BIOL 1107 D, E, F - PRINCIPLES OF BIOLOGY 1 - FALL 2011 SYLLABUS & COURSE POLICIES

Lecture: Bailey Science Center (BSC) 1023 (M, W, F, 10:00-10:50 a.m.) Laboratory: All laboratory sections meet in BSC 1083 Section D meets Thurs. 9:30 - 12:20 Section E meets Thurs. 1:00 3:50 Section F meets Friday 11:30- 2:20 Instructor: Dr. Mark Blackmore <u>Com</u> Office: Biology Annex, Room 1 <u>Telep</u> Office Hours: M, W 12:00-12:45 or by appointment email

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- 7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written and visual materials.
- 8. Students will demonstrate knowledge of principles of ethics and their employment in the analysis and resolution of moral problems.

Department of Biology Educational Outcomes (BEO)

- 1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral format used in peer-reviewed journals and at scientific meetings.
- 2. Describe the evolutionary process responsible for biological diversity, explain the phylogenetic relationships among the other taxa of life, and provide illustrative examples.
- 3. Demonstrate an understanding of the cellular basis of life.
- 4. Relate the structure and function of DNA/RNA to the

beginning of the semester.

Week	<u>Dates</u>	<u>Topics</u>	Assigned <u>Reading</u>
1	Aug 15 10	Introduction to Biology; Chemistry of Life	
2	Aug 22 26	Chemistry of Life; Protein, Carbohydrates, Lipids	
3	Aug 29 Sept 2	Nucleic Acids; Cells	
4	Sept 5 9	No class Monday (Labor Day); Exam 1 Sept 7 (Ch 1-4); Cells	
5	Sept 12 16	Cells; Cell Membranes	Ch 5, 6
6	Sept 19 23	Cell Cycle & Cell Division in part (Ch 11.1, 11.2, 11.3, 11.6 & 11.7)	Ch 11 pt
7	Sept 26 30	Cell Signaling & Communication; Exam 2 Sept 30 (Ch 5-7; 11 pt)	Ch 7
8	Oct 3 7	Energy, Enzymes & Metabolism	Ch 8
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Tentative* Lecture Schedule Fall Semester 2011

FALL 2011- Tentative Laboratory Schedule, BIOL 1107 D, E, F

LABORATORY EXERCISES:

Lab	Days:	Topic:	Due Dates
1	August 18-19	Laboratory Introduction Ex. 1 Introduction to the Use of the Scientific Method	
2	August 25-26	Ex. 2 Basics of the Light Microscope.	
3	September 1-2	Ex. 3 Observation of Living Cells with Light Microscopy	
4	September 8-9	Ex. 4 Independent Group Microscope Project: Proposal	
5	September 15-16	Ex. 4 Independent Group Microscopy Project: Data collection lab <i>(Lab assignment 1)</i>	Assignment 1 due next Monday by 3:00 pm
6	September 22-23	Ex. 5 Cellular Water Relations	
7	September 29-30	Ex. 6 Protein extraction & quantification	
8	October 6-7	Ex. 7 Enzymology: -amylase activity	
9	October 13-14	Ex. 8 Enzymology: Investigation of the effects of temperature on enzyme activity (Lab assignment 2)	Assignment 2 due next Monday by 3:00 pm
	October 20-21	Ex. 9 Photosynthesis	
10	October 27-28	Fall Break (Mon & Tue) – no labs this week	
11	November 3-4	Ex. 10 Cell reproduction: Mitosis, Meiosis, & Cytokinesis	
12	November 10-11	DNA fingerprinting & Ex. 12 PCR-Based VNTR Human DNA Typing	
13	November 17-18	Ex. 13 Genetically Modified Organisms part 1	
	November 24-25	Thanksgiving Holiday	
14	December 1-2	Ex. 13 GMO part 2	Notebooks graded in lab