Chaminade University
Dr. Karen Petras
Spring 1999

Lecture: Tues,Thurs 12:30 -1:50pm
Lab: **Tues, 2-4:50 pm**
Office Hours: after class and lab, by appointment

Biology 101: General Biology

Text: **Audesirk, Gerald, and Teresa Audesirk, 1996. Biology: Life on Earth, 4th edition, Prentice Hall Publishing Co.**

Course Goals:

1. **To present basic concepts and principles of biology.**
2. **To identify key concepts in the study of cells, genetics, and evolution.**
3. **To identify how cells use matter and energy in order to sustain life and growth.**

Grade Determination:

Three lecture exams at 100 points each	300pts.
Final examination	150pts.
Biology article write-ups	20pts.
Extra credit write-ups	50pts.
Total points	**520pts.**

The final exam will be comprehensive, covering material from the entire semester.
Grading scale:
90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, 59% and below= F

Requirements:

Reading assignments should **be completed before each class period. General announcements will be given at the beginning of lecture, so please be punctual. Course material builds on itself throughout the semester; it will be much easier to understand concepts presented if your attendance is regular. Habitual lateness and/or absence will be reflected negatively in your grades.**

Absence from an examination or a laboratory exercise must be accompanied by a written excuse, such as a doctor's note, traffic accident report, etc., as appropriate to the situation. Excused absence from an exam will result in grade calculation from remaining test scores. For example, if you miss one of the four lecture exams, each test will count 50% of your lecture exam grade, not 33%. Unexcused absence from a lecture exam will result in a score of zero for that exam. If you are absent from a laboratory without an excuse you will still be responsible for the material covered. You will also have a zero on the lab report for that week, if applicable.

Write-ups will consist of a brief analysis of newspaper or magazine articles related to topics in biology. More detailed information on these wil be made available at a later date.

3/30	Molecular Genetics and Biotechnology I	pp. 261-279
4/1	Molecular Genetics II	
4/6	Human Genetics I	PP. 282-300
4/8	Human Genetics II	
4/13	Principles of Evolution I	pp. 303-321
4/15	How Organisms Evolve 1	pp. 323-345
4/20	How Organisms Evolve II	
4122	Diversity and Adaptation 1	pp. 346-358
4/27	Diversity and Adaptation II	
4/29	Review-Last Lecture of Semester	
5/4	Final Examination	

Biology 101L- General Biology Laboratory Syllabus

The laboratory section of this class is designed to complement and reinforce principles learned in lecture. We will learn methods of scientific inquiry and become familiar with the use of experimental equipment. There is no required text for the laboratory portion of this class. Handouts will be provided. Brief written reports are required for many of the labs.

Policies:

You will often be working in groups of 2-3 students, as some of the labs will be difficult to complete in the time alotted if you all work individually. In fairness to your lab partners and to get the most out of your lab experience, please be punctual. Handouts should be read thoroughly before each lab to ensure that you start off each lab with a good idea of what you will be doing that day.

A three-ring binder will be useful for keeping handouts and data sheets together. Bring it to each lab period, along with a pocket calculator. A pencil and pens of two different colors will aid in doing drawings, graphs, and data collection in a clear manner.

Most of the labs entail collection of data and presenting your observations on paper. Guidelines for these brief reports will be handed out at a later date. Results/reports are due at the beginning of the following lab period. It is Biology Department policy that papers will be marked down one letter grade for each day they are late.

Safety:

1. Food and drinks are not allowed in lab, to protect both yourselves and the equipment.

Tentative Lecture Schedule

Date	Topic	Reading
1/12	Introduction	
1/14	Introduction to Life on Earth	pp. 1-18
1/19	Atoms, Molecules, and Life	pp. 21-35
1/21	Biological Molecules I	pp. 37-55
1/26	Biological Molecules I I	
1/28	Energy Flow in Cells	pp. 57-73
2/2	Cell Structure and Function	pp. 75-103
2/4	Exam 1, Ch. 1-4	
2/9	Cell Membrane Structure and Function	pp. 106-125
2/11	Photosynthesis	pp. 127-139
2/16	Glycolosis and Cell Respiration I	pp. 142-156
2/18	Glycolysis and Cell Respiration II	
2/23	Cellular Reproduction	pp. 159-175
2/25	Exam 2, Ch. 5-8	
3/2	DNA	pp. 177-191
3/4	Gene Expression and Regulation I	pp. 193-217
3/9	Gene Expression and Regulation II	
3/11	Genetic Variability, Meiosis, and Sexual Reproduction	pp. 219-233
3/16	Patterns of Inheritance: Mendelian Genetics I	pp. 235-259
3/18	Exam 3, Ch. ~~10~~ 9-12	
3/23-3/25	Spring Break-No Class	

2. Long hair should be tied back, out of the way of flames or chemicals.
3. Long sleeves should be rolled up when working around an open flame.
4. Report all spills/broken glassware to the instructor immediately.

Grade Determination:

10 lab write-ups at 10 pts.	each:	100pts.
2 lab exams at 100 pts.	each:	200pts.
Total		**300 pts.**

Biology 101 Laboratory
Tentative Schedule

Date	Topic	Write-up Due
1/12	Introduction to Lab, Metric System	None
1/19	Microscope Use	1/26
1/26	Cell Structure and Function	2/2
212	Biological Molecules	2/9
2/9	Osmosis	2/16
2/16	Photosynthesis	2/23
2/23	Lab Midterm	None
3/2	Mitosis	3/9
3/9	Meiosis	3/16
3116	Mendelian Genetics	3130
3/23	Spring Break-No Lab	
3130	Human Genetics and Evolution	4/6
4/6	Speciation	4/13
4/13	Diversity	4/20
4/20	Waikiki Aquarium Field Trip	None
4/27	Lab Final Exam	