

Biochemistry- Nucleic Acids
CHEM 3813
Spring 2018

Instructor: Erich G. Chapman, PhD
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Class Schedule: 8:00am-8:50am, Mon, Wed, Fri
Detailed Schedule Included Below
Boettcher Center Room 102

Office Hours: Tuesday afternoon: 2:00-3:30pm
Wednesday afternoon: 2:30-4:00pm
or by appointment as needed

Textbook: Lehninger Principles of Biochemistry, 5th, 6th, or 7th Edition
ISBN-10: 1-4641-2611-9
An electronic copy of the 5th edition is available freely online

Homework: Homework problems corresponding to the chapters that we cover in class will be periodically suggested. It is highly recommended to work through these problems as they are an important out-of-class learning tool and similar questions may appear on exams and tests. I will suggest problems from the 7th ed of the textbook and post that edition's solution's manual online. Some homework problem numbers differ between different editions of the textbook.

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

If you miss a 1-hour midterm exam then your final exam will be counted twice and replace the missed midterm exam. 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.

Quizzes: There will be 9 quizzes. Each Quiz will cover the material of the preceding week(s) and be worth 20 points.

Talk/Seminar Attendance: There are a variety of scientific and technological seminars on campus. In order to encourage students to take advantage of these talks two, ten-point assignments will be comprised of a short written summary of a talk/seminar that you've attended.

Grading Summary:	midterm exams	200 points
	final exam	100 points
	quizzes	180 points
	seminar attendance	20 points
	total	500 points

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Tentative Schedule (subject to revision)

Date		Topics Covered	Assessment	Reading Chapter
26-Mar	Mon	Syllabus, Intro		
28-Mar	Wed	Nucleotides and Nucleic Acid Structure		8
30-Mar	Fri	Nucleic Acid Chemistry	Quiz 1	8
2-Apr	Mon	Nucleic Acid Synthesis and Sequencing		8
4-Apr	Wed	Recombinant DNA		8 and 9
6-Apr	Fri	Restriction Enzymes and Cloning	Quiz 2	9
9-Apr	Mon	PCR and Mutagenesis		9
11-Apr	Wed	Genomics, Dark Matter and Ancestry		9
13-Apr	Fri	Catch-up 1	Quiz 3	9 and 24
16-Apr	Mon	Genes and Chromosomes		24
18-Apr	Wed	DNA Topology		24
20-Apr	Fri	Nucleosomes and Accessing DNA	Quiz 4	24
23-Apr	Mon	Exam 1	Exam 1	
25-Apr	Wed	DNA metabolism		25
27-Apr	Fri	DNA replication	Quiz 5	25
30-Apr	Mon	DNA repair		25
2-May	Wed	DNA recombination and Transposons		25
4-May	Fri	RNA Metabolism	Quiz 6	26
7-May	Mon	Transcription		26
9-May	Wed	RNA Processing and Splicing		26
11-May	Fri	Reverse Transcription and RNA replication	Quiz 7	26 and 27
14-May	Mon	The Genetic Code		27
16-May	Wed	Protein Synthesis		27
18-May	Fri	Exam 2	Exam 2	27
21-May	Mon	Protein Targeting and Decay		
23-May	Wed	Gene Regulation		28
25-May	Fri	Genetic Control in Bacteria	Quiz 8	28
28-Mar	Mon	NO CLASS- MEMORIAL DAY		
31-May	Wed	Genetic Control in Eukaryotes		28
2-Jun	Fri	Developmental Regulation	Quiz 9	28
4-Jun	Mon 8am- 9:50am	Comprehensive Final Exam		Cumulative

Course Website: <https://canvas.du.edu/courses/59921>

I'll use Canvas to supplement in-class instruction. Course assignments, lectures and supplementary materials will be uploaded as they accumulate. I will make an effort to post each day's lecture slides prior to the day's lecture.

Quizzes and Exams will be administered in class. Scored quizzes and exams will be returned the following class period. I will retain electronic copies of your quizzes and exams for record-keeping purposes. I will post scores online in Canvas.

Additional Policies:

Diversity and Inclusion Statement:

Inside and outside of this classroom I expect everyone to respect one another and help foster a positive learning environment. I will do my best to create an open and inquisitive classroom and would appreciate your help. If specific issues arise please let me know immediately in person or by email. We can work together to help resolve and correct them.

A copy of the Chancellor's Statement on Diversity, Equity and Inclusive Excellence can be found at: <http://www.du.edu/chancellor/vision/diversitystatement.html>

Additional resources addressing Diversity and Inclusion can be found on the Office of Diversity and Inclusion's website at: <http://www.du.edu/diversity-inclusion/index.html>

DU Honor Code:

All members of the University of Denver are expected to uphold the values of *Integrity*, *Respect*, and *Responsibility*. These values embody the standards of conduct for students, faculty, staff, and administrators as members of the University community.

Our institutional values are defined as:

Integrity: acting in an honest and ethical manner;

Respect: honoring differences in people, ideas, and opinions;

Responsibility: accepting ownership for one's own conduct.

A complete explanation of University's policies and procedures regarding student conduct can be found at: <http://www.du.edu/studentlife/studentconduct/media/documents/honorcode.pdf>

Title IX Statement:

The University prohibits discrimination on the basis of sex, including sexual misconduct, in its educational programs and activities. The University is committed to complying with Title IX of the Education Amendment Act of 1972 and ensuring that the University's education programs and activities are operated in a manner consistent with applicable federal law, regulations, and provisions.

Further information concerning DU's Title IX policies can be found at: <http://www.du.edu/equalopportunity/policies/index.html>

Students with Disabilities/Medical Issues:

University of Denver complies with the American with Disabilities Act and Section 504 of the Rehabilitation Act. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs and what we can do jointly to accommodate them. If you qualify for academic accommodations because of a disability or medical issue please submit a Faculty Letter to me from Disability Services Program (DSP) in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities/medical issues. Please contact the Disability Services Program located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave., to coordinate reasonable accommodations for students with documented disabilities/medical issues. 303.871/2278/7432/ 2455. Information is also available on line at <http://www.du.edu/disability/dsp>; see the Handbook for Students with Disabilities.

There are other resources available on campus to help students with their learning and study needs. The Learning Effectiveness Program (LEP), a fee based program that offers support services to DU students with LD and/or ADHD, which provides academic counseling, tutoring and other specialist services (<http://www.du.edu/disability/lep>, 4th floor of Ruffatto Hall, 303.871.2372). The Writing Center supports and promotes effective student writing helping with all kinds of writing projects: class assignments, personal writing, professional writing, and multimedia projects. They serve any student affiliated with the University and invite students in all classes, at all levels of writing ability, and at any stage of the writing process to visit us. To Schedule an Appointment: <http://myweb.du.edu>, Student & Financial Aid tab, Writing Center, 303.871.7456. They are located in the AAC and offer evening and weekend hours. The Career Center partners with faculty, staff, senior administration and employers, to help students and alumni make informed decisions about work and life. They offer self assessment, career and educational options, self marketing strategies and real world experiences and can be contacted at <http://www.du.edu/studentlife/career>, 303.871.2150 and are located in the basement of the Driscoll Center. T

Religious Accommodations:

University policy grants students excused absences from class or other organized activities for observance of religious holy days, unless the accommodation would create an undue hardship. Faculty are asked to be responsive to requests when students contact them in advance to request such an excused absence. Students are responsible for completing assignments given during their absence, but should be given an opportunity to make up work missed because of religious observance.

Once a student has registered for a class, the student is expected to examine the course syllabus for potential conflicts with holy days and to notify the instructor by the end of the first week of classes of any conflicts that may require an absence (including any required additional preparation/travel time). The student is also expected to remind the faculty member in advance of the missed class, and to make arrangements in advance (with the faculty member) to make up any missed work or in-class material within a reasonable amount of time.