

Biochemistry Laboratory CHEM 3820

Prof. Michelle Knowles

Email: michelle.knowles@du.edu

Phone: 871-6698

Meeting time and location: Monday and Wednesdays 1-4:50 pm, SGM 209

Office:SGM 101 Email for times to meet

TAs: Paul Dinkel, paul.dinkel@du.edu, Kathryn Palma, kathryn.palma@du.edu

Course Goals:The purpose of this course is to learn modern 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 6 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.
- 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. One lab will be selected for grading.
- 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 do the pre-labs. They will be posted on blackboard at least a week before they are due and collected at the beginning of lab.
- D. Presentations:** One formal group presentation over the projects will be done on March 7th. Details will be given in class.
- E. Exam:** The exam will be given on March 9th and cover the theory and application of protein purification and characterization that will be covered in labs 1-6. The text, discussion questions, data analysis (including linear fitting of data), and journal articles given out or posted on blackboard will be covered.
- F. Grading**

<i>Assignment</i>	<i>points</i>
Prelabs(8, 10 pts each)	80
Lab reports (6, 50 pts each)	300
Presentation	100
Exam	100
Lab Notebook	20
TOTAL	600

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

G. Schedule

Biochemistry Laboratory Schedule

<i>Day</i>	<i>Date</i>	<i>Do in Lab</i>	<i>Due</i>	<i>Reading</i>
M	3-Jan	Lab 1A		1B-E, 3D, 11A,11C
W	5-Jan	Lab 1B	prelab #1	4
Th	6-Jan	<i>move plates to 4C (afternoon)</i>		
M	10-Jan	Lab 1B		5A, 5C-E
Tu	11-Jan	<i>spin (20m) and freeze bacteria pellets</i>		
W	12-Jan	Lab 1C	prelab #2	7A
F	14-Jan	<i>Turn in lab report to Paul by 5pm*</i>	lab report #1	
M	17-Jan	NO CLASSES!		
W	19-Jan	Lab 2	prelab #3	3B
F	21-Jan	<i>Turn in lab report to Paul by 5pm</i>	<i>lab report #2</i>	
M	24-Jan	Lab 3	prelab #4	6A-C**
W	26-Jan	Lab 3		
F	28-Jan	<i>Turn in lab report to Paul by 5pm</i>	<i>lab report #3</i>	
M	31-Jan	Lab 4	prelab #5	7B
W	2-Feb	Lab 4	prelab #6	
F	4-Feb	<i>Turn in lab report to Paul by 5pm</i>	<i>lab report #4</i>	
M	7-Feb	Lab 5		
W	9-Feb	Lab 5		
F	11-Feb	<i>Turn in lab report to Paul by 5pm</i>	<i>lab report #5</i>	
M	14-Feb	Lab 6	prelab #7	
W	16-Feb	Lab 6		
F	18-Feb	<i>Turn in lab report to Paul by 5pm</i>	<i>lab report #6</i>	
M	21-Feb	projects	prelab #8	
W	23-Feb	projects		
M	28-Feb	projects		
W	2-Mar	projects		
M	7-Mar	presentations		
W	9-Mar	final exam, check out		

* = You must print the lab report. Do not submit it via email. Paul has a mailbox in the Chemistry office or a desk in SGM 267.

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