

BIOL 1107K: Unifying Principles of Biology I

Valdosta State University, Biology Department, Fall 2017: Laboratory Syllabus

Lecture (BC 1011): **M W F** 8:00 – 8:50 a.m.- Dr. Cantonwine or **M W F** 12:00 – 12:50 p.m.- Dr. Elder

Laboratory: **Section A (CRN # 81958): M / 9:00 - 11:50 a.m. - Dr. Ring (BC 1083, Cantonwine)**

Section R (CRN # 81978): W / 9:00 - 11:50 a.m. - Dr. Ring (BC 1083, Elder)

Section O (CRN # 81975): F / 9:00 - 11:50 a.m. - Dr. Ring (BC 1085, Elder)

Ring Office hours (BC 2084): **M & W** 4:00-5:00 p.m. Phone: 249-4841, Email: bcring@valdosta.edu

TENTATIVE LABORATORY EXERCISES:

Lab	Week of:	Topic:
1	Aug.13-17	Introduction to the Lab, Safety, and Laboratory Notebooks Exercise 1: Introduction to the Use of the Scientific Method
2	Aug. 20-24	Exercise 2: Basic Light Microscopy
3	Aug. 27- 31	Exercise 3: Light Microscopy Observations of cells and organisms; Basic "5 Kingdom" levels of organization. Exercise 4: Independent Microscopy Project A1 Due: Group Proposal (end of class)
--	Sept. 03-07	Labor Day- NO LABS
4	Sept. 10-14	Exercise 4 Cont'd: Independent Microscopy Project: Experimental Set up Lab; Distribution of microscopic flora and fauna. Exercise 5: Cellular Water Relations
5	Sept. 17-21	Exercise 4 Cont'd: Independent Microscopy Project: Data experimental collection lab A2 Due: Exercise 4, Summary of Group Results (end of class) See Appendix B N1: Notebook check # 1
6	Sept. 24-28	Exercise 6: Protein extraction & Quantification from living tissues Read Appendix C & D
7	Oct. 01-05 Oct. 4- Midterm	Exercise 7: Enzymology Lab: basics of α -amylase activity
--	Oct. 08-12	Fall Break- NO LABS
8	Oct. 15-19	Exercise 8: Enzyme Regulation: Investigation of the effects of temperature and pH on α -amylase
9	Oct. 22-26	Exercise 9: Photosynthesis
10	Oct. 29-Nov. 02	Exercise 10: Cellular Reproduction: Cell Cycle, Mitosis & Meiosis A3 Due: Group Research Paper (Exercise 4)
11	Nov. 05-09	DNA Forensic RFLP Lab (handout)
12	Nov. 12-16	Exercise 14: Transformation of pGLO plasmid Bioinformatics Exercise (handout)
--	Nov. 19-23	Thanksgiving Break- NO LABS
13	Nov. 26- 30	Finish Ex. 14- Analyze Transformations Lab Assessment Exercise 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 $(x/y) \times 100 =$ 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. 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 either during class time as indicated or at the discretion of your instructor(s). Participation is awarded based on continuous effort of the student as observed by the instructor.