SSE '00

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COURSE: BI 101-General Biology (Lecture)
TIME: 1730-1935 M & W (July 5, - Sept. 13, 2000)
INSTRUCTOR: Dr. **Alan Ohta,**
email: ohta@i-one.com
OFFICE HRS: 1630 -1730 M or by appointment
TEXT: Biology Life on Earth, **5th ed. by Teresa & Gerald Audesirk, Prentice Hall,** *1999/1996.*

COURSE DESCRIPTION: This course is designed to introduce the Biological Sciences. Thus we will begin with the structure and function of the cell, the basic unit of all life. To be followed by the basis of heredity also common to all life forms. Finally we will investigate how all organisms change & adapt in order to survive.

OBJECTIVES:

1. **to provide a sound background of biological systems (function & structure).**
2. **to promote an appreciation for the complexity of living organisms.**
3. **to promote critical thinking in applying concepts.**
4. **to promote an appreciation for all organisms & their common bonds to one another.**

LECTURES:
1. **Lecture topics and text assignments are fisted in the course outline.**
2. **Examination dates are also listed in the course outline.**
3. **The instructor reserves the right to add, omit, or change the materials as he sees fit.**

EXAMS, QUIZZES & GRADES:
1. **All exams & quizzes are "open book & notes" & will consist of short essay questions. You will be graded on your ability not only to answer the question (some can be answered in several ways), but also in how effectively you can defend your answer/position using your knowledge of the subject & applying what you learned through the use of appropriate facts/examples. Thus all questions asking for your opinion or position, whether stated or not have an implied "Why?" or "How?" question attached.**
2. **Grades will be based on the following system & scale:**

Grade Scale:		Grading System:	
90% & above	= A	Quizzes	30%
80 - 89%	= B	Mid Term	30%
65-79%	= C	Final	40%
50 - 64%	= D		
49% & below	= F		

COURSE OUTLINE:

07/05/2000	Introduction to Life (Chap. 1)
07/10	Atom, Molecules, & Life (Chap. 2)
07/12	Biological Molecules (Chap. 3)
07/17	Biological Molecules (con't)
07/19	Energy Flow in Cells (Chap. 4)
07/24	Cell Membrane Structure & Function (Chap. 5)
07/26	Cell Structure & Function (Chap. 6)
07/31	Photosynthesis (Chap. 7)
08/02	Glycolysis & Cellular Respiration (Chap. 8)
08/07	Midterm Exam
08/09	Glycolysis & Cellular Respiration (con't)
08/14	DNA (Chap. 9)
08/16	Gene Expression & Regulation (Chap. 10)
08/21	Cellular Reproduction (Chap. 11)
08/23	Patterns of Inheritance (Chap. 12)
08/28	Patterns of Inheritance (con't)
08/30	Biotechnology (Chap. 13)
09/04	Holiday: Labor Day
09/06	Principles of Evolution (Chap. 14 & 15)
09/11	Origin of Species (Chap. 16 & 17)
09/13	Final Exam

COURSE: BI 101L-General Biology Lab, Summer 2000
TIME: 1950-2155 M & W (July 5, - Sept. 13, 2000)
INSTRUCTOR: Dr. **Alan Ohta**
email: ohta@i-one.com
OFFICE HRS: 1630 - 1730 M **or by appointment**

COURSE DESCRIPTION: The lab class for this course is designed to aide in your understanding of the function and interaction of the cell and its components. The way in which cells pass their information to other cells as well as to the next generation of cells will be investigated. Finally how organisms change from one generation to the next will be addressed.

OBJECTIVES:

1. **To obtain practical knowledge of concepts and structures discussed in the lecture.**
2. **To promote scientific thinking and inquiry.**
3. **To enhance powers of observation and to be more scientifically observant.**
4. **To increase appreciation for the natural environment.**

ASSIGNMENTS:

All lab exercises will require a written report using the format provided by the instructor. These reports will be due as announced by the instructor.

LABS:

1. **Laboratory topics and assignments are listed in the course outline.**
2. **Examination dates are also listed in the course outline.**
3. **The instructor reserves the right to add, omit, or change the materials as he sees fit.**

EXAMS, QUIZZES & GRADES:

1. **All exams & quizzes are "open book & notes" & will consist of short essay questions. You will be grades on your ability not only to answer the question (some can be answered in several ways), but also in how effectively you can defend your answer/position using your knowledge of the subject & applying what you learned through the use of appropriate facts/examples. Thus all questions asking for your opinion or position, whether stated or not have an implied "Why?" or "How?" question attached.**
2. **Grades will be based on the following system & scale:**

Grade Scale:
90% & above - A
80 - 89% = B
65-79°/a =C
50-64% =D
49% & below = F

Grading System:

Labs	**75%**
Final	**25%**

COURSE OUTLINE:

07/05/2000	Introduction
07/10	Scientific Method
07/12	Metrics
07/17	Microscope Use
07/19	Biological Molecules
07/24	Enzymes
07/26	Osmosis
07/31	Cell Structure & Function (Plants)
08/02	Photosynthesis
08/05	*Field Trip to Lyon Aboretum
08/09	Cell Structure & Function (Animals)
08/14	Cell Respiration & Fermentation
08/16	Cell Division (Mitosis)
08/21	Cell Division (Meiosis)
08/23	Mendelian Genetics & Evolution
08/28	Human Genetics
09/02	* Field Trip Hanauma Bay
09/04	Holiday: Labor Day
09/06	Time off from field trips
09/11	Time off from field trips
09/13	Final Exam