



**BIOCHEMISTRY AND
MOLECULAR BIOLOGY**
COLORADO STATE UNIVERSITY

**BC465/466 Molecular Regulation of
Cellular Function**
Spring 2022 Syllabus

Lecture: Monday & Wednesday 3:00-4:15, CLARK A204

Instructors: Dr. Jennifer DeLuca, MRB 237, jdeluca@colostate.edu
Dr. Chaoping Chen, MRB 233, Chaoping.Chen@colostate.edu

Instructor Office hours: Email instructors above to arrange appointments

Class TA: Miriam Mioro; Miriam.Mioro@colostate.edu

Q&A time: Miriam will be available from 3:30-4:30 pm on Tuesdays for office hours in MRB 250. If you have a time conflict or would like additional discussion time, please set up an appointment with Miriam via email.

Suggested Textbook: **Molecular Biology of the Cell**, 6th edition; Bruce Alberts et al, 2015 print (not required)

Additional References: **Cell Biology**, 2nd Edition, Thomas Pollard et al, 2008 print
Molecular Cell Biology, 6th Edition, Harvery Lodish et al, 2008 print
Molecular Biology of the Cell, 5th Edition, Bruce Alberts et al, 2008 print

Lecture Slides: Lecture slides will be posted to Canvas prior to each class

Grading:

There are four exams (each worth 100 points) throughout the semester making up 80% of the final grade (400 points). In-class activities and take-home assignments/quizzes will each be worth 10% of your final grade. Total possible points = 500. The grading scale posted to the right will be followed.

Individual exams are not curved, but the final grades may be curved depending on the average and distribution of grades.

In class group activities: There will be a total of 14 in-class activities, and these activities will be worth a total of 52 points toward your final grade (activities will be worth 3-4 points each, as indicated on the activity). Points will be assigned based on participation, level of engagement, and quality of work.

Take-home assignments/quizzes: One take-home assignment/quiz will be assigned each week. There are a total of 12 assignments, each is worth 4 points, totaling 48 points for your final grade.

A (or A+)	100 %	to 93.33%
A-	< 93.33 %	to 90.0%
B+	< 90.0 %	to 86.67%
B	< 86.67 %	to 83.33%
B-	< 83.33 %	to 80.0%
C+	< 80.0 %	to 76.67%
C	< 76.67 %	to 70.0%
D	< 70.0 %	to 60.0%
F	< 60.0 %	to 0.0%

Make-up Exams: No written make-up exam is offered. An unexcused absence from an exam is graded zero. An excused absence from one mid-term exam will result in your grade being set on a percentage basis for the missing exam. An excused absence from the final exam or more than one mid-term exam will result in an "I" (incomplete) grade. An "I" grade can be removed by re-taking the course next year or, if permitted by the instructor, by taking an oral exam covering the material on the missed exams.

Re-grading: Please submit your exam sheet along with a written explanation of why the student feels the original answer was correct or was deserving of more points. This must be done within one week from the date when the exams are returned to the class. Exam answers will be posted to Canvas approximately 1 week after the exam is returned.

BC466: Students enrolled in BC466 will complete a project on a topic decided on after discussion with the instructors. Please see Dr. DeLuca within 2 weeks of the start of the semester to decide on the project.

Incomplete Grade Policy:

At the discretion of the instructor, a temporary grade of "I" may be given to a student who demonstrates that he/she could not complete the requirements of a course due to circumstances beyond the student's control and not reasonably foreseeable. The request for an "I" grade must be made before the last day of the class, *i.e.*, prior to the final exam. A student must be passing a course at the time that an incomplete is requested unless the instructor determines that there are extenuating circumstances to assign an incomplete to a student who is not passing the course. When an instructor assigns an "I", he/she shall specify in writing the requirements the student shall fulfill to complete the course as well as the reasons for granting an "I" when the student is not passing the course. The instructor shall retain a copy of this statement in his/her grade records and provide copies to the student and the department. If a student must re-take the course to complete the Incomplete, they should NOT register for the course a second time. After successful completion of the makeup requirements, the "I" grade will be changed by the instructor. After one year of the assigned "I" grade, or at the end of the semester in which the student graduates (whichever comes first), any incompletes remaining on a students' record will be automatically changed to a grade of "F".

Academic Integrity (modified from an example provided by the Institute for Learning and Teaching at CSU)

We take academic integrity seriously. At minimum, academic integrity means that no one will use another's work as their own. The CSU writing center defines plagiarism this way:

Plagiarism is the unauthorized or unacknowledged use of another person's academic or scholarly work. Done on purpose, it is cheating. Done accidentally, it is no less serious. Regardless of how it occurs, plagiarism is a theft of intellectual property and a violation of an ironclad rule demanding "credit be given where credit is due."

If you plagiarize in your work you could lose credit for the plagiarized work, fail the assignment, or fail the course. Plagiarism could result in expulsion from the university. Each instance of plagiarism, classroom cheating, and other types of academic dishonesty will be addressed according to the principles published in the CSU General Catalog:

<http://www.catalog.colostate.edu/FrontPDF/1.6POLICIES1112f.pdf>

Of course, academic integrity means more than just avoiding plagiarism. It also involves doing your own reading and studying. It includes regular class attendance, careful consideration of all class materials, and engagement with the class and your fellow students. Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. By taking this class, you agree that ***you will not give, receive, or use any unauthorized assistance.***

Course Schedule:

Date	Lect #	HW	Topic	Reading (MBoC)	HW due date
17-Jan	none		University holiday: No class		
19-Jan	cancelled		Class cancelled due to snow & ice		
24-Jan	1	JD	Cell biology intro / Actin structure, dynamics	1-41; 529-564; 889-903	
26-Jan	2	JD	Actin regulation / Actin motors: Myosins	904-925	28-Jan
31-Jan	3	JD	In-class Activity / Microtubule function and structure	925-936	
2-Feb	4	JD	Microtubule regulation and kinesin motors	929-944	4-Feb
7-Feb	5	JD	In-class Activity / Dynein motors	937-939	
9-Feb	6	JD	Intermediate Filaments / In-class Activity	644-950	11-Feb
14-Feb		JD	Exam #1		
16-Feb	7	JD	Intro to cell cycle	963-974	18-Feb
21-Feb	8	JD	Intro to cell cycle (cont) / In-class activity	963-974	
23-Feb	9	JD	G1 and S phase	1010-1018; 974-979; 261-262	25-Feb
28-Feb	10	JD	In-class Activity / G2 and M entry	980-996	
2-Mar	11	JD	Mitosis	980-996	4-Mar
7-Mar	12	JD	Mitotic Exit and Cytokinesis / In-class Activity	996-1002	
9-Mar	Exam #2	JD	Exam #2		
14-Mar	SP BREAK		Spring Break		
16-Mar	SP BREAK		Spring Break		
21-Mar	14	CC	Membrane Introduction	565-596	
23-Mar	15	CC	Membrane dynamics/ In-class Activity	655-6	25-Mar
28-Mar	16	CC	Cell signaling: Overview and plasma membrane receptors	813-31 / 850-4 / 863-6	
30-Mar	17	CC	In-class Activity /Cell signaling: Protein hardware for signaling	832 / 854-7	1-Apr
4-Apr	18	CC	Cell signaling: Second messengers/ In-class Activity	834-48	
6-Apr	19	CC	Cell signaling: Integration of signals I	843-6	8-Apr
11-Apr	20	CC	Cell signaling: Integration of signals II/ In-class Activity	860-6	
13-Apr	Exam #3	CC	Exam #3		
18-Apr	21	CC	Protein Synthesis Overview	353-9	
20-Apr	22	CC	Gated nuclear transport/ In-class Activity	649-54	22-Apr
25-Apr	23	CC	Transmembrane trafficking	669-701	
27-Apr	24	CC	In-class Activity /Intracellular vesicular traffic and the Golgi Apparatus	701-722	29-Apr
2-May	25	CC	Exocytosis	722-41	
4-May	26	CC	In-class Activity /Endocytosis	741-50	6-May
12-May	Exam #4	CC	Exam #4 / Final Exam: Thursday May 12th 11:50-1:50		

Important information for students:

Masks are required inside university buildings. You must also meet university vaccine or exemption requirements.

All students are expected and required to report to the COVID Reporter (<https://covid.colostate.edu/reporter/>) when:

- You suspect you have symptoms of COVID, regardless of whether or not you are vaccinated and even if your symptoms are mild
- You have tested positive for COVID through a non-CSU testing site, such as home test or test at a pharmacy
- You believe you may have been exposed to COVID go to the COVID Reporter and follow the guidance under “I believe I have been in close contact with someone who has COVID-19.” This guidance will depend upon your individual circumstances

You will not be penalized in any way for reporting symptoms or concerns.

Do not ask me as your instructor to report for you. It is your responsibility to report through the COVID Reporter promptly.

As your instructor I may not ask you about vaccination status or if you have COVID but you may freely volunteer to send me information from a public health official - if you have been asked to isolate or quarantine.

When you complete the COVID Reporter, the CSU Public Health office is notified. Once notified, that office will contact you and, depending upon each situation, will conduct contact tracing, initiate any necessary public health requirements and notify you if you need to take any steps.

If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600.

For the latest information about the University's COVID resources and information, including FAQs about the spring semester, please visit the **CSU COVID-19 site** <https://covid.colostate.edu/>.