

MMBB 382- Fall 2013 Biochemistry Laboratory

Textbook: None Required
Location: Life Sciences South, LSS 167

<u>Instructor</u>	<u>office</u>	<u>phone</u>	<u>e-mail</u>	<u>office hours</u>
Martina Ederer	LSS 162	885-2037	mederer@uidaho.edu	arrange time

bbLearn All lab materials will be posted on blackboard. Be sure to print **and** read relevant information **before** class.

<u>Lead TA</u>	<u>lab section / time</u>	<u>e-mail</u>	<u>office hours</u>
Steven Heid	52/ W 2:00 -5:20 pm	heid7760 @vandals.uidaho.edu	TBA
Lei Yang	53/ W 6:30 -9:50 pm	yang7950 @vandals.uidaho.edu	TBA

Grading:	Reports and assignments	240 pts
	Lab notebook at midterm	25 pts
	<u>Prelab, quizzes, and activities</u>	<u>145 pts</u>
	Total	410 pts

The final grade will be based as follows:

1. >90% of the total points will qualify for an A
2. >80% of the total points will qualify for a B
3. >70% of total points will qualify for a C
4. >60% of total points will qualify for a D
5. <60% of the total points will likely guarantee an F

Course Requirements

1. You are required to attend all of the scheduled labs. If you miss a lab due to illness, death in the family, or pre-arranged school activity, you need to provide a written excuse and arrange for generating the missed work by using data obtained from the missed lab.
2. Be prepared for each lab period. For the best understanding and retention, you should read the assigned material prior to lab.
3. You will work on several occasions in groups on assignments prior to starting the actual lab work. These assignments maybe graded as group assignments and/or individually, nonetheless you are responsible for all the material covered.
4. Students will work in groups to collect data, but keep separate notebooks and prepare separate lab reports. The lab notebook will be **graded once** to make sure that you are on the right track.

5. There are **no exams or lab practica** in this lab. However, there will be prelabs, quizzes, assignments at the beginning of each lab period worth 10 pts each.
6. The emphasis is on lab reports. They are worth almost 60% of your grade. Particularly, for the large, cumulative lab report, it is important that you take good notes in you lab notebook and start working on data analysis week by week in order to get feedback from your TAs (TAs are only required to review the material from the previous week). Stay on top of things, so that you will not be overwhelmed just before Thanksgiving break. Follow the examples for preparing graphs and Tables that were handed out during the first lab. Remember, you do need figure legends. Do not procrastinate!
7. Cheating, plagiarism, falsification of academic records will not be tolerated. Such behavior will be handled according to the Student Code of Conduct, Article II- Academic Honesty (p4, 2007).
<http://www.uidaho.edu/~media/Files/orgs/Student%20Affairs/DOS/Judicial%20Affairs/UI%20Student%20Code%20of%20Conduct.ashx>

The Learning outcomes for this course are aligned with the UI Learning outcomes.

1. **Lean and integrate:** You will apply your knowledge in from chemistry, biology and biochemistry to design experiments in biochemistry and and interpret the results.
2. **Think and create:** You will apply the concepts you learned in lecture and use them in practice by conducting experiments, predicting outcomes and designing follow up approaches.
3. **Communicate:** You will be working in cooperative groups and communicate your results in a written format to your instructors.
4. **Clarify purpose and perspective:** You will gain understanding into the working of cellular processes and insights into the relatedness of biochemical processes.
5. **Practice citizenship:** The cooperative working environment of the laboratory and interpretation of the obtained results will aid in developing an understanding of the diversity of the natural world and its importance to everyday life.

University of Idaho Classroom Learning Civility Clause

In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning.

Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (5-6757), the UI Counseling & Testing Center's confidential services (5-6716), or the UI Office of Human Rights, Access, & Inclusion (5-4285).

MMBB382, Fall 2013
Tentative syllabus

	Date	Day		Experiment	
1	8/28	W	In-lab activities, 10 + 5 pts	Intro, pipetting	Assignment due 9/4, 20 pts
2	9/4	W	Prelab, 10 pts	Vinegar, Titration	Report due 9/11, 20 pts
3	9/11	W	Prelab, 10 pts	DNA isolation	
4	9/18	W	Prelab, 10 pts	Restriction enzymes, Sequencing	Focus on methods and results, Review 10/2
5	9/25	W	Prelab, 10 pts	Bioinformatics	Report DNA and bioinformatics I, due 10/2, 30 pts
6	10/2	W	Prelab, 10 pts	Bioinformatics	Assignment and Journal research, due 10/9, 30 pts.
7	10/9	W	Prelab, 10 pts	Enzyme activity	Methods and results, review 10/16
8 Midterm week	10/16	W	Prelab, 10 pts	Enzyme purification	Methods and results, review 10/23
9	10/23	W	Prelab, 10 pts	Affinity column activity	Methods and results, review 10/30

10	10/30	W	Prelab, 10 pts	SDS gel, protein concentration	Start working on introduction,
11	11/6	W	Prelab, 10 pts	Western	Continue on report
12	11/13	W	Prelab, 10 pts	Finish up experiments	Put it all together
13	11/20		Prelab, 10 pts	Tyrosinase	comprehensive report due 100 pts
14	11/27	W	Thanksgiving		
15	12/6	W	Prelab, 10 pts	Tyrosinase	Start working on report
16	12/11	W	Prelab, 10 pts	Tyrosinase	Report due, 40 pts
	12/21		Finals Week	No lab	

The syllabus is subject to change. As you can see there is one big experiment. Rather than having you work on a lab report for each individual experiment, you are expected to collect your materials over time. You will hand them in to the TAs the following week for review. You will get them back with corrections, comments, and suggestions. You will make the corrections and then use them in the comprehensive report for grading. This way you know that you are on the right track.