Biology 45 Syllabus Summer 2014

Professor
Natasha Grotz
231 LSC
6-0120

Lectures
205 LSC
MWF 10-11:05
There are two evening exams from 7:00-9:00 on Tuesday, July 15th, and Tuesday, August 5th.

Office Hours
Office hours will be held by appointment; please e-mail me to schedule a meeting.

Textbook
The textbook for the course is *Molecular Biology of the Gene, 7th ed.* by James Watson *et al*, and it is available at Wheelock Books.

Grading

First Exam	28%
Second Exam	28%
Final Exam	28%
Oral Presentations	8%
Participation	8%

Canvas
The Canvas site for the course will contain the Powerpoint slides used during lecture, practice exams and any other relevant course material.

Note to Students with Physical or Learning Disabilities
I encourage students with documented disabilities, including "invisible" disabilities like chronic diseases and learning disabilities, to discuss with me the appropriate accommodations that might be helpful. Please contact me during the first week of class so that we have the time to implement any accommodations. All discussions will remain confidential.

Religious Observances
Some students may wish to take part in religious observances that fall during this academic term. Should you have a religious observance that conflicts with your participation in the course, please come speak with me before the end of the second week of the term to discuss appropriate accommodations.

Academic Honor Principle

The Dartmouth College Student Handbook states "Fundamental to the principle of independent learning are the requirements of honesty and integrity in the performance of academic assignments, both in the classroom and outside. Dartmouth operates on the principle of academic honor, without proctoring of examinations. Students who submit work which is not their own or who commit other acts of academic dishonesty forfeit the opportunity to continue at Dartmouth."

There are a number of situations in which a student in Biology 45 might be unsure about what constitutes a violation of the Academic Honor Principle. These situations include (but are not limited to) the following:

a) Examinations must be completed without reference to written materials other than those provided with the exam paper and must be completed without communication with anyone else (the only permissible exception is that students may request clarification of any exam question from the course faculty and/or staff who are present expressly for that purpose). The answers that you provide must be entirely your own work.

b) Under certain circumstances, students may request that a portion of the exam be re-graded. Any alteration of the answers between the time when the graded papers were returned to the student and the time when the paper was submitted for re-grading constitutes a breach of the Academic Honor Principle.

Honesty is the foundation of the academic pursuit of knowledge. In recognition of this, the faculty of Biology 45 will not overlook any violations of the Academic Honor Principle. Indeed, the Faculty Handbook of Dartmouth College states explicitly that College Faculty is obligated to report potential violations of the Academic Honor Principle to the Dartmouth College Committee on Standards.

Course Schedule: Biology 45-Molecular Biology

Lecture Number	Lecture Date	Topic	Reading
1	6/20-F	Introduction, Nucleic Acid Chemistry	pp 24-25, 32-33, 77-91
2	6/23-M	Protein Chemistry	Ch 6, pp 51-63
3	6/25-W	DNA Replication I	Ch 9
4	6/27-F	DNA Replication II	
5	6/30-M	Bacterial Transcription	pp 429-447
6	7/2-W	Bacterial Transcription II	
	7/4-F	No Class, College Holiday	
7	7/7-M	Bacterial Gene Control: Operons I	pp 615-635
8	7/9-W	Bacterial Gene Control: Operons II	
9	7/11-F	Bacterial Gene Control: Bacteriophage λ	pp 636-653
10	7/14-M	Bacterial Gene Control: Bacteriophage λ	
	7/14-M	Review Session, 7PM	
Exam 1	7/15-T	7:00-9:00 PM, Location To Be Announced Lectures (1-8)	
11	7/16-W	Eukaryotic Transcription I	pp 448-464
12	7/18-F	Eukaryotic Transcription II	
13	7/21-M	Eukaryotic Gene Regulation I	pp 657-686
14	7/23-W	Eukaryotic Gene Regulation II	
	7/25-F	Oral Presentations (Lectures 1-12)	
15	7/28-M	Chromatin I	pp 220-255, 687-698
16	7/30-W	Chromatin II	
	8/1-F	No Class	
17	8/4-M	RNA Processing I	pp 457-462, 467-496
	8/4-M	Review Session, 7PM	
Exam 2	8/5-T	7:00-9:00 PM, Location To Be Announced Lectures (9-16)	
18	8/6-W	RNA Processing II/RNA Silencing	pp 711-727
19	8/8-F	DNA Mutagenesis and Repair I	Ch 10
20	8/11-M	DNA Mutagenesis and Repair II	
21	8/13-W	Translation I	Ch 15, Ch 16, pp 33-41
22	8/15-F	Translation II	
23	8/18-M	Site Specific Recombination and Transposons	Ch 12
	8/20-W	Oral Presentations (Lectures 13-24)	
	8/23-Sat	Review Session, 7PM	
Final Exam	8/24-Sun	11:30-2:30 AM, Location To Be Announced Lectures (17-23)	