

**Biochemistry- Nucleic Acids**  
**CHEM 3813**  
**Spring 2023**

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**Class Schedule:** 8:00am-8:50am, Mon, Wed, Fri  
Detailed Schedule Included Below  
Boettcher Auditorium Room 102

**Office Hours:** Wednesdays 11:30am-1:30pm

**Textbook:** Lehninger Principles of Biochemistry, 8<sup>th</sup> Edition  
ISBN-10: 1-4641-2611-9  
Electronic copies of several editions are also available freely online

**Assessment:**

**Quizzes:** There will be 8 in-class quizzes. Each Quiz will cover the material of the preceding week(s) and be worth 20 points. Quizzes are administered in paper/handout format. There is a possibility some of the later quizzes may be delivered online via Canvas.

**Exams:** There will be two 1-hour midterm exams during the quarter, plus one 2-hour cumulative final exam. Each exam is worth 100 points. Exam questions will be a combination of multiple choice and short answer, drawing and calculation-based problems. Exams are administered in paper/handout format.

With one exception, there will be no makeup exams. The only exception to the no-makeup policy will be for members of a university team or group, e.g. athletic team or music group scheduled to be away from campus at the time of the exam. You must inform me of this prior to the exam and make arrangements at that time for a makeup exam.

<b>Grading Summary:</b>	quizzes	160 points
	midterm exams	200 points
	final exam	100 points
	total	460 points

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Tentative Schedule (subject to revision)

Date	Day	Topics Covered	Assessment	Chapter	Points
27-Mar	Mon	Syllabus, Intro	Quiz 1		/20
29-Mar	Wed	Nucleotides and Nucleic Acid Structure		8	
31-Mar	Fri	Nucleic Acid Chemistry		8	
3-Apr	Mon	Nucleic Acid Synthesis and Sequencing	Quiz 2	8	/20
5-Apr	Wed	finish/review day			
7-Apr	Fri	Recombinant DNA		9	
10-Apr	Mon	Restriction Enzymes and Cloning	Quiz 3	9	/20
12-Apr	Wed	Mutagenesis		9	
14-Apr	Fri	finish/review day		9	
17-Apr	Mon	<b>Exam 1</b>	Exam 1		/100
19-Apr	Wed	Genomics, Dark Matter and Ancestry		24	
21-Apr	Fri	Genes and Chromosomes		24	
24-Apr	Mon	Review Exam 1	Quiz 4		/20
26-Apr	Wed	DNA Topology		25	
28-Apr	Fri	Nucleosomes and Accessing DNA		25	
1-May	Mon	DNA metabolism	Quiz 5	25	/20
3-May	Wed	DNA replication		25	
5-May	Fri	DNA repair		25	
8-May	Mon	DNA Repair and Recombination	Quiz 6	25	/20
10-May	Wed	review/finish day			
12-May	Fri	Transcription and RNA metabolism		26	
15-May	Mon	<b>Exam 2</b>	Exam 2		/100
17-May	Wed	RNA Processing and Splicing		26	
19-May	Fri	Reverse Transcription and RNA replication		26	
22-May	Mon	Review Exam 2	Quiz 7		/20
24-May	Wed	The Genetic Code		27	
26-May	Fri	Protein Synthesis 1		27	
29-May	Mon	NO CLASS- MEMORIAL DAY			
31-May	Wed	Protein Synthesis 2	Quiz 8	27	/20
2-Jun	Fri	Review Day		all	
5-Jun	Mon 8am- 9:50am	<b>Comprehensive Final Exam</b>	Exam 3		/100
				total:	/460

**Course Website:** <https://canvas.du.edu/courses/154353>

I'll use Canvas to supplement in-class instruction. I will make an effort to post each day's lecture slides prior to the day's lecture. Quizzes and Exams will be administered on paper in class with scores uploaded as they are completed.

### **Additional Policies:**

In general, this course will adhere to the policies listed on the Office of Teaching and Learning's "Sample Syllabus" website: <https://otl.du.edu/plan-a-course/teaching-resources/sample-syllabus-statements/>.

Below, I've copied and pasted a version of those policies, with sections that are particularly germane to this course expanded to include their full text. Sections in grey are equally valid, but not fully listed here. Hyperlinks within the copied section aren't active but are available through the website linked to above.

Masking Requirements

Accessing Course Materials

AI Tools in the Classroom

Attendance-In person

Attendance/Participation (online courses)

Participation (online course with required synchronous component)

### **Students with Disabilities/Medical Issues**

DU's Disability Services Program (DSP) is committed to providing equitable opportunities to all students in full compliance with the Americans with Disabilities Act (ADA) of 1990, as amended, the Rehabilitation Act of 1973, and other applicable laws.

Students with disabilities (i.e., physical, medical, mental, emotional, and learning) deserve to participate in all of the University of Denver's courses, programs, and activities. We, at the DSP, help to facilitate this participation by approving and providing accommodations at no extra cost for any student who has a documented disability.

Please note your professors must have your Letter of Approved Accommodations in order to provide you with accommodations. Accommodations are not retroactive, e.g., after a test or due date.

All requests to take quizzes, tests, midterms, and final exams at the DSP Testing Center must be made prior to the sign-up deadlines via the [Accommodate Student Portal](#).

Speak to one of our DSP staff members to learn how to apply for accommodations, how the approval process works, and what comes next at the links below. Reach out to us at 303-871-3241, [dsp@du.edu](mailto:dsp@du.edu), or stop in. Our office is located in Driscoll South, Suite 22 (by the card office). For specific information and the DSP Handbook, please view our [webpage](#).

### **Peer Note Taker Agreements**

As you know, DU aspires for inclusive excellence and is particularly attentive to diversity, equity, and inclusion issues. One or more students in this class have a disability which prevents them from taking adequate class notes. Would you like to help? The Disability Services Program pays note takers \$40 in DU Bookstore credit at the completion of each course for which they have provided notes. For additional information, please let your professor know that you would like to perform this service.

## **Religious Accommodations Policy**

As part of its commitment to diversity and Inclusive Excellence, the University provides reasonable accommodations for students' sincerely held religious beliefs or practices unless the University determines that such an accommodation would fundamentally alter the curriculum or academic program. Students are expected to examine the course syllabus for potential conflicts with religious beliefs or practices, and submit the Religious Accommodation Request webform to seek accommodation. [Requests for absences from an internship or externship, field placement, or other practical learning experience outside the classroom will be assessed on an individual, case-by-case basis in consultation with the University placement supervisor and the field placement supervisor.] Students who have conflicts with the overall class or experience schedule, such as the time and date the class is offered, are encouraged to find an alternative section for the class. For full details, including request process, visit the [Religious and Spiritual Life web page](#).

## **Supporting your Academic Success**

### **Honor Code/Academic Integrity**

All work submitted in this course must be your own and produced exclusively for this course. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented. For the consequences of violating the Academic Misconduct policy, refer to the University of Denver website on the Honor Code ([studentaffairs.du.edu/student-rights-responsibilities/honor-code](http://studentaffairs.du.edu/student-rights-responsibilities/honor-code))

View more samples at: [Honor Code Abstract Samples for Faculty Use in Syllabi](#)

### **Inclusive Learning Environments**

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, socioeconomic background, and myriad other social identities and life experiences. The goal of inclusiveness, in a diverse community, encourages and appreciates expressions of different ideas, opinions, and beliefs, so that conversations and interactions that could potentially be divisive turn instead into opportunities for intellectual and personal enrichment.

A dedication to inclusiveness requires respecting what others say, their right to say it, and the thoughtful consideration of others' communication. Both speaking up and listening are valuable tools for furthering thoughtful, enlightening dialogue. Respecting one another's individual differences is critical in transforming a collection of diverse individuals into an inclusive, collaborative and excellent learning community. Our core commitment shapes our core expectation for behavior inside and outside of the classroom.

### **Name and Pronoun Etiquette**

A critical part of building a learning environment that is inclusive of sexual orientation and gender identity is asking and correctly using someone's name and pronouns. You can add your pronouns in your Banner profile through MyDU so that we can refer to you using the correct pronouns. If your pronoun set is not available in Banner, please let me know so that I can use the correct pronouns for you. Preferred names and pronouns may change during the term, so feel free at any point to let me know that you would like to be addressed differently. As a community, we will strive to address each other with the names and pronouns identified in Canvas. If we make mistakes or are corrected, we will briefly apologize and correct ourselves. To learn more about personal pronouns and why they are important, please visit the ["Sexual Orientation and Gender Identity"](#) module on the Office of Teaching and Learning website. For student resources, please visit the ["Gender and Sexuality"](#) section on the DU Cultural Center's website.

## **Mental Health & Wellness**

As part of the University's Culture of Care & Support we provide campus resources to create access for you to maintain your safety, health, and well-being. We understand that as a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug concerns, depression, difficulty concentrating and/or lack of motivation. These stressful moments can impact academic performance or reduce your ability to engage. The University offers services to assist you with addressing these or ANY other concerns you may be experiencing. If you or someone you know are suffering from any challenges, you should reach out for support. You can seek confidential mental health services available on campus in the Health & Counseling Center (HCC) and My Student Support System (My SSP). Another helpful campus office is Student Outreach & Support (SOS), where staff work with you to connect to all the appropriate campus resources (there are many!), develop a plan of action, and guide you in navigating challenging situations. If you are concerned about yourself and/or one of your peers you can send a SOS referral.

More information about HCC, MY SSP, and SOS can be found at:

- [Health & Counseling Services](#)
- [My SSP 24/7 confidential services for students \(Links to an external site.\)](#)
- [Student Outreach & Support \(SOS\) and SOS Referrals](#)

## **Discrimination, Harassment & Gender-based Violence (Title IX)**

Discrimination, harassment, and gender-based violence can happen to anyone regardless of race, class, age, appearance, gender identity, or sexual orientation. The University of Denver is committed to providing an environment free of discrimination on the basis of sex (gender), including sexual misconduct, sexual assault, relationship violence, and stalking, and other protected classes, such as race, color, national origin, age, and disability.

The Office of Equal Opportunity & Title IX (EOIX) is responsible for responding to and investigating reports and complaints of discrimination, harassment, and gender-based violence. In addition, all non-confidential University employees are considered "responsible employees" and required to report such incidents to EOIX. For more information, please visit the Office of Equal Opportunity & Title IX website at <https://www.du.edu/equalopportunity/>.

## **Center for Advocacy, Prevention, and Empowerment (CAPE)** **Use of Technology in the Classroom**

## **Restriction of Audio or Visual Recording, Reproduction, and Distribution of Content in Online Courses**

At the University of Denver, we protect the intellectual property of all our faculty, and safeguard the privacy of all our students in online learning environments. To this end, students may not record, reproduce, screenshot, photograph, or distribute any video, audio, or visual content from their online courses. This restriction includes but is not limited to:

- Pre-recorded and live lectures
- Live discussions
- Discussion boards
- Simulations
- Posted course materials
- Faculty feedback forms
- Visual materials that accompany lectures/discussions, such as slides
- Virtual whiteboard notes/equations, etc.

As we engage in online learning as an academic community, it is imperative to be respectful of all. Keep in mind that if any student is identifiable in an online class recording, this may constitute a violation of the educational record protections provided under FERPA.

Students with disabilities who need to record classroom lectures or discussions must contact the Disability Services Program to register, request, and be approved for an accommodation. All students are advised that students may tape classroom activities for this purpose. Such recordings are to be used solely for individual or group study with other students enrolled in the class that quarter/semester. They may not be reproduced, shared in any way (including electronically or posting in any web environment) with those not in the class in that quarter.

Students who violate this policy will be reported to The Office of Student Rights & Responsibilities and may be subject to both legal sanctions for violations of copyright law and disciplinary action under *Student Rights & Responsibilities Policies*.

### Turnitin Plagiarism Detection Software within Canvas Online and Web-supported Classes

### **Student Athletes**

If you are a student-athlete, you should inform me of any class days to be missed due to DU sponsored varsity athletic events in which you are participating. Please provide me with an absence policy form by the end of the first week of class. You will need to make up any missed lectures, assignments, and/or exams.

### Research Center Services Writing Center Services