



Introductory Biochemistry Laboratory

Chemistry 3710 • Dr. Harris
Spring 2012 Course Schedule
1 credit

Dates		Experiment/Activity
January	17 th – 23 rd	Course Policies – Safety Contracts – Excel Introduction
January	24 th – 30 th	Amino Acid Titrations
January/February	31 st – 6 th	UV Absorption of Sun Screen Lotions
February	7 th – 13 th	Got Protein
February	14 th – 21 st	SDS-PAGE of Milk Protein
February	22 nd – 24 th	No Lab Sections
February/March	27 th – 2 nd	Size Exclusion Chromatography
March	5 th – 9 th	Lactase Enzyme Kinetics
March	19 th – 23 rd	Kinetics Data Analysis
March	26 th – 30 th	PDB/Literature Data Bases Introduction
April	2 nd – 6 th	Inhibiting the Flu
April	9 th – 13 th	Inhibiting the Flu Lab Report Submission and Grade Check
April	16 th – 20 th	The Flu Fights Back

Dr. Doug Harris Office: Widtsoe 335, (435) 797-1609 E-mail: doug.harris@usu.edu
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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://ion.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

A score of 90% is guaranteed an A- and 95% or better is guaranteed an A. Final scores will be rounded to nearest one's place (94.4% = 94% and 94.5% = 95%).

8 (best of 9) Lab reports @ 20 pts.....	160 points
Teaching Assistant Evaluation (safety, cooperation, independence).....	20 points
Total.....	180 points

All lab reports are due by the laboratory section meeting time one week after completion of the experiment. Late reports will be assessed a 10% penalty per week. The lab report for the final experiment (The Flu Fights Back) will be due at the conclusion of the lab period that it is performed.

Students must review all lab course grades at the grade check meeting time (April 9th – 13th). It is also recommended that students retain all graded course laboratory work. The laboratory teaching assistant will not declare a student's final lab course grade at the grade check meeting. In order to obtain the highest grade possible, all students are encouraged to complete all nine experiments. As a convenience, students may elect to check out of the lab at the grade check meeting and miss the ninth experiment (which will subsequently be dropped as the lowest scoring experiment). All students who choose to check out of the lab during the grade check meeting assume all final grade consequences of missing the ninth experiment.

Policies and Procedures

1. The administration of Chemistry 3710 will adhere strictly to the policies (including the issuing of incompletes) outlined in the USU 2011 – 2012 General Catalog.
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. Experiments will not be rescheduled to an earlier date and time. Make up experiments will not be offered.
4. 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 and protein structure

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 suggestions for course improvement.