Valdosta State University, Department of Biology

BIOL 1107: Principles of Biology I (Lab syllabus) Fall 2013

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Office hours: Tuesdays 1-2pm, Wednesdays 4-5pm, and by appointment

This syllabus will apply to the following sections:
Section G: Tuesday 9:30am-12:20pm in BSC 1083
Section H: Wednesday 1pm-3:50pm in BSC 1083
Section O: Tuesday 2pm-4:50pm in BSC 1085 *FLC with Math 1112
Section P: Thursday 1pm-3:50pm in BSC 1085 *FLC with Eng 1101

Course Overview

Welcome to Bio1107 Lab. This course is a required companion to the lecture portion of Bio1107. The laboratory exercises in this course will complement the material presented in lecture. A major theme in this course will be the scientific method, and getting you to "think like a scientist." You will be applying what you have learned in the classroom and from your laboratory manual to generate hypotheses, design experiments, test hypotheses, and make inferences about the natural world.

Course Objectives and Linked Assignments

The broad objectives of this course are to introduce you to the scientific method and to apply that method to understand scientific principles and biological phenomena. You will learn new technologies and techniques, learn concepts by experimentation, learn scientific writing, and be able to analyze, evaluate, and make inferences from oral, written, or visual materials.

Objectives	Linked Assignments
Understand and implement the scientific method	Week 1 Lecture, Exercise 1 Lab, reading assignment, Quiz 1
Excel at light microscopy and observe living cells	Exercises 2, 3 and 4 Labs, Quizzes 2 and 3
Experiment with osmosis and diffusion	Exercise 5 Lab, Quizzes 3 and 4
Work collaboratively in small groups	All Labs, Assignment 1
Write scientifically	All Labs, Week 1 Lecture, Project Proposal, Assignments 1-3, Lab Notebook
Understand how to extract and quantify proteins	Exercise 6 Lab, Quizzes 5 and 6
Understand and experiment with enzyme function	Exercise 7 Lab, Quizzes 7, 8 and 9
Understand mitosis, meiosis and cytokinesis	Exercise 10 Lab, Quizzes 9 and 10
Understand Mendelian genetics	Genetics Lab Exercise, Quizzes 10 and 11, Assignment 2
Use restriction enzyme digests of DNA for forensic scientific experimentation	Crime Scene Lab, Quizzes 11-13, Assignment 3

Course Prerequisites and expectations

There are no prerequisites for this course, except that you are also enrolled in the lecture portion of Bio1107.

Course Credits

BIOL 1107 is a 4 credit course, and the Lab section of the course will contribute 25% of your grade.

Required Texts and Materials

Goddard, R. H. 2013. Methods and Investigations in Basic Biology. Sixth edition. Hayden-McNeil Publishing, Plymouth, Michigan.

Basis for Final Grade

Lab Grade (25% of BIOL 1107 grade)
- Quizzes (12*): 10 points each
- Lab assignments (3): 25 points each
- Lab Notebook (1): 25 points
- Lab assessment (1): 25 points
- *The lowest quiz grade is dropped

Average Percent Lab Grade = ((total # points earned / possible points earned so far) * 100)

***Your lab grades will be posted to the BIOL 1107 section Grade Book on Blazeview*. Assignment grades will be made available the week after they are due unless otherwise indicated. Students will have until the end of the following week to contest any grades; after that time grades are final. Any questions about grades must be made in writing through email.**

Lab quizzes. There will be a 10 point quiz at the beginning of each lab session, so do not be late for lab! Quizzes will be taken only using your Turning Point clickers. **You are required to use Response Card XT clickers**, which are available in the VSU bookstore. Always carry an extra battery to class. If you do not have a clicker, or if your battery dies, you get a zero for the quiz, no exceptions. The quizzes will be based on material from the previous labs and the current lab, so you are required to read the lab for each day **BEFORE** coming to class. Quizzes are open notebook, but the lab manual may not be used. Grades for lab quizzes will be available at the end of each week on Blazeview, unless otherwise noted. If there is an error with your quiz grade you must contact me on the week the quiz is given, as grades will become final by the following week.

Lab Assignments. Each assignment is worth 25 points. For Freshman Learning Communities, these assignments may be a joint effort between BIOL 1100, MATH 1111, MATH1112, or ENGL 1101. Questions regarding assignment grades must be made during the week the grade has been given to you, as grades will become final by the following week. Assignments are due at the start of class, and will not be accepted late.

Lab Notebook. Students are required to keep a lab notebook in a ½" 3-ring binder. The lab notebook will be used on weekly lab quizzes and will be turned in the last day of lab to be graded. Your notebook grade will be based on completeness, accuracy, and order. More information can be found in the lab manual.

Attendance Policy: Students who miss two labs without an excuse or three labs total cannot receive a lab grade above a "D" (60%). Attendance will be recorded using the lab quiz, which will be given the

first 10 minutes of the lab. So, do not be late to lab. In the event that a student misses a lab with an excuse, s/he should email the instructor within 24 hours of the missed lab. It is the instructor's prerogative to accept the excuse or not. **Absolutely no laboratories can be made up, and no work will be accepted late.** If you are more than 15 minutes late, you may not be allowed to enter the lab, so please be on time.

Student Conduct

You will be respectful of your classmates and your instructor. Cell phone use is not allowed during lab. One point will be taken off of your quiz if a cell phone is observed during lab for any purpose. This includes checking your text messages. Refer to the lab manual for lab rules.

Course Policies: Technology and Media

Email: Please email me only from a VSU email account. I am unable to respond to emails from non-VSU accounts.

Classroom Devices: As noted above, you may NOT use your cell phones in class under any circumstances. Please bring calculators when needed. Timers will be made available when necessary.

Classroom Response Clickers:
We will be using "clickers" in class on a regular basis. You will need to purchase a ResponseCard XT clicker from the bookstore or computer store and bring it with you to every class session. It would be wise to bring extra batteries as well, as we will be using the clickers in activities that count for class points. The purchase of a clicker is NOT optional; it will be used as an integral part of this course. I will provide a short demonstration of how to use it in class. Note: the clicker can be used in other classes if it is the same version/generation. Check with your other instructors to be sure. After you purchase your clicker, you must register your clicker online for this class. It is imperative that every student register their unit no later than the first week of class. Instructions for the registration process can be found online. Purchase your clicker at the Computer Store or the Bookstore. Note that if you forget your clicker, you will get a zero for the quiz and you will be noted as absent from that lab.

Accommodations 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 Farber Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (Video Phone), and 229-219-1348 (TTY). For more information, please visit http://www.valdosta.edu/student/disability or email access@valdosta.edu.

Academic Integrity

Academic integrity is the responsibility of all VSU faculty and students. Students are responsible for knowing and abiding by the Academic Integrity Policy as set forth in the Student Code of Conduct and the syllabus. All students are expected to do their own work and to uphold a high standard of academic ethics. Cheating (including plagiarism) will not be tolerated. The instructor reserves the right to dismiss you from the course without credit if you are caught cheating. You will be respectful of your instructor and your fellow students at all times, or you will be dismissed from the class and potentially the course.

Tentative Laboratory Schedule, BIOL 1107, Fall 2013

LABORATORY EXERCISES:

Lab	Week of:	Topic:	
1	Aug 12	Laboratory Introduction – What is Science	
2	Aug 19	Ex. 1 Introduction to the Use of the Scientific Method	*Quiz 1*
3	Aug 26	Ex. 2 Basics of the Light Microscope.	*Quiz 2*
-----	Sept 2	**Labor Day Week – No Labs**	-------
4	Sept 9	Ex. 3 Observation of Living Cells with Light Microscopy	*Quiz 3*
5	Sept 16	Ex. 5 Cellular Water Relations	*Quiz 4*
6	Sept 23	Ex. 4 Independent Group Microscope Project: Proposal	*Quiz 5*
7	Sept 30	Ex. 4 Independent Group Microscopy Project: Data collection lab	*Quiz 6, Begin Assignment 1*
8	Oct 7	Ex.6 Protein extraction & quantification	*Quiz 7, Assignment 1 first draft due at beginning of lab, Assignment 1 final draft due Friday, Oct. 11, 1:00pm.*
9	Oct 14	Ex. 7 Enzymology: α-amylase activity	*Quiz 8*
10	Oct 21	Ex. 8 Enzymology: Investigation of the effects of temperature on enzyme activity	*Quiz 9 Begin Assignment 2*
11	Oct 28	Ex. 10 Cell reproduction: Mitosis, Meiosis, & Cytokinesis	*Quiz 10, Assignment 2 first draft due at the beginning of lab, Assignment 2 final draft due Friday, Nov. 1, 1:00pm.*
12	Nov 4	Mendelian Genetics Lab – Handout	*Quiz 11, Begin Assignment 3*
13	Nov 11	Crime Scene Lab part 1	*Quiz 12, Assignment 3 due*
14	Nov 18	Crime Scene Lab part 2; Turn in Notebooks; Lab assessment	*Quiz 13 (replacement quiz), Notebooks due, Course Assessment*
----	Nov 25	**Thanksgiving Holiday – No Labs**	--------

*Final Exam dates will be posted, and will fall between December 4th and 6th.