



Introductory Biochemistry Laboratory

Chemistry 3710 • Dr. Harris
Spring 2008 Course Schedule
1 credit

Dates		Experiment/Activity
January	14 th – 17 th	Course Policies – Safety Contracts – Excel Introduction
January	21 st	Holiday – No Monday Lab Section
January	22 nd – 28 th	Amino Acid Titrations
January/February	29 th – 4 th	UV Absorption of Sun Screen Lotions
February	5 th – 11 th	Got Protein
February	12 th – 14 th	SDS-PAGE of Milk Protein
February	18 th	Holiday – No Monday Lab Section
February	19 th (Tuesday – Attend Monday Classes)	SDS-PAGE of Milk Protein (Monday Lab Section)
February	21 st – 26 th	Size Exclusion Chromatography
February/March	28 th – 4 th	Lactase Enzyme Kinetics
March	6 th	Kinetics Data Analysis
March	10 th – 13 th	Spring Break
March	17 th – 18 th	Kinetics Data Analysis
March	20 th – 25 th	ELISA
March/April	27 th – 1 st	PDB/Literature Data Bases Introduction
April	3 rd – 8 th	Inhibiting the Flu
April	10 th – 15 th	Restriction Enzymes
April	17 th – 22 nd	Restriction Enzymes Lab Report Submission and Grade Review

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Materials

The laboratory guide used in this course will be available as Word/pdf documents on the course web site:

<http://www.chem.usu.edu/~harrisd/>

Goggles, full-length pants, and closed-toe shoes are required in the laboratory.

The lab fee of \$55 is used to purchase equipment and supplies for the laboratory.

Prerequisites

Concurrent enrollment in Chemistry 3700. Prior general and organic chemistry experience is expected.

Grades

This course will be graded based on the total points received for 9 of the possible 10 laboratory reports (the lowest report grade will be dropped). Final letter grades will be assigned based on the percentage of the total points possible with the following scale:

100% - 92%	A
91% - 88%	A-
87% - 85%	B+
84% - 81%	B
80% - 77%	B-
76% - 73%	C+
72% - 64%	C
63% - 60%	C-
59% - 57%	D+
56% - 50%	D

Note: Scores rounded to nearest one's place (91.4% = 91% and 91.5% = 92%).

All lab reports are due by the laboratory section meeting time one week after completion of the experiment. Students must review all lab report grades at the laboratory section meeting time of the last week (April 17th - 22nd). It is also recommended that students retain each graded laboratory report.

Policies and Procedures

1. The administration of Chemistry 3710 will adhere strictly to the policies outlined in the USU Spring 2008 Semester Schedule of Classes.
2. Qualified students with disabilities may be eligible for reasonable accommodations. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll-free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.
3. Attendance at all the assigned meetings is required.
4. Except for school-excused absences, experiments will not be rescheduled. All experiment rescheduling requests for absences that are not school-excused will be directly referred to this policy without further discussion.
5. Individuals not wearing safety goggles, full-length pants, or closed-toed shoes will not be allowed in the laboratory, no exceptions.

Course Objectives and Assessment

This course is designed to provide hands-on experience with techniques and concepts common to biochemistry research. This will be accomplished through a laboratory experience that will involve directed reading, observations of demonstrations, performance of experiments, data analysis, and completion of laboratory reports. This course is intended to be taken concurrently with chemistry 3700.

Learning objectives include:

1. Appreciation of laboratory safety
2. Use of photometry
3. Understanding of chromatography
4. Use of gel electrophoresis
5. Understanding of enzyme kinetics, ELISA, and protein structure
6. Understanding of restriction enzyme action on DNA.

Exposure to these topics is appropriate for all pre-health and pre-vet professionals, along with majors in many other life science areas.

Assessment of the course will include an end-of-semester evaluation seeking input on course direction and suggestions for improvement.