

Biochemistry Laboratory  
CHEM 3820-01  
Winter 2016

**Instructor:** Prof. Todd A. Wells

Office hours: By appointment in Physics 205

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**Course Goals:** To learn modern biochemistry laboratory techniques, how to write scientific papers, and how to present your work in a poster presentation. In the last 4 weeks, we will perform an independent biochemistry research projects.

**Required Materials:**

- *Biochemistry Laboratory* by Rodney Boyer
- A lab notebook (available at the bookstore)
- All other materials (handouts, lab manual) will be posted on Canvas.

**Absences:** You must notify me and the TA well in advance. Arrangements will be made for you to makeup the missed work.

**Grading:**

- A. Lab Reports:** There are 4 lab reports due. All reports will be written in the format of a journal article (Abstract, Introduction, Materials and Methods, Results and Discussion, References). Links to the guidelines will be available on Canvas. You must write your lab report and analyze your data INDEPENDENTLY! If two reports are identical in any way, including the same figures, both get zeros. You must print the lab report. Do not submit it via email.
- B. Notebooks:** See handout on how to keep a notebook. Notebooks will be collected and grade at the end of the term.
- C. Lab Participation and preparation:** It is your responsibility to be involved in each lab and clean up when you are done. Lab preparation is graded critically. Prior to coming to lab you need to do the pre-labs and watch the pre-lab lecture through Canvas. Starting in the second week pre-labs and pre-lab lectures will be posted on Canvas one week before they are due and pre-labs will be collected at the very beginning of lab.

The lab, *including the balances*, must be cleaned up at the end of every session. If not, the entire class will lose points.

**D. Independent Projects:** More details given in late January.

- a. Group Plan (due Day 1 of Module 4) this should address the following questions:  
Distribution of work amongst the 3-4 people?  
The specific procedure you are following (references)  
Needed reagents. If it costs a lot, then I may say no.
- b. Progress reports (individual grade) – due weekly.
- c. Final Report (individual grade): This is a journal style paper that should be written independently but using all of the group data. You should fully understand what other members did and tie the experiments together to tell a story and conclude something.
- d. Presentations (group grade): One formal group poster presentation over the projects will be done in March during the last week of classes. Details will be given in class.

**E. Exam:** The exam will be given in Week 8 and covers the theory and application of protein purification, characterization and fluorescence spectroscopy that will be covered in labs 1-4. The text, discussion questions, data analysis (including linear fitting of data), and journal articles posted on Canvas will be covered.

**F. Grading**

<i>Assignment</i>	<i>points</i>
Prelabs(5 x 20 pts each)	100
Lab reports (4 x 100 pts each)	400
Independent Project Report and progress reports	150
Poster Presentation	100
Exam	200
Lab Notebook	50
TOTAL	1000

**G. Accomodations:** Students who have disabilities or medical conditions and who want to request accommodations should contact the Disability Services Program (DSP); 303-871-2372/2278; 1999 E. Evans Ave.; 4th floor of Ruffatto Hall. Information is also available online at [www.du.edu/disability/dsp](http://www.du.edu/disability/dsp). Please do this *in advance* of the exam or other times that you may need appropriate accomodations.