

BIOL 1107L: Principles of Biology Laboratory I (0-3-1)
Valdosta State University, Biology Department, College of Science & Math
Spring 2024: Laboratory Syllabus

Instructor: Dr. Brian C. Ring, Professor of Biology

Office Hours (BC 2084): M & W 10:00 a.m. - 1:00 p.m. **Phone:** 249-4841 **Email:** bcring@valdosta.edu
Please use BlazeView course email first

Laboratory Sections: F (CRN # 26740): R / 9:30 a.m. -- 12:20 p.m. – BC 1083

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). 7th Edition.

Required Laboratory Notebook & Brief Instructions: A dedicated 3-Ring or spiral or 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- just like a scientist would do.

Laboratory Reports/Papers: Two papers will be assigned in laboratory covering assigned labs. Instructions for writing papers are found in the laboratory manual under **Appendix B** and your instructor will provide additional guidance in the laboratory and/or on BlazeView (BV). Papers may be handed in as hard copy or through BV *TurnItIn* online.

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

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

Laboratory Grading: The laboratory course schedule is found in the table below. Your laboratory grade is computed as a percentage across categories listed in the table below and more details can be found in the D2L BlazeView (BV) course site. Quizzes are given weekly at the beginning of lab and if you are late you may be marked as tardy, but there are no make-up quizzes. Notebook checks are listed thrice during the semester and are performed either during class time as indicated or at the discretion of your instructor(s) in or outside of laboratory time (e.g. collected by your instructor for grading and return). Two laboratory papers will be assigned based on results collected in the laboratory for Exercise 1 (Scientific Method) and Exercise 8 (Enzymology Lab, page 85). More details will be described by your instructor and posted on BV.

Grade Calculation		Grade Distribution		
Category	Possible Weight	Letter	Percentage	Point Range
Lab Quizzes	50%	A	90-100%	N/A
Lab Attendance	20%	B	80-89%	
Lab Notebook	15%	C	70-79%	
Lab Reports/papers (2x)	15%	D	60-69%	
		F	< 59%	
Total	100%			

Attendance Policy: Students arriving late to lab will be counted as tardy but will receive a zero for any missed assignments. 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/>

Attendance & Sars-Cov2 (and its derivatives causing Covid19) Reporting: Blazers protect Blazers. As members of a community, we seek to protect others and ourselves. The first line of protection against COVID 19 is to be fully vaccinated, including a booster. Vaccinations are strongly encouraged and are available free of charge through VSU Health Services and many local pharmacies. Information about scheduling an appointment at Student Health Services is available at <https://www.valdosta.edu/administration/student-affairs/student-health/>.

To protect yourself and others, properly wearing a face covering is strongly encouraged in all classrooms and other instructional spaces at all times.

If you are experiencing COVID symptoms, use the free testing available at the Student Health Center; you may also obtain a test at many other locations around town. If you test positive, please report your case using the COVID Self Reporting tool at the top of your MyVSU page. Guidance on student absences is available at <https://www.valdosta.edu/academics/academic-affairs/guidance-on-student-absences.php>. **To report an absence to the Dean of Students Office, complete the form** at <https://www.valdosta.edu/administration/student-affairs/absentee-notification-form.php>. If you must self-isolate or quarantine, follow the directions provided by Student Health after you have reported your COVID status.

Mid-term, or in-progress grades: The instructor is required to submit in-progress grades prior to mid-term (2/29/2024). In theory, a mid-term grade is necessary for a student to assess how s/he is 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.

Student Conduct: Cellular Phone usage is not allowed during laboratory sessions except as needed for quizzes and assignments (e.g. using a timer). One point will be taken off your quiz if your cell phone is observed during lab for any unapproved purpose (e.g. text messaging). Refer to your lab manual introduction for further lab rules and safety.

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.

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.

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.

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, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31698, 229-333-5463.

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.

TENTATIVE LABORATORY SCHEDULE & EXERCISES:

Lab	Week of:	Topic:
1	Jan.08	Introduction to the Lab, Safety, and Laboratory Notebooks
--	Jan.15	MLK Day- NO LABS
2	Jan.22	Exercise 1: Use of the Scientific Method (Paper 1) Read Appendix B
3	Jan.29	Exercise 2: Introduction to Basic Light Microscopy
4	Feb.05	Exercise 3: Light Microscopy of Living Organisms
5	Feb.12	Exercise 4: Independent Group Microscopy Project (Paper 1)
6	Feb.19	Exercise 5: Exploring Cellular Water Relations N1: Notebook check # 1
7	Feb.26	Exercise 6: Basic Biochemical Techniques Read Appendix C, D & E Oct. 06- Midterm
8	Mar.04	Exercise 7: Protein extraction & Quantification Oct. 06- Midterm
--	Mar.11	Spring Break- NO LABS
9	Mar.18	Exercise 8: Enzymology Lab: basics of α -amylase activity (Paper 2) N2: Notebook check # 2 Paper 1 Due (Ex. 4 Group Microscopy)
10	Mar.25	Exercise 10: Photosynthesis
11	Apr. 01	Exercise 11: Cellular Reproduction: Mitosis & Meiosis
12	Apr. 08	Special Topic Handout: DNA Gel Electrophoresis Paper 2 Due (Enzymology Lab, pg. 85)
13	Apr. 15	Exercise 16: Introduction to Bioinformatics
14	Apr. 22	Catch Up & Assessment N3: Notebook check # 3