

Principles of Biology I - BIOL 1107K (Spring, 2014) Section B

1. Course Information

- Course number and section: BIOL 1107K (section: B) CRN: 21916
- Course name: Principles of Biology I
- Hours of credit: 4
- Lab location and room number: Bailey Science Center 1083, Monday 1:00 pm - 3:50 pm;
- Department, College, University: Department of Biology, College of Arts and Sciences, Valdosta State University

2. Instructor Information

- Instructor name: Dr. Jonghoon Kang
- Instructor contact: BC 2217, 229-333-7140, jkang@valdosta.edu
- Instructor office hours: Wed 9:00 am - 11:00 am

3. Course Description

Lab Manual: Goddard, R.H. 2013. Methods and Investigations in Basic Biology. 6th edition.

4. Lab Conduct

- Arrive on time. Assignments are due at the start of lab. Students arriving 10 minutes late will not be able to turn in assignments and will receive a zero (0) on those assignments
- It is strongly advised to maintain a laboratory notebook with drawings, descriptions, data etc. of the laboratory exercises. A dedicated notebook is required. The notebook will help you study for the quizzes.
- No eating or drinking during the lab.
- Attendance to lab is mandatory. Excused absences are usually given for medical emergencies and documentation must be provided; the professor determines whether or not an absence is "excused" or not. If a student misses three labs for any reason the student cannot earn higher than a "D" for his/her final grade. Except under extenuating circumstances, labs cannot be made up outside of scheduled laboratory sessions. Students are still responsible for all lab content even if they received an excused absence.
- Students must take care of lab equipment. Notify the professor if something is not working properly or if something breaks during the course of the lab
- Each student will be assigned a microscope. It is the student's responsibility to properly use the microscope. After lab the professor will check each scope to make sure that it was put away properly. Failure to do so will result in one point being subtracted from the student's total lab points (not the final percentage) each week it is not put away properly. Notify the professor if your microscope is not functioning properly.

- Cell phones are not allowed to be used in lab with the exception of using them as timers or cameras to take pictures of data when necessary.

5. Lab assignments and Lab Practical Exams:

Throughout the semester lab assignments will be given. These assignments are due at the start of the following lab period. No late assignments will be accepted (see above).

6. Assessment or Evaluation Policy

11 quizzes (110) + A1 (10) + A2 (10) + N (10) = 140.

7. TENTATIVE LAB SCHEDULE AND TOPICS

Date:	Topic:
Jan. 13	Lab Safety and General Lab Introduction Laboratory Safety: Exercise 1: "The Black Box" - Scientific Method;
Jan. 20	MLK Holiday on Monday: No Labs
Jan. 27	Exercise 2: Basic Light Microscope Operation and Microscope checkout: Use of the Light Microscope Q1
Feb. 3	Exercise 3: Observation of living cells with Light Microscopy; Basic cellular organization; Independent microscopy lab proposals discussed. Q2
Feb. 10	Exercise 5: Cellular Water Relations Q3
Feb. 17	Exercise 4: Independent Microscopy Projects; Project proposal lab; how to collect useful data Q4, A1 due (proposal)
Feb. 24	Exercise 4: Independent Microscopy Projects: Distribution of microscopic flora and fauna; Data collection lab
Mar. 3	Exercise 6: Protein extraction from biological tissues and determination of total protein, Spectrophotometry and Standard Curves A2 due (Group Research Paper)
Ma. 10	Exercise 7: Enzymology Lab: basics of alpha-amylase activity; Q5
March 17	Spring Break
Mar. 24	Exercise 8: Enzyme Regulation: "Investigation of the effects of temperature and pH on enzyme activity" Q6
Mar. 31	Exercise 9: Photosynthesis Q7
Apr. 7	Exercise 11: Start: Isolation of plasmid DNA from <i>E.coli</i> and restriction with MspA1I: Q8
Apr. 14	Exercise 12: PCR-based VNTR Human DNA typing OR GMOs in food. Q9
Apr. 21	Exercise 14: Transformation of the pGLO plasmid into bacteria Q10
Apr. 28	Analyze transformation experiment. Exercise 10: Mitosis and Meiosis Q11 Notebook check (N)
May 5	Lab assessment

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	A1	A2	N	Sum	Final

Final = Sum/1.4