AM – 12:00 PM**  
Or by appointment (please send me an email to my valdosta.edu account with “appointment” in the subject line and I will accommodate as time permits).

**Laboratory Sections:**      **H (CRN # 83338): H /**      2:00 -- 4:50 p.m. – **BC 1083**  
   **M (CRN # 83343): M /**      12:00 -- 2:50 p.m. – **BC 1085**

**Pre- or Corequisite:** BIOL 1107 Unifying Principles of Biology I.

Note a grade of C or higher is required in both these lectures and labs!

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

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

**Required Laboratory Notebook & Brief Instructions:** A dedicated bound notebook must be maintained for deposition of each laboratory exercise following the guidelines in the above lab manual (see introduction for details). Students must include a table of contents with numbered pages for each lab exercise. In addition, each lab entry in the dedicated notebook must provide a title, introduction, materials and methods, results in the form of collected data (i.e., Tables) or drawings and graphs (i.e. Figures). This is followed by a summary of what principles or hypotheses were learned through experimentation in the conclusion of each laboratory entry. More instructions will be provided by your instructor but note this notebook must always be present with you during lab sessions for data collection and inspection by your instructor.

**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 in written formats used in peer-reviewed journals.
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

**Laboratory Assignments and Grading:** Students will be graded on their performance in the laboratory based on attendance, quiz grades, selected homework assignments, and other assignments as specified by your instructor.

1. **Lab Quizzes or Assignments (50%):** You will complete and submit a weekly lab quiz or assignment that will demonstrate your mastery of the skills that you developed in the lab. These quizzes and assignments will be administered through Blazeview. I will provide you with completion dates at a

later time. A make-up assignment will be provided for those who have excused absences.

2. **Lab Reports (30%):** You will develop and complete an experiment and write a summary of the lab results in standard scientific format for two separate labs. Further information will be provided in the lab.
3. **Lab Notebook (10%):** A laboratory notebook is an important element for conducting scientific research. Each student will maintain a lab notebook for recording methods employed in the experiment as well as the experimental results. Students are **required** to have their notebook at every lab class.
4. **Group Participation (10%):** You will be graded on your attendance and ability to work with the members of your group. You must be present for the entire lab in order to receive full credit for group participation. You will receive a grade for each lab. Your lowest group participation grade will be dropped.

**Attendance Policy:** Students arriving late to lab will be counted as present but will receive a zero for the lab quiz. However, you must sign and date your quiz indicating you were late or you will be considered absent. Absences resulting in >20% of missed laboratory time (i.e., 3 labs) will result in an automatic grade of F as per University policy. **No make-up labs or quizzes are allowed.** The full absence regulations are available in the online catalog at <http://catalog.valdosta.edu/undergraduate/academic-affairs/>

#### **Lab Conduct:**

1. Please arrive on time. If you are more than 20 minutes late without clearing it with me, you will not receive credit for participating in that lab.
2. Please bring your notebook to the lab each week and record data in your notebook.
3. **No eating or drinking in the lab is allowed.**
4. You must take care of lab equipment. Notify the professor if something is not working properly or if something breaks during the course of the lab.
5. It is your responsibility to properly use the microscope assigned to your seat position. Please notify me if the microscope is not functioning properly.
6. Cell phones are not to be used in the lab. **This means no texting during the lab unless I give permission for cell phones to be out.**
7. A laboratory course is a collaborative effort. You will often work with your lab group or a lab partner. Please be prepared for the lab each week and be fully engaged in the lab experiments.

**Academic Integrity:** By taking this course, you agree that all required course work may be subject to submission for textual similarity review to Turnitin, a tool within BlazeVIEW.

**Mid-term, or in-progress grades:** The instructor is required to submit in-progress grades prior to mid-term (10/4/2022). In theory, a mid-term grade is necessary for students to assess how they are doing in class by midterm. In this course, students will have feedback on several lab quizzes, lab assignments, and any homework or group assignments. I will, in general, assign an overall average grade at this point on the normal scale of A-F viewable on Banner. Students receiving a grade of "D" or lower should therefore carefully evaluate their option of dropping this course by midterm without academic penalty. The deadline for withdrawal is listed in Banner about a week later.

## TENTATIVE SCHEDULE LABORATORY EXERCISES

Week	Date	Topic
1	Aug. 15-19	Syllabus and Course Introduction
2	Aug. 22-26	Exercise 1: Introduction to the Scientific Method and Primary Scientific Literature (PSL)
3	Aug 29 – Sept. 2	Exercise 2: Basic Light Microscopy
4	Sept. 5-9	<b>Labor Day Week- NO LABS</b>
5	Sept. 12-16	Lab 3: Microscopy of Living Organisms
6	Sept. 19-23	Exercise 5: Cellular Water Relations
7	Sept. 26 -30	Handout: Biochemical Spectroscopy
8	Oct 3-7	Exercise 6: Protein Extraction & Quantification from Living Tissues
9	Oct. 10-14	<b>Fall Break – NO LABS</b>
10	Oct. 17-21	Exercise 7: Enzymology Lab: Basics of Amylase Enzyme Activity
11	Oct. 24-28	Exercise 9: Photosynthesis: <b>submit lab report 1 for enzyme activity lab</b>
12	Oct. 31- Nov. 4	Exercise 10: Cell Reproduction: Mitosis, Meiosis and Cytokinesis
13	Nov. 7-11	Handout: Crime Scene RFLP and Gel Electrophoresis
14	Nov. 14-18	Handout: Bioinformatics Lab
15	Nov. 21-25	<b>Thanksgiving Break- NO LABS</b>
16	Nov. 28-Dec. 2	No lab; <b>submit lab report 2 for Crime Scene Lab this week</b>

**Privacy Act (FERPA):** The Family Educational Rights and Privacy Act (FERPA) prohibit the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given by email or over the telephone, as positive identification can not be made by this manner. Grades will be posted through BlazeView course website.

**Biology Tutoring:** The Academic Success Center (ASC) at Valdosta State University is located in the Odum Library and is available to all students. The ASC provides free peer tutoring in core curriculum courses, including biology, chemistry, math, writing, and foreign languages. The SSC also provides free professional academic advising and on-campus job information in one location. Call 333-7570 to make an appointment, or visit the website: [www.valdosta.edu/asc](http://www.valdosta.edu/asc).

**Access Office:** Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in the Farber Hall. The phone numbers are 245-2498 (V/VP) and 219-1348 (TTY) or visit the website 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 sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, 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: the Director of the Office of Social Equity, [titleix@valdosta.edu](mailto:titleix@valdosta.edu), 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31698, 229-333-5463.

### **COVID-19 related policy**

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, while face coverings are no longer required, individuals are strongly encouraged to continue wearing a face covering indoors. **Unvaccinated individuals are strongly encouraged to get vaccinated. Vaccines remain available at no cost for all members of the university community by appointment at Student Health Services. For COVID Vaccines, please call ahead for an appointment at 229-333-5886.**

**Campus Gun Carry Statement (HB 280):** If you choose to carry and 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/>

**SOI Statement:** At the end of the term, all students will be expected to complete an online Student Opinion of Instruction survey (SOI) that will be available through SmartEvals. Students will receive an email notification through their VSU email address when the SOI is available (generally at least one week before the end of the term). SOI responses are anonymous to instructors/administrators, and they will be able to access results only after they have submitted final grades. Before final grade submission, instructors will not be able to see any responses, but they can see the percentage of students who have or have not completed their SOIs. While instructors will not be able to see student names, an automated system will send a reminder email to those who have yet to complete their SOIs. Students who withdraw or drop a course will also be sent invitations to complete the Dropped Course Survey. Complete information about the SOIs, including how to access the survey, is available on the SOI Procedures webpage.