

BIOL 1107K: Unifying Principles of Biology

Valdosta State University, Biology Department, Fall 2016: Laboratory Syllabus

Lecture (BC 1011): M W 3:30 – 4:45 p.m.- Dr. Chambers

Laboratory (BC 1083): Section H (CRN # 81250): M / 9:00 - 11:50 a.m. - Dr. Ring

Section I (CRN # 81251): M / 12:30 - 3:20 p.m. - Dr. Ring

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

TENTATIVE LABORATORY EXERCISES:

Lab	Week of:	Topic:
1	Aug.15-19	Introduction to the Lab, Safety, and Laboratory Notebooks
2	Aug. 22-26	Exercise 1: Introduction to the Use of the Scientific Method
3	Aug. 29- Sept. 02	Exercise 2: Basic Light Microscopy
--	Sept. 05-09	Labor Day- NO LABS
4	Sept. 12-16	Exercise 3: Light Microscopy Observations of cells and organisms; Basic "5 Kingdom" levels of organization.
5	Sept. 19-23	Exercise 5: Cellular Water Relations
6	Sept. 26-30	Exercise 4: Independent Microscopy Project A1 Due: Group Proposal (end of class) N1: Notebook check # 1
7	Oct. 03-07 Oct. 6- Midterm	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
--	Oct. 10-11	Fall Break- NO LABS
8	Oct. 17-21	Exercise 6: Protein extraction & Quantification from living tissues Read Appendix C & D
9	Oct. 24-28	Exercise 7: Enzymology Lab: basics of α -amylase activity A3 Due: Group Research Paper (Exercise 4)
10	Oct. 31-Nov. 04	Exercise 8: Enzyme Regulation: Investigation of the effects of temperature and pH on α -amylase activity
12	Nov. 07-11	Exercise 10: Cellular Reproduction: Cell Cycle, Mitosis & Meiosis Mendelian Genetics Handout- In class exercise
13	Nov. 14-18	Exercise 14: GMO Detection with PCR
--	Nov. 21-25	Thanksgiving Break- NO LABS
14	Nov. 28- Dec. 02	Finish Ex. 14- Gel electrophoresis Lab Assessment Exam 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 both individually and as a group member as observed by the instructor.