BI 210: Biological Techniques (1 credit)
Fall 2000
Mondays 2 - 5 PM
Dr. Shimakawa X803
eshimaka@chaminade.edu
Office Hours: Tuesday, Friday: 2-4 PM or by appointment
Chaminade University

Course Description and Objectives:

Grading

Tentative Schedule

Course Description and Objectives:

This course provides Biology majors with the skills necessary to operate independently in the laboratory in preparation for working there either assisting an instructor (for pay) or carrying out one's own Senior Research project. Facility with equipment and commonly used techniques is essential to the Biology major, and thus this course is required for graduation. The course Objectives reflect the expectations of the Biology faculty and those whom provide internships and jobs to our students and encompass a variety of operations.

Objectives:	By the end of the course the successful student should be able
1. Glassware & Supplies: Identification, Maintenance and Location.	1. Correctly identify, explain maintenance and location of several randomly chosen items.
2. Decontamination and Cleaning: Autoclaving, Disinfection and Disposal.	2. Correctly describe or demonstrate the proper use of the autoclave and other standard techniques of decontamination and the safety issues associated with them.
3. Laboratory Safety: Chemical and Biological Safety	3. Locate and demonstrate knowledge in the utility of MSDS and other safety information.
4. Making Solutions	4. Correctly calculate or demonstrate how to make up simple molar and percent solutions.
5. Ordering and Taking Receipt of Supplies	5. Correctly complete a requisition for supplies and correctly indicate the lab protocol for taking receipt of new supplies.
	6. Correctly demonstrate the use

6. Using Specialty Equipment	of equipment such as centrifuges, microscopes, spectrophotometers, PCR and electrophoresis apparatus, etc.
7. Journals and Other Library Resources	7. Acquire abstracts and journal article references independently
8. Statistics	8. Identify parametric vs. non-parametric data and appropriate statistical tests for exemplary experiments.
9. Specimen Collections	9. Demonstrate knowledge of proper and responsible specimen collecting techniques..
10. Research Integrity	10. Describe and identify non-trivial examples of plagarism and demonstrate an understanding of the concept of Integri in research.
11. Culture and Diversity.	11. Demonstrate an appreciation f how differences in approach nd background can inform and enrich our understanding of biology and medicine.

Grading:

Weekly Quizzes*: 3% each 30%
Midterm Exam: 16 October 25%
Attendance: 10%
Final: 8 May 35%

*Weekly quizzes will be given at the beginning of each class period unless there is an exam.

NO MAKE-UP EXAMS WITHOUT A NOTE FROM YOUR PHYSICIAN.

2	11-Sep	Introduction to Making Solutions
3	POP	Library Resources
4	25-Sep	Using the Spectrophotometer (& micropipettors)
5	02-Oct	The Autoclave and other forms of Disinfection
		Child
	30-O	Research Integrity: What does it mean?
9	6-N	Order and Receiving Supplies
		Specialty Equipment: Centrifuges,
Z	27-Nov	Statistics
3	04- ec	FINAL EXAM