

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

Laboratory (BC 1083): Section E (CRN # 82061): Thurs / 9:30 a. m. – 12:20 p.m. - Dr. Blackmore

Section F (CRN # 82062): Thurs / 1:00 – 3:50 p.m. - Dr. Blackmore

Office hours (BC 2218): Tue 2-3; Wed 12-1 or by appointment. Phone: 259-5114, Email: mblackmo@valdosta.edu

TENTATIVE LABORATORY EXERCISES

Lab	Week of:	Topic:
1	Aug. 17	Introduction to the Lab, Safety, and Laboratory Notebooks
2	Aug. 24	Exercise 1: Introduction to the Use of the Scientific Method
3	Aug. 31	Q1; Exercise 2: Basic Light Microscopy
--	Sept. 4 – 9	Labor Day- NO LABS
4	Sept. 14	Q2; Exercise 3: Light Microscopy Observations of cells and organisms; Basic "5 Kingdom" levels of organization.
5	Sept. 21	Q3; Exercise 4: Independent Microscopy Project A1 Due: Group Proposal (end of class) N1: Notebook check # 1
6	Sept. 28	Q4; 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
7	Oct. 5 Oct. 5- Midterm	Q5; Exercise 6: Protein extraction & Quantification from living tissues Read Appendix C & D
--	Oct. 09 – 13	Fall Break- NO LABS
8	Oct. 19	Q6; Exercise 7: Enzymology Lab: basics of α -amylase activity A3 Due: Group Research Paper (Exercise 4)
9	Oct. 26	Q7; Exercise 8: Enzyme Regulation: Investigation of the effects of temperature and pH on α -amylase activity
10	Nov. 02	Q8; Human Identification / Crime Scene: RFLP & Gel Electrophoresis Mendelian Genetics Handout- In class exercise
11	Nov. 09	Q9; Bioinformatics Exercise: Handout in class & computer lab
12	Nov. 16	Q11; Exercise 14: Transformation of pGLO plasmid
--	Nov. 20 – 24	Thanksgiving Break- NO LABS
13	Nov. 30	Q12; Finish Ex. 14- Analyze Transformations 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
10	10	10	10	10	10	10	10	10	10	10	10	8	8	8	15	15	26	200

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

The laboratory grade is computed as a percentage of your total points (x) from the total possible (200), where $(x / y) \times 100$ = laboratory percentage. Use the empty row in the table above to track 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. Only the time allotted at the beginning of lab may be used 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. Notebooks are checked twice during the semester. These will be done either during class time as indicated or at the discretion of your instructor. Participation is based on continuous effort by the student both individually and as a group member as observed by the instructor.