

Biochemistry Laboratory CHEM 3820

Prof. Michelle Knowles

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Meeting time and location: Wednesday and Thursdays 1-4:50 pm, Room 209

Office hours: SG Mudd 101, 11-12 Wednesday, email me for more times.

TA: Paul Dinkel, Lab 267 SG Mudd, paul.dinkel@du.edu

Introduction: The purpose of this course is to learn fundamental biochemistry laboratory techniques, how to write scientific papers, and give scientific presentations.

Required Materials:

- Biochemistry Laboratory by Rodney Boyer
- A lab notebook with numbered pages, available at the bookstore
- Lab manual, available on Blackboard

Grading:

A. Lab Reports: There are 7 lab reports due. All reports must be written in the format of a journal article (Abstract, Introduction, Materials and Methods, Results and Discussion, Bibliography). 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.

- i. Experiment #1A/B
- ii. Experiment #1C/D
- iii. Experiment #2
- iv. Experiment #3
- v. Experiment #4
- vi. Experiment #5
- vii. Experiment #6

B. Notebooks: See handout on how to keep a notebook. During the first week of lab I will have an example notebook that received full credit last year. I will collect and grade notebooks at the end of the term.

C. Lab Participation and preparation: Be involved in lab and clean up when you are done. Lab preparation is graded critically. Prior to coming to lab you need to:

- 1) Read the lab thoroughly and know what you need to do when you arrive.
- 2) Make a list of reagents and equipment needed.
- 3) Meet with Paul each week for 10-15 minutes prior to the lab to discuss the upcoming lab.
- 4) Do calculations in advance, *prior* to meeting with Paul, then check during your pre-lab meeting.

D. Presentations: One individual presentation will be assigned during the course. Details will be given in class. Send your powerpoint presentations to me 3 days before you present, then your corrected ones after the presentation for full credit.

E. Exam: The exam will be given on March 10th and cover the theory and application of protein purification and characterization that will be covered in labs 1-6. The text and journal articles given out or posted on blackboard will be covered. This includes the techniques that are discussed in student presentations.

F. Grading

<i>Assignment</i>	<i>points</i>
Prelab preparation	50
Lab reports (7, 50 pts each)	350
Presentation	50
Exam on techniques	100
Lab Notebook	50
TOTAL	600

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

G. Schedule

Date	Experiment	Reading	DUE
January 6	1A	1B-E, 3D, 11A,11C	
January 7	1A/B	4	
January 13*	1C	5A, 5C-E	Lab Report Due (1A/B)
January 14	1C/D	7A	
January 20	1D		
January 21*	1D		
January 27	2	3B	Lab Report Due (1C/D)
January 28	Peer review		Draft of Lab 2 for peer review
February 3	3	6A-C**	Lab Report Due (2)
February 4	3		
February 10	4A	7B	Lab Report Due (3)
February 11	4B		
February 17	4C		
February 18	5		Lab Report Due (4)
February 24	6	Paper on GFP	
February 25	6		
March 3	Presentations		Lab Report Due (6), Notebooks Due
March 4	Presentations		
March 10	Final exam and lab check out		Exam

* = day may be longer than 4:50pm.

** = only read 6B through page 186. I will not cover nucleic acid gel electrophoresis.