

**BIOL 1107: Unifying Principles of Biology**  
**Valdosta State University, Spring 2015: Laboratory Syllabus**

Lecture (BC 1011): T & R 9:30 a.m. – 10:45 a.m.- Dr. Cy Mott

Laboratory (BC 1083): Section A (CRN # 21281): M / 10:00 - 12:50 a.m. - Dr. Ring

Ring Office hours (BC 2084): M & W 3:30-4:30 p.m. Phone: 249-4841, Email: [bcring@valdosta.edu](mailto:bcring@valdosta.edu)

**TENTATIVE LABORATORY EXERCISES:**

Lab	Date:	Topic:
1	Jan.12 (M)	Introduction to the Lab, Safety, and Laboratory Notebooks
--	Jan. 19 (M)	MLK Day- <b>NO LABS</b>
2	Jan. 26 (M)	<b>Exercise 1:</b> Introduction to the Use of the Scientific Method
3	Feb. 02 (M)	<b>Exercise 2:</b> Basic Light Microscopy
4	Feb. 09 (M)	<b>Exercise 3:</b> Light Microscopy Observations of cells and organisms; Basic "5 Kingdom" levels of organization. <b>Exercise 4:</b> Group Microscopy Project: <u>Proposal Discussion</u> <b>Read Appendix A &amp; A1 Due:</b> Group Proposal (end of class)
5	Feb. 16 (M)	<b>Exercise 4 Cont'd:</b> Independent Microscopy Project: Data collection lab; Distribution of microscopic flora and fauna. <b>A2 Due:</b> Exercise 4, Summary of Group Results (end of class), <b>See Appendix B</b> <b>N1:</b> Notebook check # 1
6	Feb. 23 (M)	<b>Exercise 5:</b> Cellular Water Relations
7	Mar. 02 (M) <b>Mar. 5- Midterm</b>	<b>Exercise 6:</b> Protein extraction & Quantification from living tissues <b>Read Appendix C &amp; D</b>
8	Mar. 09 (M)	<b>Exercise 7:</b> Enzymology Lab: basics of $\alpha$ -amylase activity <b>A3 Due:</b> Group Research Paper (Exercise 4)
9	Mar. 16 (M)	<b>Exercise 8:</b> Enzyme Regulation: Investigation of the effects of temperature and pH on $\alpha$ -amylase activity
--	Mar. 23 (M)	<b>SPRING BREAK- NO LAB</b>
10	Mar. 30 (M)	<b>Exercise 9:</b> Photosynthesis
11	April 06 (M)	<b>Exercise 10:</b> Cellular Reproduction: Cell Cycle, Mitosis & Meiosis
12	April 13 (M)	<b>DNA Fingerprinting:</b> Crime Scene Investigation (Handout)
13	April 20 (M)	<b>Exercise 13:</b> Genetically Modified Organisms- Part I OR <b>Exercise 14:</b> pGLO Transformation into Bacteria- Part I
14	April 29 (M)	<b>Exercise 13:</b> Genetically Modified Organisms- Part II OR <b>Exercise 14:</b> pGLO Transformation into Bacteria- Part II <b>N2:</b> Notebook check # 2

**Summary of Laboratory Grade (100% points):**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	A1	A2	A3	N1	N2	P	Total
20	20	20	20	20	20	20	20	20	20	20	20	20	20	45	25	25	25	400

Q= Laboratory Quiz, A= Laboratory Assignment in or outside of class, N= Laboratory Notebook Check, P= Participation

Your laboratory grade is computed as a percentage of your total points (x) from the total possible (y), where  $(x / y) \times 100 =$  laboratory percentage. Use the empty third row in the table above to keep track of your individual points and lab percentage at any point in the semester. Quizzes are given weekly at the beginning of lab during the first 20 minutes. Quizzes may be given by clicker or a combination of paper and clicker. You will have only the time allotted at the beginning of lab to take the quiz. **No make-up quizzes allowed.** Assignments are listed in the above Laboratory Exercises as A1- A3 along with a short description. Notebook checks are listed twice during the semester and are performed during class time as indicated or at the discretion of your instructor(s). Participation is awarded based on continuous effort of the student both individually and as a group member as observed by the instructor.