

Syllabus – Fall 2020

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: Cell Biology Honors

Credits: 3

Format: Online, Asynchronous via [HuskyCT](#)

Prerequisites: BIOL 1107. Not open to students who have passed MCB 2210. May not be taken out of sequence after passing MCB 3211, 3220, 3246, 3842W

Professor/Instructor/Facilitator: Dr. Adam Zweifach

Pronouns: he/him/his

Email: adam.zweifach@uconn.edu

Telephone: N/A

Other: (If applicable)

Office Hours/Availability: Online - By appointment

Professor/Instructor/Facilitator: Dr. Aoife Heaslip

Pronouns: she/her

Email: aoife.heaslip@uconn.edu

Telephone: N/A

Other: (If applicable)

Office Hours/Availability: Online - By appointment

Course Materials

Required course materials should be obtained before the first day of class.

Molecular Cell Biology – 8th Edition by Lodish et al. Please purchase or rent the eBook from the [MacMillian website](#).

Course Description

MCB2215 provides an overview of eukaryotic cell biology for Honors students. Emphasizes primary research literature and understanding concepts and pathways rather than memorizing detail.

Course Objectives

This course is divided into two sections.

Part 1: Zweifach

In this section of the course, we will use the interaction of coronaviruses with mammalian cells as a springboard for motivating our study of some of the core topics of cell biology.

Topics covered will include:

Introduction: How is this on-line largely asynchronous course going to work? What are coronaviruses, and why are they a reasonable choice to motivate you to learn the material in the first part of the course?

What are the core tools cell biologists use to study cell function?

Membranes and membrane proteins

Synthesis and trafficking of proteins to organelles, including:

The ER/Golgi/lysosomes and plasma membrane, nucleus, mitochondria, chloroplasts, and peroxisomes

Vesicle trafficking, endocytosis, exocytosis and phagocytosis

Membrane transport of small molecules

Signal Transduction- how does information get across membranes?

Part 2: Heaslip

In the second half of the course, we will examine the dynamic behaviors of proteins, organelles, and cells, and understanding how the eukaryotic cytoskeleton controls these vital cellular processes. We will discuss how these functions relate to human health and disease. Topics covered will include:

Structure and Function of Actin, Microtubules, and Intermediate Filaments

Molecular Motor Proteins and cytoskeletal organization

Cell connections, Cell movement, Cell specialization

Cell Growth, Cell Cycle, Cell Death

How to Succeed in this Course

To succeed in this course, you should expect to spend 8-9 hours/ week on the assigned activities. This course is entirely open-source. You will learn the core fact-base of the material by completing surveys that will require you to find the answers to questions we provide you. You will receive 25% of your final grade for completing these surveys, which will not be graded. You will also learn to read primary scientific papers. Questions you answer about papers will be used to assess your mastery of this skill, and will comprise an additional 25% of your final grade. Finally, "big quizzes" will be assigned weekly starting in week 3 of the course. These will test your ability to apply the facts, concepts and skills you are acquiring, and will serve as both formative and summative assessments of your progress. Your graded answers to the questions on these quizzes will comprise the remaining 50% of your final grade.

To do well, put in the time. Complete all the assigned activities. Ask questions at the synchronous discussions, via email, or in individual video-chats. Think.

Synchronous discussion sessions

Synchronous sessions will be on Tuesday and Thursday afternoons using Blackboard collaborate. Depending upon class size and instructor, students will be broken into either 2 or 4 groups. If there are two groups, the meetings will be as follows:

Group 1: Tues/Thurs 2-2:35 & Group 2: Tues/Thurs 2:40-3:15

If there are 4 groups, meetings will be as follows:

Group 1: Tues 2-2:35; Group 2: Tues 2:40- 3:15; Group 3: Thurs 2-2:35; Group 4: Thurs 2:40- 3:15.

The group to which you are assigned will be communicated to you clearly in advance. Students are NOT required to participate in group discussions. Students are welcome to listen in on other group discussions, but are asked to limit participation so as to provide fair opportunities for other students. Sessions will be recorded and will be posted on line within 12 hours of completion.

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
Survey questions	25%
Primary literature quizzes	25%
Weekly quizzes	50%

Grading Scale: We plan to apply the following scale to assign letter grades. An upwards curve may be applied, and scores will be rounded up.

Grade	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
<60	F

Due Dates and Late Policy

All quiz and survey due dates are identified in the course outline above and on the “due dates” chart posted on HuskyCT. Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submittal times accordingly. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

Late submissions will be considered only in cases of emergency. Documentation of the emergency may be required. If possible, we ask that communication about late submissions should happen prior to the deadline.

Feedback and Grades

We will make every effort to provide feedback and grades within one week. To keep track of your performance in the course, refer to My Grades in HuskyCT.

All exams and survey questions are open book, open note, open internet. However, you must complete these assignments on your own. All assignments will be monitored through safeassign in HuskyCT. For short or long answer questions, you may use any resources listed above but you must answer the questions in your own words.

Weekly Time Commitment

You should expect to dedicate 8-9 hours a week to this course. This expectation is based on the various course activities, assignments, and assessments and the University of Connecticut's policy regarding credit hours. More information related to hours per week per credit can be accessed at the [Online Student website](#).

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in online courses and to establish that students who register in an online course are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include secure access to the learning management system using your unique UConn NetID and password.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important [standards, policies and resources](#), which include:

- The Student Code
 - Academic Integrity
 - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or <http://csd.uconn.edu/>.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from [Blackboard's website](#))

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- HuskyCT/Blackboard ([HuskyCT/ Blackboard Accessibility Statement](#), [HuskyCT/ Blackboard Privacy Policy](#))
- [Adobe Acrobat Reader](#) ([Adobe Reader Accessibility Statement](#), [Adobe Reader Privacy Policy](#))
- Google Apps ([Google Apps Accessibility](#), [Google for Education Privacy Policy](#))
- Microsoft Office (free to UConn students through uconn.onthehub.com) ([Microsoft Accessibility Statement](#), [Microsoft Privacy Statement](#))
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).
- WebCam

For information on managing your privacy at the University of Connecticut, visit the [University's Privacy](#)

page.

NOTE: This course has NOT been designed for use with mobile devices.

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information..

Evaluation of Course Experience

Students will be given an opportunity to provide feedback on their course experience and instruction using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

The University of Connecticut is dedicated to supporting and enhancing teaching effectiveness and student learning using a variety of methods. The Student Evaluation of Teaching (SET) is just one tool used to help faculty enhance their teaching. The SET is used for both formative (self-improvement) and summative (evaluation) purposes.

Additional informal formative surveys and other feedback instruments may be administered within the course.