

MCB 4026W/MCB 5002: Advanced Biochemistry Lab Laboratory Schedule Spring, 2020 Updated 3/20

Meetings: I will be doing asynchronous instruction for the rest of the semester unless you'd like to try a class meet-up
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Notices, lab changes, and schedule changes will be announced via e-mail. You are responsible for checking your e-mail every day.

Week	Experiment
1/20	Protein assays and an introduction to the course; check in. Lab: protein quantification by absorbance at 280 nm and Lowry assays
1/27	Lecture: Biosafety lecture Fastcloning overview and pcr, writing an M&M section Lab: Protein quantification by BCA assay. Start Cloning lab-PCR of vector and LDH gene.
2/3	Lecture: Cloning a protein for purification Lab: DpnI digestion, transformation of cells, primer design and sequencing analysis Hand in notebooks and rough draft of M&M section for Lab 1 on Wed. 2/5.
2/10	Lecture: Protein Purification, Bulk steps, Affinity Chromatography Lab: plasmid prep, restriction digestions
2/17	Lecture: LDH overview centrifugation. Results section Hand in final draft of M&M section for Lab 1 on Mon 2/17 Lab: Prepare for LDH purification
2/24	Lecture: Protein Techniques to determine protein size Hand in notebooks and rough draft of Results section for Lab 2 on Wed. 2/26 Lab: LDH purification
3/2	Lecture: Independent projects, Ion Exchange and Hydrophobic Interaction Chromatography Lab: LDH purification and characterization
3/9	Lecture: Protein Characterization Discussion section Hand in final draft of Results section of Lab 2 on Mon 3/9 Hand in problem set 1 on Wednesday 3/11. Lab: Wrap up of LDH characterization/clean up Begin planning independent projects. Make general protocol and list of chemicals needed. Check with prep room for availability of items needed. Write up protocol for project including when you anticipate doing each step. Allow for possible failures at early steps.
3/16	Spring Break

- 3/23 Online Recorded Lecture: Writing Introduction section of a paper. Description of what is expected in Introduction section. Each student will write up an Introduction section for LDH labs 2 and 3 - **due 3/30 by e-mail to Dr. Landin**
 Lab: Do assignment(s) for participation credit
E-mail lab notebook to Wayne on Wed. 3/25
- 3/30 Online Recorded Lecture: Writing Materials and Methods section of a paper. Description of what is expected in materials and methods section. Each student will write up materials and methods section for LDH labs 2 and 3 – Rough draft **due 4/6 by e-mail to Dr. Landin**
 Lab: Do assignment(s) for participation credit
- 4/6 Online Recorded Lecture: Writing Results section of a paper. Description of division of material between results and discussion sections. How much to include and form of figures and tables. Each student will write up a results section for LDH labs 2 and 3 – rough draft **due 4/13 by e-mail to Dr. Landin.**
 Lab: Do assignment(s) for participation credit
- 4/13 Online Recorded Lecture: Writing Discussion section of a paper. Each student will write up a Discussion section of the LDH labs 2 and 3 – Rough draft **due 4/20 by e-mail to Dr. Landin**
Problem set 2 due on 4/15 by e-mail to Wayne
 Lab: Do assignment(s) for participation credit
- 4/20 Online Recorded Lecture: Writing of Abstract; Each student will write up an abstract for the manuscript - **due 4/27 by e-mail to Dr. Landin**
 Lab: Do assignment(s) for participation credit
- 4/27 NO Lecture -Use this week to rework the Manuscript. **Final Draft due by e-mail at the time of the final exam**
 Lab: Turn in final assignment for participation credit

Grades*: Lab notebook - 30% (Will consist of Notebook for labs 1, 2 and 3)
 Problem sets - 15%
 Writing/manuscript - 35% (no final drafts of manuscript will be accepted without a first draft having been previously submitted, graded, and returned)
 Participation - 10%
 Poster presentation - 10% (these points will be spread evenly over the remaining grade categories)

* In accordance with policies for W courses, failure in the writing segment of the course will result in a grade of F for the course. You must write a total of 15 pages and turn in a rough draft and a final draft of each W assignment. If you do not reach 15 pages, you will have to perform another written assignment.

Assignments for participation credit must be e-mailed as requested for each assignment. Assignments for each week will be due on the Wednesday of the following week by 4pm. Assignments may be discussed with others but must be done by each individual.

Class Texts are in Books section of HuskyCT for the course:

1. Protein Purification: Principles, High Resolution Methods, and Applications, Jan-Christer Janson
2. Guide to Protein Purification, Burgess and Deutscher
3. Writing Scientific Research Articles Margaret Cargill and Patrick O'Connor

Late lab reports/problem sets/lab assignment result in a decreased grade by 10% each business day (24 hrs) to 50% off. Assignment Lateness and Incompletes: Assignments are late at the official end of that class. The ONLY exception is for those with a documented medical excuse or documented direct family member's death. University-sanctioned events and activities are planned in advance and, accordingly, do not qualify as valid justifications for late work. Excuses such as "I overslept," "The printer broke," "I ran out of toner," or "The computer crashed" will not be accepted. E-mailed assignments WILL NOT be accepted.

Academic misconduct includes:

PLAGIARISM: No student shall plagiarize the words of others (including your lab partner) in any paper submitted for credit or for publication. The term "Plagiarize" means using, by paraphrase or direct quotation, any not insubstantial portion of the written work of another, without full and clear acknowledgment, or using materials prepared by another person who is engaged in the selling or giving of term papers or other academic materials.

MISREPRESENTATION: No student shall misrepresent her work as another's or another's as hers. Misrepresentation also includes submitting for evaluation or credit any work prepared, used, or submitted in another course or for a law journal, academic competition, clinic, employer, or any other organization, except with prior express permission of the faculty member or other person in authority after full disclosure.

For the first offense, a 0 will be given on that part of the paper/lab report/problem set. A second offense will result in a 0 on the entire assignment. A third offense will result in an F in the course. Plagiarism of any sort on the Final Manuscript or the Poster will result in an F for the course.

Class Rules

Attendance will not be recorded but you will be expected to be in lab at the start of lab unless lab is officially cancelled.

Habitual lateness to class is not acceptable and will be considered when determining your Participation grade.

Lab cleanliness is of the utmost importance because we are sharing the lab. Failure to clean up after yourself will have a serious impact on your Participation grade. No one here is interested in taking on the role of your maid.

The TA and staff should be treated with the same respect you would give to any faculty member. Please remember that the TA is a graduate student who has their own work to do and be respectful of their time by making appointments for help. However, if you are in the lab and need assistance, please contact the TA, the professor or prep room staff for help especially in cases where safety or equipment is a concern.