Syllabus BICD 110 Cell Biology Spring 2024

Time: Tuesday & Thursday, 9:30 – 10:50 AM

Place: York Hall 2722

Instructor:
Dr. Andreas Ernst
Cell & Developmental Biology
4218 Bonner Hall
Phone: (858) 246-4768
email: aernst@ucsd.edu

Office Hours: Zoom, Fr 1-3 PM (see Canvas for link)
Limited 1:1 Zoom meetings available upon request.

TAs and IAs:

Savannah Bogus	*email:* sabogus@ucsd.edu
Mackenzie Hughes	*email:* m4hughes@ucsd.edu
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Exams and Grading:

Midterm 1	(Apr 25, *in class*, lectures 1-7)
Midterm 2	(May 21, *in class*, lectures 8-13)
Final	(Jun 11, location TBA, lectures 1-17)

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 (9th Edition, Lodish *et al.*), *optional*

Prerequisites: BIBC 100 or BIBC 102

The grading and point structure of this course is designed to accommodate as many students (and their respective personal circumstances) as possible.

- *Lectures will be podcasted* (https://podcast.ucsd.edu); in-person attendance during lectures and sections 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 (listed below) is *highly encouraged*, but is 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 are closed book. They will however contain extra questions that serve as a buffer (midterms: + 5 pts; final: + 10 pts), meaning maximal exam points can still be achieved even if some exam questions are answered incorrectly. Extra points *do not* carry over to total course points (e.g., if 30 pts are achieved in a midterm, the total pts are still 25 pts max. for this exam).

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

- *Research paper presentation/report:* 5 pts

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) *must be submitted to your IA by June 06*. 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. Revisions might be necessary to obtain minimal points. More than one report can be submitted.

- *Active and constructive participation during lectures or sections:* 0.5 pts/event

Whether the 'event' will be awarded pts is at the discretion of the instructors.

The final grade will consist of exam points (90 pts max) **and participation credit** (10 pts max) **as listed below.** No 'curving' will be applied, and scores in between two grades will be rounded up (e.g. 91.5 to 92).

100	pts	=	A +	99 – 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).

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.

Lecture	Date	Topic
1	02-Apr	Introduction
2	04-Apr	Molecular Building Blocks
problem set 1 (lectures 1 - 4)		
3	09-Apr	Membrane-Enclosed Compartments
4	11-Apr	Endoplasmic Reticulum (ER)
problem set 2 (lectures 5 - 7)		
5	16-Apr	ER-to-Golgi Transport
6	18-Apr	The Golgi
7	23-Apr	Trans-Golgi-Network (TGN) & Exocytosis
	25-Apr	**MIDTERM 1 (Lectures 1-7)**
problem set 3 (lectures 8 - 10)		
8	30-Apr	Endocytosis
9	02-May	Channels and Transporters
10	07-May	Signal Transduction
problem set 4 (lectures 11 - 13)		
11	09-May	Membrane-Less Compartments
12	14-May	The Nucleus
13	16-May	Mitochondria, Lipid Droplets, Peroxisomes
	21-May	**MIDTERM 2 (Lectures 8-13)**
problem set 5 (lectures 14 - 15)		
14	23-May	The Cytoskeleton
15	28-May	Molecular Motors
problem set 6 (lectures 16 - 17)		
16	30-May	Cell Cycle
17	04-Jun	Cancer

18	06-Jun	Review
	11- Jun	**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; 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 | 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.