

# **Biology 45 Syllabus Winter 2020**

## **Professor**

Natasha Grotz  
231 LSC  
6-0120

## **Lectures**

205 LSC  
T/Th 10:10-12  
W 3:30-4:20

## **Office Hours**

Office hours are by appointment; please e-mail me to schedule.

## **Textbook**

*Molecular Biology of the Gene, 7<sup>th</sup> ed.* by James Watson *et al.*

## **Grading**

First Exam	26%
Second Exam	26%
Final Exam	26%
Written Assignment/Presentation	6%
Participation	8%
Paper Summaries	8%

## **Web Site**

The Canvas site for the course will contain PowerPoint slides used during lecture as well as Echo 360 recordings.

## **Note to Students with Physical or Learning Disabilities**

Students with disabilities who may need disability-related academic adjustments and services for this course are encouraged to see me privately as early in the term as possible. Students requiring disability-related academic adjustments and services must consult the [Student Accessibility Services office](#) (Carson Hall, Suite 125, 646-9900). Once SAS has authorized services, students must show the originally signed SAS Services and Consent Form and/or a letter on SAS letterhead to their professor. As a first step, if students have questions about whether they qualify to receive academic adjustments and services, they should contact the SAS office. All inquiries and discussions will remain confidential.

### **Religious Observances**

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

### **Mental Health**

The academic environment at Dartmouth is challenging, our terms are intensive, and classes are not the only demanding part of your life. There are a number of resources available to you on campus to support your wellness, including your undergraduate dean (<http://www.dartmouth.edu/~upperde/>), Counseling and Human Development (<http://www.dartmouth.edu/~chd/>), and the Student Wellness Center (<http://www.dartmouth.edu/~healthed/>).

### **Sexual Misconduct and Title IX**

At Dartmouth, we value integrity, responsibility, and respect for the rights and interests of others, all central to our Principles of Community. We are dedicated to establishing and maintaining a safe and inclusive campus where all have equal access to the educational and employment opportunities Dartmouth offers. We strive to promote an environment of sexual respect, safety, and well-being. In its policies and standards, Dartmouth demonstrates unequivocally that sexual assault, gender-based harassment, domestic violence, dating violence, and stalking are not tolerated in our community.

The Sexual Respect Website (<https://sexual-respect.dartmouth.edu>) at Dartmouth provides a wealth of information on your rights with regard to sexual respect and resources that are available to all in our community.

Please note that, as a faculty member, I am obligated to share disclosures regarding conduct under Title IX with Dartmouth's Title IX Coordinator. Confidential resources are also available, and include licensed medical or counseling professionals (e.g., a licensed psychologist), staff members of organizations recognized as rape crisis centers under state law (such as WISE), and ordained clergy (see <https://sexual-respect.dartmouth.edu/reporting-support/all-resources/confidential-resources>).

Should you have any questions, please feel free to contact Dartmouth's Title IX Coordinator ([Kristi.Clemens@Dartmouth.edu](mailto:Kristi.Clemens@Dartmouth.edu)) or Title IX Office ([TitleIX@Dartmouth.edu](mailto:TitleIX@Dartmouth.edu)).

### **Financial Challenges**

If you encounter financial challenges related to this class, please let me know.

### **Academic Honor Principle**

The Dartmouth College ORC 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. Any student who submits work which is not his or her own, or commits other acts of academic dishonesty, violates the

purposes of the College and is subject to disciplinary actions, up to and including suspension or separation.”

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.

### **Topic Overview/Schedule**

#### Section 1 (1/7-1/23)

Topics: Nucleic Acid and Protein Chemistry, DNA Replication, Bacterial DNA Damage and Repair, Bacterial Transcription and Control, Bacteriophage Lambda

Midterm 1: January 28

#### Section 2 (1/30-2/13)

Topics: Techniques in Transcription, Eukaryotic Transcription and Gene Control, Chromatin

Midterm 2: February 18

#### Section 3 (2/20-3/5)

Topics: RNA Processing, RNA Silencing, Translation, Site Specific Recombination and Transposons

Midterm 3/Final Exam: March 10 (11:30-2:30)

Note: Paper summaries will be due during Section 2 and Section 3. The writing assignment and presentation will occur in Section 3.