

## Syllabus BICD 110 Cell Biology Winter 2022

---

- Time:** Tuesday & Thursday, 3:30 – 4:50 PM
- Place:** Sequoyah Hall 148
- Instructor:** Dr. Andreas Ernst  
Cell & Developmental Biology  
4218 Bonner Hall  
Phone: (858) 246-4768  
Email: [aernst@ucsd.edu](mailto:aernst@ucsd.edu)
- Office Hours:** Bonner Hall 4146, Wed 2-3 PM & Fr 12-1 PM
- Instructional Assistant:** Austin Wang, email: [auwang@ucsd.edu](mailto:auwang@ucsd.edu)  
Sesha Khandavilli, email: [sakhanda@ucsd.edu](mailto:sakhanda@ucsd.edu)
- Class Web Site:** The class website is on Canvas (<http://canvas.ucsd.edu>). All class notices, the syllabus, lecture slides, and problem sets will be posted here. Please check the web site regularly for updates.
- Lecture Book:** Molecular Cell Biology (9<sup>th</sup> Edition, Lodish et al), optional
- Prerequisites:** BIBC 100 or BIBC 102
- Exams and Grading:** Midterm 1 (Jan 27, *in class*, lectures 1-7)  
Midterm 2 (Feb 22, *in class*, lectures 8-13)  
Final (Mar 15, location TBA, lectures 1-17)

*The grading and point structure of this course is designed to accommodate as many students (and their respective personal circumstances) as possible during the ongoing SARS-CoV-2 pandemic. It also considers the recent transition from remote to in-person instruction.*

- *Lectures will be podcasted* (<https://podcast.ucsd.edu>); in-person attendance is highly encouraged but *not* mandatory
- *Problem sets* (discussed during section, and available on the course website) will not be graded and resemble exam questions closely.
- Participation during class/section and extra credit options are highly encouraged, but are *not* a prerequisite to perform well in this course (i.e. an A(-) can be achieved by only taking the exams).

### Grading Scheme 1 (90 pts max)

- Midterm 1                      **25 pts** max.
- Midterm 2                      **25 pts** max.
- Final                              **40 pts** max.

- If beneficial for the student, 1 of the midterms can be dropped (to grading scheme 2). Prerequisite for dropping a midterm is taking both midterms. Failure to take both midterms without a valid excuse (e.g. doctor's note) will result in the use of grading scheme 1.

### Grading Scheme 2 (90 pts max)

- Midterm 1 or 2                **40 pts** max.
- Final                              **50 pts** max.

- Midterm and Final exams will contain extra credit questions (midterms: + 5 pts; final: + 10 pts). These questions are intended to facilitate the transition from open to closed book exams by serving as a buffer (i.e. maximal exam points can still be achieved even if core exams questions are answered incorrectly). Exam extra credit does *not* carry over to total course points (e.g., if 25 pts + 5 EC pts are achieved in a midterm, the total pts are still 25 for this exam).

### Participation Credit (**10 pts** max, by any combination of the following)

- *Active and constructive participation during lectures or sections:*      0.5 pts/event.
- *Research paper presentation/report:*    5 or 7 pts

Three very recent publications/preprints will be posted on the class website. Choosing one of these publications, a video recording of a ppt presentation (>15 min, e.g. recorded using Zoom) or a written report (>3 pages (excluding figures), font size 12, single spacing) must be submitted by March 10. The presentation/report should cover: 1) the motivation for the study, 2) the techniques used to address the problem, 3) description of their findings, and 4) discussion of why these findings are relevant/novel. 5 pts will be awarded if the format and points 1-4 are addressed properly, 7 pts if expectations are exceeded.

- *Foldscope image/video submission*    1 pts or 3 pts

A 'foldscope' is a preassembled paper microscope with a plastic objective that allows for 140X magnification, and that can be attached to a cell phone. Groups of two students will receive 1 unit during

section and are encouraged to submit a micrograph/video of any interesting cell/tissue/microscopic organism they can find to be awarded 1 pt. Foldsopes must be returned at the last day of section, and we will together vote for the best picture/video on Mar 10. The winning team will be awarded 3 pts each.

- **CAPES** 2 pts

2 pts will be awarded to the entire class if 90% of the class fill out their CAPES.

- The final grade will consist of exam (90 pts max) and participation credit (10 pts max) points as listed below. No 'curving' will be applied, and scores in between two grades will be rounded up (e.g. 95.5 to 96).

100 – 96	pts	=	A +	95 – 92	pts	=	A
91 – 87	pts	=	A –	86 – 83	pts	=	B +
82 – 79	pts	=	B	78 – 75	pts	=	B –
74 – 70	pts	=	C +	69 – 66	pts	=	C
65 – 62	pts	=	C –	61 – 51	pts	=	D
50 – 0	pts	=	F				

### **Makeup Exams:**

There will be *no* makeup exams for midterms. As listed above, grading scheme 2 will apply if one midterm is missed and a valid excuse (e.g. doctor's note) is presented. In the event of a medical emergency that prevents the student from taking the final (doctor's note must be presented), an oral makeup final will be given.

### **Regrade Policy:**

Request for regrades must be submitted *within one week of the exam return date* during office hours or lectures and contain 1) a cover letter with description of the error, and 2) the original exam (please be advised that we will photocopy all exams before returning them).

### **Policy on Cheating:**

Do. Not. Cheat. This includes during exams, changing an answer for a re-grade, or submitting other student's work as original work. Students caught cheating will be reported to the Office of Academic Integrity (*no exceptions*).

**Letter Policy:** Letters of recommendation will be available upon request for students who achieved a total of 92 pts (A) or higher, and who have selected the participation credit option 'research paper presentation/report'.

**Course Description:** BICD 110 is an upper division course on the structure and function of eukaryotic cells. Lectures will cover the structure and function of cellular organelles, biological membranes, the cytoskeleton, protein synthesis and sorting, methods of cell biology research, and cells in development and disease. The schedule below is *tentative* and might be adjusted to address student needs.

<u>Lecture</u>	<u>Date</u>	<u>Topic</u>
1	4-Jan	Introduction
2	6-Jan	Molecular Building Blocks
<i>problem set 1 (lectures 1 - 4)</i>		
3	11-Jan	Membrane-Enclosed Compartments
4	13-Jan	Endoplasmic Reticulum (ER)
<i>problem set 2 (lectures 5 - 7)</i>		
5	18-Jan	ER-to-Golgi Transport
6	20-Jan	The Golgi
7	25-Jan	Trans-Golgi-Network (TGN) & Exocytosis
<b><u>27-Jan MIDTERM 1 (Lectures 1-7)</u></b>		
<i>problem set 3 (lectures 8 - 10)</i>		
8	1-Feb	Endocytosis
9	3-Feb	Channels and Transporters
10	8-Feb	Signal Transduction
<i>problem set 4 (lectures 11 - 13)</i>		
11	10-Feb	Membrane-Less Compartments

12	15-Feb	The Nucleus
13	17-Feb	Mitochondria, Lipid Droplets, Peroxisomes
<b><u>22-Feb MIDTERM 2 (Lectures 8-13)</u></b>		

*problem set 5 (lectures 14 - 15)*

14	24-Feb	The Cytoskeleton
15	1-Mar	Molecular Motors

*problem set 6 (lectures 16 - 17)*

16	3-Mar	Cell Cycle
17	8-Mar	Cancer
18	10-Mar	Review

**15-Mar FINAL (Lectures 1-17)**

### **Student Resources:**

#### Accessibility

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD, located in University Center 202 behind Center Hall). Students are required to present their AFA letters to Faculty and to the OSD Liaison in the department in advance so that accommodations may be arranged. Contact the OSD for further information: <https://disabilities.ucsd.edu/>.

#### Inclusion

I am committed to creating a learning environment that supports diversity of thought, perspective, experience, and identity. This is important, because key discoveries and significant progress in science requires addressing research questions from as many perspectives as possible. Please share your ideas on how to further promote inclusion with the

Office of Equity, Diversity, and Inclusion: [diversity@ucsd.edu](mailto:diversity@ucsd.edu);  
<https://diversity.ucsd.edu/>

*Basic Needs*

If food insecurities or a lack of a safe and stable place to live affect your learning, please contact:

[foodpantry@ucsd.edu](mailto:foodpantry@ucsd.edu) | [basicneeds@ucsd.edu](mailto:basicneeds@ucsd.edu)

*UC San Diego Academic policies*

Principles of Community:

<https://ucsd.edu/about/principles.html>

Student Conduct Code:

<https://students.ucsd.edu/files/student-conduct/ucsandiego-student-conduct-code-interim-revisions1-16-18.pdf>

Religious Accommodations:

<https://senate.ucsd.edu/operating-procedures/educational-policies/courses/epc-policies-on-courses/policy-exams-including-midterms-final-exams-and-religious-accommodations-for-exams/>

Community Centers:

<https://students.ucsd.edu/student-life/diversity/index.html>

Counseling and Psychological Services (CAPS):

<https://caps.ucsd.edu/>

Office for the Prevention of Harassment & Discrimination (OPHD):

<https://ophd.ucsd.edu/report-bias/index.html>

**Subject to  
Change Policy:**

The information provided in this course syllabus (with the exception of grading and absence policies) may be subject to change with reasonable advance notice, e.g. if required to meet student needs and/or to enhance student learning.