

## **BIMM 101 Recombinant DNA Techniques Spring 2010**

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Office hours: Tues 2 to 3 PM  
York 3080 D

Lectures: Warren Lecture Hall 2113 M-W-F 1:00 to 1:50 PM

Labs: York 4318 and 4332 W-F 2:00 – 6:00 PM

### **Learning objectives:**

- Learn the theory behind molecular techniques, and the applications of the methodologies in biological research
- Become proficient at basic molecular biology techniques
- Learn the importance of proper controls in designing experiments and interpreting results
- Improve lab math skills and ability to graph data correctly
- Learn to make logical conclusions from experimental data
- Become familiar with bioinformatics databases and applications
- Learn to find, read, and evaluate primary literature
- Become aware of the implications of the technology for society

### **Required texts:**

BIMM 101 Lab Manual from University Readers

*From Genes to Genomes* by Dale (2nd edition) also on reserve in BML

Readings on WebCT ([webct.ucsd.edu](http://webct.ucsd.edu))

### **Required Materials – needed by second day of class:**

Labcoat (the bookstore has cheap ones)

UV blocking safety glasses (also at bookstore)

Lab notebook with carbon copies (bookstore or Grove general store)

**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 TA, and make up the lab in a way that I will determine. You must be on time for lab; the TAs go over the experiments at the beginning of lab, and also pop quizzes are administered then.

1. **Quizzes:** Starting Jan9th, there will be a quiz on every Wednesday at the beginning of lab. The quiz will cover the lecture and lab experiments from the previous week. There will be eight quizzes, each of which is worth 5% of your final grade, except for the quiz in week 5, which will be worth 8%. Total = 36% of final grade.

2. **Homeworks and lab reports:** there will be 1 lab report worth 16% of your grade and three shorter homeworks worth 8% of your grade. Total = 40%.

Although you will be doing the experiments and collecting data with a partner, you must hand in your own homeworks and lab report, in your own words. **Copying someone else's lab report or homework is cheating (see below). You must submit your lab report to Turnitin.com**

Note that in presenting data, much of your homework and lab grade will depend on correct labeling of figures and graphing of data.

**Late policy:** homeworks and lab reports are due at the beginning of the lab on the assigned date. For each day thereafter, you will lose 10% off the total.

4. **Lab performance** There are no points for lab performance per se. However, your effort, attitude, and the success of your experiments will be considered when assigning the final grade, especially if you are on the borderline between two grades. If you miss one lab with no excuse, you will lose 5% from your final grade. If you miss two labs, you will be administratively dropped from the course.

5. **Exams:** there will be cumulative final, worth 24% of the final grade, on March 11<sup>th</sup>.

6. **Lab notebook:** it is mandatory that you keep a lab notebook, with carbon paper. The notebook must contain the following (see back of lab manual for more details):

- i. The date, title and purpose
- ii. Any changes in protocol
- iii. All data/results
- iv. All calculations done during experiments
- v. Observations

You will need to attach carbons of relevant labs to all homeworks and lab reports you hand in (I will indicate on lab reports which lab #s to include).

Final grade:

The final grade is based on a straight average of your scores.

97+ = A+

93-96 = A

90-92 = A-

87-89 = B+

83-86 = B

80-82 = B-

76-79 = C+

70-75 = C

65-70 = C-

**Policy on cheating:** anyone caught cheating (includes plagiarizing lab reports, cheating on a test, or changing an answer for a regrade) will be reported to the Academic Integrity Office.

**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 passing scores on those assignments (an average of 65) to get a C- in the class.**

**Letters of recommendation:** if you think you may want me to write you a letter of recommendation at some point in the future, please save your lab reports and tests, for I will ask for some of them to review. Also, I will write letters only for those who receive a A in the course. Finally, even if you have a A, if you have never spoken to me or come to my office hours, I may not agree to write a letter for you.

**BIMM 101 Winter 2010 Student contract:**

**1. I understand that if I am late for lab on a day a quiz is given, I will not be allowed to take the quiz and will receive a 0 score for that quiz.**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

All lab reports for the class must be independently written, i.e., **your own work in your own words**. While discussion of data among lab partners is encouraged, each student on their own must complete all text, references, figures, graphs, and tables. The submission of reports by lab partners that contain shared work is forbidden, and will result in points being deducted from both reports. The exception to this is when a figure is the raw data that is supplied to each member of the group (specifically absorption spectra and gel photographs). In this case the labeling of that figure must be done independently. If you have questions about the difference between discussing your work with others and unauthorized collaboration, please ask your instructor or T.A. for clarification.

Because lab reports are to be your own work in your own words, you may not copy to any extent current or past laboratory reports that were written by other students. This is known as plagiarism, which is a direct attempt by the student to present the work of others as their own, and is no different than cheating on an exam. Directly copying material from other sources without putting it in your own words is also plagiarism, even if the source is cited as a reference. Plagiarism in lab reports is rigorously sought out and penalized. Students are required to upload an electronic version of each lab report to Turnitin.com, where the report is screened with a plagiarism checker against all reports in the Turnitin database. All incidents of plagiarism will automatically be turned in to the Academic Integrity Coordinator. Following UCSD's Policy on Integrity of Scholarship ([www-senate.ucsd.edu/manual/appendices/app2.htm](http://www-senate.ucsd.edu/manual/appendices/app2.htm)), students found to have committed plagiarism or other academic misconduct will receive both an administrative (decided by the Council of Deans) and academic penalty (decided by the instructor). Furthermore, all submitted reports are retained in the Turnitin database. Similarity hits by the plagiarism checker will also reveal the name of the student who provided the plagiarized material. Giving one's own lab report to other students to allow them to copy material from that report is also academic dishonesty, and will be pursued and penalized as rigorously as for the student committing the plagiarism.

**2. I understand that if I plagiarize a lab report and it is detected by Turnitin.com, the matter will go to the Academic Integrity Office on campus. I also understand that if I give a lab report to a student who takes the lab in a subsequent quarter, and he or she plagiarizes my lab report, I will also be subject to disciplining by the Academic Integrity Office.**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date