

# Syllabus

**Course Title and Number:** Biochemistry Lab CHEM 3131  
**Instructor of record:** Dr. Ricardo A. Bernal  
**Teaching Assistants:** Kelley Aguirre or Fernando Chavira

**TA Office Hours:** \_\_\_\_\_

**Email Address:** [fchaviraguerr@miners.utep.edu](mailto:fchaviraguerr@miners.utep.edu): [kaaguirremende@miners.utep.edu](mailto:kaaguirremende@miners.utep.edu) [rbernal@utep.edu](mailto:rbernal@utep.edu)

**TA Office Location:** CCSB G.0512A (make sure you have an appointment to visit)

**TA Office Phone Number:** 747-6918

## Textbooks

No Textbook required for this lab. The lab manual will be provided free as a PDF file. You're welcome...

**Required:** Must be purchased by the student

- Safety goggles, Lab Coat and a Sharpie for labeling things
- Lab notebook/binder to insert lab reports and to keep lab notes

## Course Information and website

The material related to this course (e.g., syllabus, reading material, slides, etc.) will be available through Blackboard. The instructor will upgrade the information every week, therefore you are encouraged to consult the information available on the course website (Blackboard) on a weekly basis. You are expected to utilize the internet to get information about details not contained in the lab manual. The lab manual in certain instances will be brief by design and for this purpose.

## Prerequisites

It is recommended that students take CHEM 3330/3332 (Introductory Biochemistry) either before or concurrently with this lab.

## Course Description

The course will focus on modern biochemistry techniques used in most modern laboratories. It is anticipated that everyone taking this course will learn not only the theory behind the techniques but will also get hands-on experience in doing them. The goal for the semester is to clone and purify a recombinant protein while learning all the techniques along the way.

## Grading:

There will be a laboratory report due for each laboratory at the **beginning** of the next lab. Reports will be considered late if not turned in within the first 10 minutes of class. Late reports will automatically have 10 points deducted per day for that report and no report will be accepted after 2 days. Lab reports are to be done individually, that means each student must submit their own original lab report. You can discuss reports among group members and share data for results but nothing else!

A straight average of all the lab reports will determine 50% of your overall grade. There will be attendance regularly. Attendance will make up 10% of your final grade. 20% will be quizzes and 20% will be an oral presentation. NO grades will be dropped, and only excused absences (official University recognized) will be allowed for missed labs or reports. There will be no "extra credit" or additional assignments given at the end of the semester so please do not come begging to have your grade bumped up for no reason. You are in complete control over your grade so please try hard from the first day of class to the last. Absolutely no lab report re-do's allowed.

As a rule, there are no grades of incomplete given in this lab. If you have missed a significant amount of work or labs you should drop the class. This is because **it is nearly impossible to make up a missed lab**. Lab report plagiarism will result in an automatic zero. **Do not copy lab reports from previous semesters or lab partners!!!!!! You will get a zero.**

## Lab Reports

Requirements for lab reports.

1. This will be due within the first 10 minutes of the following lab.
2. You are required to work on your lab reports individually (no copying others)
3. Each laboratory module will require the creation of a laboratory report that contains the following sections.
  - a. An appropriate Title
  - b. Abstract/Summary of entire lab report (no more than 200 words)
  - c. Introduction – Gives a brief statement of what is known about the project (aka background), why this is important, and the approach taken.
  - d. Materials & Methods – This is an important section that describes in detail the methods you used.
  - e. Results – This section presents your results as obtained in your experiments during the lab. You should present all your results in a professional manner using images, diagrams, plots and graphs, etc. as appropriate to present a clear impression of what was done. Note that even negative results are important. Present your results here but Do Not Analyze Results (save that for Discussion section).
  - f. Discussion – Here you should discuss the results obtained in the previous section. Compare results to others and provide an analysis of what they might mean.
  - g. Conclusions – What is the major outcome of this experiment? No more than 2-3 sentences.
  - h. References Cited – Give credit where credit is due. Make sure you cite everything you read those others did.
4. It is highly encouraged that you take photographs (with cell phones) of experimental results so that you can include these in your reports.
5. Some data analysis may require you to use statistical methods in spreadsheets such as Excel. UTEP My Apps (my.apps.utep.edu) gives you access to this software.

## Withdrawal Policy:

The last day for you to withdraw from any course with an automatic "W" is listed in the current academic calendar. Please note that it is the student's responsibility to officially withdraw from a course. We will not administratively drop anyone after the deadline.

## Class Attendance:

Lab attendance is required. Attendance will be routinely taken. Students are responsible for attending lab regularly and knowing what takes place during the lab. This includes not only the material covered in the class, but also all announcements, handouts, changes in the syllabus, etc. *If you must* miss a lab, you need to make a special effort to learn what occurred during your absence.

It is expected that the material be read over *before* the topic is presented in class. With this background, the lectures and the lab will prove to be more meaningful. Unexcused absences will count against you in your final grade!!!!

## Disability:

If you have or suspect a disability and need accommodations you should contact Disabled Student Services Office (DSSO) at 747-5148 or at [dss@utep.edu](mailto:dss@utep.edu) or come by Room 106 Union East Building.

**Since the schedule for each laboratory is very tight, you are expected to come to each lab prepared. You should read each lab before coming to class and familiarize yourselves with any calculations that will be required and procedures that you will need to master that day. You must watch the YouTube video demos before class!! If your absence is unavoidable, it is advised that you attend a different section, so you don't miss class. Labs are impossible to make up later unless you attend another section.**

## Lab Safety Rules

1. Always wear eye protection in the lab.
2. A lab coat **MUST** be worn in the lab always.
3. Don't Eat or Drink in Lab
4. Only authorized personnel are allowed into the lab (don't bring your friends).
5. **DO NOT BE WASTEFUL** with reagents and supplies.
6. Dress appropriately (Closed toe shoes and long trousers must be worn in the lab. Sandals and shorts are not allowed.)
7. Clean up after yourself. Wash all your glassware and clean (disinfect) your work area.
8. Identify the Safety Equipment in case you need it in the future.
9. Don't Casually Dispose of Chemicals Down the Drain. There are special containers for everything.
10. Long hair must be tied back when using open flames.
11. Always wash your hands before leaving the lab.
12. Excess reagents are never to be returned to stock bottles.
13. Always pour strong acids/bases into water and not the other way around. If you pour water into acid, the heat of reaction will cause the water to explode into steam, sometimes violently, and the acid will splatter.
14. If chemicals come into contact with your skin or eyes, flush immediately with copious amounts of water and consult and report the incident to your TA.
15. Do not place backpacks or other personal items on the lab benches.
16. Keep the lab **CLEAN** (it should be spotless).
17. Treat all equipment with care!!
18. Before using an instrument, make sure you are trained properly.
19. Keep an eye out for instruments that act up. Notify someone immediately.
20. Be as careful about the safety of others as for yourself. *Think before you act.*

Emergency Number 911(City of El Paso Police, Fire, EMS)  
UTEP Emergency Number 5611 (Campus Police)  
Poison Control Center 1-800-POISON-1(1-800-764-7661)  
Emergency Spill Response Coordinator EH&S Main Phone No. 747-7124  
Facilities Services 7116