

Eastern Oregon University
Course Syllabus

Number of Course: CHEM 454

Name of Course: Biochemistry Laboratory

Catalog Description: Introduction of standard biochemical laboratory techniques and their application to solving biochemical problems.

Credit Hours: 2

Required Texts or Suggested Materials:

Are available at: <http://eou.bncollege.com/>

Prerequisites: CHEM 450 or consent of instructor.

Learning Outcomes:

The student should be able to:

1. Identify and properly use routine biochemistry laboratory equipment.
2. Follow biochemistry experimental protocols.
3. Analyze and interpret biochemical data.
4. Apply biochemical knowledge to the understanding of biochemical experiments.
5. Create laboratory reports detailing the experimental purpose, procedure, observations, data collection and handling, instrumental analysis, and discussion of applicable techniques.
6. Be familiar with on-line biochemical databases and molecular visualization software.
7. Learn to think scientifically and independently.

Course Requirements:

Attendance and completion of all scheduled laboratory experiments, including written/oral reports, is required.

Laboratory Notebooks

For each experiment you will be required to keep a hand-written laboratory notebook in which to record your observations and data collection, AS THEY ARE OBTAINED. You should also describe the major steps in the experiment, pointing out any modifications in the procedure as compared to the handout.

Formal Laboratory Reports

Formal laboratory reports for each experiment should be typed (sample calculations may be handwritten). Strive for clarity and conciseness. Reports should generally contain no more than FOUR letter-sized pages of text (excluding tables, figures, references, and answers to questions).

Reports should be organized according to the format outlined below:

(i) Title

(ii) Abstract

A concise (single paragraph) summary of your experiment.

(iii) Introduction

A brief summary of the background information and relevance of the experiment.

(iv) Methods

A brief description of the experimental procedure, enough for another scientist to be able to understand and repeat what you did.

(v) Results

Written description of data, including Tables, Figures, Graphs.

(vi) Discussion and Conclusions (if any)

Summarize experimental outcomes. Make arguments to support conclusions you believe can be made from your data. Discuss possible sources of error. Answer any questions asked in the lab hand-out.

(vii) References

Each report will be graded out of 30 points, assigned as follows:

15 pts: scientific content (quality of data, analysis of results, background info/research)

10 pts: organization (length of report, logical progression, clarity)

5 pts: supplemental questions

Presentation

During the last scheduled lab period, you will be required to prepare and present a 20-minute seminar related to one of your experiments (to be selected by instructor). The presentation will be graded out of 30 points, assigned as follows:

15 pts: scientific content (background info/research)

10 pts: organization (length of presentation, logical progression, clarity)

5 pts: presentation style

5 pts: ability to answer questions

Grading Policies:

Explain how each course requirement will be graded (append rubrics), what percentage on any one assignment equals what grade for that assignment, percentage of overall course grade derived from each requirement, policies on accepting late work, opportunities to resubmit, etc.

Means of Assessment:

Laboratory reports (5 @ 30 pts)	150 pts
Biochemistry Olympics	30 pts
Presentation	30 pts
Total points	210 pts

Attendance and completion of all scheduled laboratory experiments, including written/oral reports, is required. Grades for each experiment will be based on your formal laboratory report AND your laboratory notebook. Each laboratory report is worth a maximum of 30 pts. Laboratory reports are due by 5 pm Tuesday following each experiment. Late reports will incur a 10% penalty for each day late. The end-of- course presentation is worth a maximum of 30 pts. Overall grades will be determined from the combined scores from all the experiments plus the presentation.

Brief Outline of Course:

Describe the nature of the course (lecture and lab, workshop format, etc.), any specific course content not detailed in the catalog description, and brief schedule.

Writing Center Statements:

For on-campus courses

The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU's undergraduate and graduate students who are writing for any course at any level, or who are writing resumes, job letters, graduate applications, and more. Go to eou.mywconline.com to schedule an appointment in the Writing Center (Loso Hall 234).

For online or on-site courses

The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU students writing for any undergraduate course. Go to [EOU's eTutoring page](#) to submit a paper to a writing tutor.

For graduate courses

The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU students writing for any graduate course. Go to [EOU's eTutoring page](#) to submit a paper to a writing tutor. Click on [Graduate Students How To](#) for information about tagging your submission.

Classroom Decorum:

Academic Misconduct Policy:

Eastern Oregon University places a high value upon the integrity of its student scholars. Any student found responsible for an act of academic misconduct (including but not limited to cheating, unauthorized collaboration, fabrication, facilitation, plagiarism or tampering) may be subject to having his or her grade reduced in the course in question, being placed on probation or suspended from the University, or a combination of these. (Please see the Student Handbook online at <http://www.eou.edu/sse/student-handbook/>).

Accommodations/Students with Disabilities policy:

Any student who feels he or she may need an accommodation for any type of disability, must contact the Disability Services Office in Loso Hall, Room 234. Phone: 541-962-3081.

Disclaimer:

This standard syllabus provides only general information on the course. For those enrolled in the course a detailed syllabus will be provided by the Instructor at the beginning of the term. Please keep in mind that not all courses are offered every year. Consult Webster for scheduling information.

Date: 2018