

Valdosta State University

BIOL 1108 Principles of Biology II Laboratory Syllabus Spring 2015

Laboratory (BC 1073): Section F: Wednesday 3:00 – 5:50 PM

Instructor: Dr. Eric W. Chambers

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Office hours: Monday and Wednesday 1:00-2:00 pm or by appointment

Text: Grove, T. 2011. Principles of Biology II Lab Manual 3rd edition

Course Overview:

This lab is a companion to the lecture portion of BIOL 1108 and must be completed in order to receive full credit for the course. Lab exercises should provide you greater insight into the physiological processes of plants and animals. The lab will also introduce you to the diversity of life within the animal and plant Kingdoms as well as highlight evolutionary relationships among the phyla within these Kingdoms.

Educational outcomes: Listed at the end of syllabus

Course Prerequisites:

BIOL 1107 or permission of instructor

Lab Grading:

The lab will constitute 25% of your overall grade in BIOL 1108. It will be based on 200 total points.

Quizzes (8): 40 points

Lab assignments (6): 60 points

Lab practical (2): 100 points

Extra credit: assigned at my discretion

Lab quizzes: Lab quizzes are worth 5 points each and will be given at the beginning of class. These quizzes could include both material from the previous lab and the current lab. Quizzes will be **closed** book and will be designed to help you prepare for the lab practical. Grades for the quizzes will be posted on Blazeview at the end of each week and the graded quiz will be returned to you in class the following week. Please contact me immediately if there is a discrepancy between your posted grade and the score on the returned quiz.

Lab assignments: You will be required to complete six short lab assignments (worth 10 points each) during the course of the semester. Assignments are due at the **start of class** and will not be accepted late. I will not allow assignments to be emailed. These assignments typically involve the collection and analysis of biological data. You may be required to prepare simple figures and tables using Excel. You may also be required to analyze the data using some basic statistical tests. You must always prepare your own reports and your own figures and tables. Any assignments that are submitted that contain clearly identical figures or tables will result in an automatic 0 for that assignment.

Lab Practicals: Two lab practical exams (worth 50 points each) will be given, one covering animals and one covering plants. Lab practicals are timed and questions may include microscope slides, whole specimens, Powerpoint images, and a written component. Lab practical exams can only be taken the week they are scheduled. **Anything we study or examine in lab is fair game for the lab practical.**

Extra Credit: I *may* provide you the opportunity to complete short extra credit assignments during the semester. More information will be provided later.

Lab Conduct:

- **Arrive on time.** Assignments are due at the start of lab. Students arriving 10 minutes late will not be able to turn in assignments and will receive a zero (0) on those assignments
- It is strongly advised to maintain a laboratory notebook with drawings, descriptions, data etc. of the laboratory exercises. The notebook will help you study for the practical exams.
- No eating or drinking during the lab.
- Attendance to lab is mandatory. Excused absences are usually given for medical emergencies and documentation must be provided; the professor determines whether or not an absence is “excused” or not. If a student misses **three** labs ***for any reason*** the student cannot earn higher than a “D” for his/her final grade ***in the course***. Labs cannot be made up outside of scheduled laboratory sessions (except under extenuating circumstances). Students are still responsible for all lab content even if they received an excused absence.
- Students 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
- Each student will be assigned a microscope. It is the student’s responsibility to properly use the microscope. After lab the professor will check each scope to make sure that it was put away properly. Failure to do so will result in one point being subtracted from the student’s total lab points (not the final percentage) each week it is not put away properly. Notify the professor if your microscope is not functioning properly.
- Cell phones are not to be used in lab

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.

Students with disabilities: Students requiring special accommodations because of disability should discuss their needs with me as soon as possible. Those needing accommodations that are not registered with the Special Services Program must contact the Access Office for Students with Disabilities located in Farber Hall. The phone numbers are 245-2498 (voice) and 219-1348 (tty).

VALDOSTA STATE UNIVERSITY GENERAL EDUCATIONAL OUTCOMES (GEO)

3. Students will use computer and information technology when appropriate. They will demonstrate knowledge of computer concepts and terminology. They will possess basic working knowledge of a computer operating system. They will be able to use at least two software tools, such as word processors, spreadsheets, database management systems, or statistical packages. They will be able to find information using computer searching tools.

4. Students will express themselves clearly, logically and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.

5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices. They will understand the basic concepts and principles underlying scientific methodology and be able to collect, analyze, and interpret data. They will learn a body of scientific knowledge and be able to judge the merits of arguments about scientific issues. They will be able to perform basic algebraic manipulations and to use fundamental algebraic concepts to solve word problems and equations. They will be able to use basic knowledge of statistics to interpret and to analyze data. They will be able to evaluate arguments based on quantitative data.

TENTATIVE LAB SCHEDULE AND TOPICS

Week of January 12	NO LAB
Week of January 19	Introduction and Learn to Use Excel (Meet in Computer Lab room 3018) (Lab 1)
Week of January 26	Diversity: Porifera and Cnidaria (Lab 8a) Vertebrate Animal Tissues (Lab 8b)
Week of February 2	Diversity: Platyhelminthes (Lab 9a) Vertebrate Anatomy (Lab 9b)
Week of February 9	Diversity: Annelida and Mollusca (Lab 10a) Sensory Systems and Muscle Structure (Lab 10b)
Week of February 16	Diversity: Nematoda and Arthropoda (Lab 11a) Cardiovascular System (Lab 11b)
Week of February 23	Diversity: Echinodermata and Chordata (Lab 12a) Digestive System and Excretory Systems (Lab 12b)
Week of March 2	LAB PRACTICAL I
Week of March 9	Non-Vascular Plants (Lab 2)
Week of March 16	Vascular Land Plants (Lab 3)
Week of March 23	NO CLASS SPRING BREAK
Week of March 30	Roots, stems and leaves (Lab 4)
Week of April 6	Angiosperm Development (Lab 5)
Week of April 13	Growth and Transpiration (Lab 6)
Week of April 20	Pollution: Effects of Chemical, Thermal and Acid Pollution (Lab 7)
Week of April 27	LAB PRACTICAL II