

BIMM 101 Recombinant DNA Techniques Spring 2016 Syllabus

Instructor: Dr. Tiffany Dunbar tldunbar@ucsd.edu (best way to reach me)

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Office hours: *Mon 1:30-2:30 PM in H&SS 1145 L* (*changes will be announced on TritonED)
If you can't make it to my office hour, please see me in lab or email me to make an appointment.

Lecture: Tues-Thurs 9:30-10:50 AM SEQUO 147 (D00)

Lab: Tues-Thurs 11:00 AM-3:00 PM YORK 3306 (D01/871659) or 3406 (D02/871660)

Learning goals and outcomes: Please see detailed document on TritonED (tritoned.ucsd.edu)

Objectives:

- Understand the theory behind molecular biology techniques, and the applications of these methodologies in biological research
- Become proficient at basic molecular biology techniques
- Understand and follow basic rules of lab safety and sterility techniques
- Be able to maintain proper records of your experiments, observations and conclusions
- Learn the importance of proper controls in designing experiments and interpreting results
- Improve lab math skills and ability to graph data correctly
- Be able to make logical conclusions from experimental data
- Become familiar with bioinformatics databases, applications and analyses
- Learn to find, read, and evaluate primary literature
- Improve skills of scientific writing
- Become aware of the implications of the technology for society

Reading:

1. From Genes to Genomes by Dale (1st, 2nd, or 3rd edition). Electronic versions of the 3rd and 1st editions are available on roger.ucsd.edu. The text is also on reserve in the library.
2. BIOLOGY/BIMM 101 Recombinant DNA Techniques Lab Manual Spring 2016 by Butler and Mel. Purchase from Soft Reserves. Bring this with you to every lab meeting.
3. Course website on TritonED: Check this before each lab! The syllabus, announcements, lectures, study guides & practice problems, assignments, lab materials, additional required readings, lab schedule, and calendar (with office hours, due dates, etc.) are posted here.

Required Materials - bring to lab each day, required by second day of lab:

1. Labcoat – must go to knees (available at bookstore)
2. UV blocking safety glasses (also at bookstore)
3. Lab notebook with carbon copies (bookstore or Grove general store)
4. Fine point Sharpie for labeling – get a dark color
5. Scientific Calculator – you may not use a graphing calculator or cell phone for quizzes!
6. Long pants and closed-toed shoes are always required in lab (entire legs and feet covered)

Instructional Assistants: Please contact the IA for your section using their email (listed below).

Section	IA	Email
D01	Agnes Grzechnik	agrzechn@ucsd.edu
D02	Layla Fijany	lfijany@ucsd.edu

Attendance: Remember that lab attendance is required – if you miss two labs, you will be asked to drop the course. If you are ill, you must leave a message with me, not your IA, and make up the lab in a way that I will determine. If you miss one lab with no excuse, you will lose 5% from your final grade. If you miss two labs, you will receive an F for the course. You must be on time for lab; the IAs go over the experiments at the beginning of lab, and quizzes are given then. If you are habitually late to lab, you will lose 5% from your final grade.

I highly recommend that you attend lectures, as extensive research and my past experience have shown that your active participation has an **enormous** impact on your learning.

Grading: There are 500 total points possible for this course. Final grades will be based on your total points as a percentage of 500 points possible. The following cutoffs are strictly adhered to. You can check your scores throughout the quarter on TritonEd.

98-100% = A+	87-89% = B+	76-79% = C+	60-66% = D
93-97% = A	83-86% = B	72-75% = C	Below 60% = F
90-92% = A-	80-82% = B-	67-71% = C-	

1. Quizzes: 35% (175 pts total)

Starting the week of Apr 4th, there will be a quiz once a week on Tuesdays at the beginning of lab every week for weeks 2, 3, 4, 5, 6, 7, 8 and 9. The quiz schedule can be found on the calendar on TritonEd. Each quiz is worth 5% (25 pts) of your final grade and your lowest quiz score will be dropped. The quizzes will cover the lectures, readings, and lab experiments from the previous week, and the purpose of that day's lab. I will post a study guide for each quiz on TritonEd. You may only request a re-grade of your quiz if you completed it in pen.

Note: If you come into lab late and miss the quiz, you will receive a zero for that quiz. There are no make-ups for quizzes.

2. Assignments: 30% (150 pts total)

You will turn in both lab notebook carbons (see #5 below) and homework missions, varying in worth and format, that will total 30% of your final grade. Guidelines for each assignment will be posted on TritonEd and due dates will be on the TritonEd calendar. Homework missions must be submitted to Turnitin (see below) on TritonEd before the start of lab, and all assignments must be handed in within 10 minutes of the start of your lab. Assignments that are handed in late that day will be penalized by deducting 5%, and each additional day an assignment is late another 5% will be deducted. Although you will be doing the experiments and collecting data with a partner, you must hand in your own assignments, written in your own words. **Copying someone else's work (including past quarters!) is cheating (see 'Academic Integrity' section below).**

3. Comprehensive Exam: 30% (150 pts)

There will be a comprehensive exam on the last day of class, June 2nd, in lab during your regular lab time. There are no make-ups for the exam.

4. Participation, lab performance, and experimental responsibility: 5% (25 pts)

Your preparedness for lab, your participation in class, and the quality and success of your experiments will all be considered when assigning these points. For example, if you do not fully participate in lab (you let your lab partner do all the work), often don't know what the purpose of the day's lab is, and/or are repeatedly careless in lab (e.g. adding the wrong reagents), you will lose points.

5. Lab notebook (see pages 102-103 in lab manual for more details about what to include, then check with your IA if you need more help):

Starting with lab 2, it is mandatory that you keep a lab notebook (with carbon paper). Complete the purpose section in your lab notebook and review the methods section in your lab manual before you come to every lab meeting. Your IA's will check your lab notebook at the end of every lab for completeness. Briefly, you should include:

- Purpose: objective of the lab in your own words (why are you doing the experiment?)
- Methods: pages of protocol/procedure and any changes you made to it, relevant charts
- Results: all calculations you do and data you collect, observations
- Conclusions: summarize and interpret results, labeling & location of samples

Note: Just coming to lab does not ensure that you will get a passing grade in the class. You must hand in all assignments and get an average of 67 to get a C- in the class.

Enrollment and safety policies: Please see the Biology lab course information website: <http://biology.ucsd.edu/education/undergrad/course/ug-labs.html>. Enrolled and waitlisted students **MUST** attend the first lecture and lab sessions. ADD/DROP procedures/deadlines are different for lab courses than lecture courses.

All enrolled and waitlisted students **must** complete the online Biology Lab Safety Training and Assessment **before** the first lab meeting: <https://dbportal3.ucsd.edu:3443/safety-training/>.

Academic Integrity (<https://students.ucsd.edu/academics/academic-integrity/index.html>):

Anyone caught cheating (this includes plagiarizing homework missions or lab notebooks, cheating on a quiz or exam, or changing an answer for a re-grade) will be reported to the Academic Integrity Office.

Note: Students agree that by taking this course all required papers will be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the terms of use agreement posted on the Turnitin.com site.

Accommodations: Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged. Be sure to check OSD office hours before going there.

Contact the OSD for further information:

858.534.4382 (phone)

osd@ucsd.edu (email)

<http://disabilities.ucsd.edu> (website)

Letters of recommendation: Letters of recommendation will only be written for students who receive an A or an A+, have good academic records and realistic goals, and who have been active participants in the in the course (I need to know who you are because you have come to office hours, or you have asked/answered questions in class, or talked to me in lab, etc.). If I think I don't know you that well or don't have too much to say about you, don't take it personally but I will probably decline your request to write a letter. If you think you may want a letter of recommendation at some point in the future, save your graded quizzes and assignments.