BIOL 1107: Unifying Principles of Biology
Valdosta State University, College of Arts & Science, Spring 2018: Laboratory Syllabus

Lecture (BC 1011): **M W F** 9:00 – 9:50 a.m.- Dr. Emily Cantonwine

Laboratory (BC 1083): Section A (CRN # 21946): M / 10:00 a.m. - 12:50 p.m. - **Dr. Brian Ring**

Ring Office hours (BC 2084): M & T 2:00-3:00 p.m. **Phone:** 249-4841, Email: bcring@valdosta.edu

TENTATIVE LABORATORY EXERCISES:

Lab	Week of:	Topic:
1	Jan.08	Introduction to the Lab, Safety, and Laboratory Notebooks **Exercise 1**: Scientific Method- The Black Box Experiment
--	Jan. 15	MLK Day- **NO LABS**
2	Jan. 22	**Exercise 2**: Basic Light Microscopy
3	Jan. 29	**Exercise 3**: Light Microscopy Observations of cells and organisms
4	Feb. 04	**Exercise 4**: Group Microscopy Project: Proposal Discussion **Read Appendix A & A1 Due:** Group Proposal (end of class)
5	Feb. 12	**Exercise 4 Cont'd**: Independent Microscopy Project: Data collection lab; Distribution of microscopic flora and fauna. **A2 Due:** Exercise 4, Summary of Group Results (end of class), **See Appendix B**
6	Feb. 19	**Exercise 5**: Cellular Water Relations **N1:** Notebook check # 1
7	Feb. 26 **Mar. 1- Midterm**	**Exercise 6**: Protein extraction & Quantification from living tissues **Read Appendix C & D**
8	Mar. 05	**Exercise 7**: Enzymology Lab: basics of α-amylase activity **A3 Due:** Group Research Paper (Exercise 4)
--	Mar. 12	**SPRING BREAK- NO LABS**
9	Mar. 19	**Exercise 8:** Enzyme Regulation: Investigation of the effects of temperature and pH on α-amylase activity
10	Mar. 26	**Exercise 9:** Photosynthesis
11	April 02	**Exercise 10:** Cellular Reproduction: Cell Cycle, Mitosis & Meiosis
12	April 09	**Exercise 13:** Genetically Modified Organisms- Part I Genetics Handout- Part I
13	April 16	**Exercise 13:** Genetically Modified Organisms- Part II Genetics Handout- Part II
14	April 23	**Exercise 14:** Genetic Transformation of E. coli with rDNA- Part I
15	April 30	**Exercise 14:** Genetic Transformation of E. coli with rDNA- Part II **N2:** 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) X 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 scantron 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.