

## BC465/466 Molecular Regulation of Cellular Function, Spring 2020: Syllabus

- Lecture: Pre-recorded lectures posted every Monday & Wednesday @3pm
- Instructors: Dr. Jennifer DeLuca, MRB 237, 491-6718, [jdeluca@colostate.edu](mailto:jdeluca@colostate.edu)  
Dr. Chaoping Chen, MRB 233, 491-0726, [Chaoping.Chen@colostate.edu](mailto:Chaoping.Chen@colostate.edu)
- Instructor Office hours: Email instructors to arrange appointments
- Class TA: Amanda Broad, MRB 263; 491-5149; [ajbroad@rams.colostate.edu](mailto:ajbroad@rams.colostate.edu)
- Q&A time and format: TBD or email Amanda
- 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 has 100 points) throughout the semester making up 80% of the final grade (400 points). In-class activities and homework assignments will each be worth 10% (50 points each) of the final grade. The total possible points are 500. Students achieving the following totals will be assured of the minimum letter grade shown here:

451-500 (>90%)	A
401-450 (80-90%)	B
351-400 (70-80%)	C
301-350 (60-70%)	D
<350 (<60%)	F

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 50 points for these activities. Points will be assigned based on participation, level of engagement, and quality of work. Starting Mar 25, 2020, these activities are substituted with after-class quizzes available in Canvas. Note that points for the in-class assignments will be reduced by ½ as they were mistakenly doubled. The total points for in-class assignments and after-class quizzes combined will be 50 points.

**Take-home exercises:** Take home assignments will be assigned each week except for exam weeks. There are a total of 12 assignments making up to a maximum of 50 points (10 assignments will be worth 4 points and 2 will be worth 5 points).

**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#		Topic	Reading (MBoC)
20-Jan	M			<b>University holiday: No class</b>	
22-Jan	W	1	JD	Course Intro / Cell biology overview	1-41; 529-564
27-Jan	M	2	JD	Intro to cytoskeleton / Actin structure, function and regulation	889-925
29-Jan	W	3	JD	Actin motors / Microtubule structure and function	925-932
3-Feb	M	4	JD	Microtubule regulation, associated proteins	932-941
5-Feb	W	5	JD	Microtubule motors	936-941
10-Feb	M	6	JD	Intermediate Filaments	944-949
12-Feb	W	7	JD	Cell Motility / Intracellular Motility / Cilia and Flagella	951-960 / 938-944
17-Feb	M		JD	<b>EXAM #1 (Lectures 1-7)</b>	
19-Feb	W	8	JD	Introduction to the cell cycle	963-974
24-Feb	M	9	JD	G1 and the regulation of cell proliferation	1010-1018
26-Feb	W	10	JD	S phase and G2 phase	974-985 / 261-262
2-Mar	M	11	JD	Mitosis	980-996
4-Mar	W	12	JD	Mitotic Checkpoint / Cytokinesis	996-1002
9-Mar	M	13	JD	Apoptosis / Senescence / Cell cycle and cancer	262-265 / 1016-1034
11-Mar	W		JD	<b>EXAM #2 (Lectures 8-13)</b>	
16-Mar	M			<i>SPRING RECESS</i>	
18-Mar	W			<i>SPRING RECESS</i>	
23-Mar	M			<i>SPRING RECESS</i>	
25-Mar	W	14	CC	Membrane: compositions and characteristics	565-596
30-Mar	M	15	CC	Membrane: dynamics	565-596
1-Apr	W	16	CC	Cell signaling: Overview and plasma membrane receptors	813-31 / 850-4 / 863-6
6-Apr	M	17	CC	Cell signaling: Protein hardware for signaling	832 / 854-7
8-Apr	W	18	CC	Cell signaling: Second messengers	834-48
13-Apr	M	19	CC	Cell signaling: Integration of signals I	843-6
15-Apr	W		CC	<b>EXAM #3 (Lectures 14-20)</b>	
20-Apr	M	20	CC	Cell signaling: Integration of signals II	860-6
22-Apr	W	21	CC	Protein traffic: Protein translation, folding, modification, targeting	353-9 / 649-54
27-Apr	M	22	CC	Membrane trafficking: The ER and intracellular vesicular traffic	669-701
29-Apr	W	23	CC	Membrane trafficking: Intracellular vesicular traffic and the Golgi Apparatus	701-722
4-May	M	24	CC	Membrane trafficking: Lysosomes and endocytosis	722-41
6-May	W	25	CC	Membrane trafficking: Exocytosis	741-50
<b>11-May</b>	<b>Monday</b>			<b>FINAL EXAM 7:30 am - 9:30 am</b>	