

PCB 3023 - Molecular Cell Biology - Summer 2020

Remote Instruction via **Zoom**- Section B001 MTWR 10:00-11:50 am

3 credit hours

In Summer B, Molecular Cell Biology will be taught as synchronous lectures that require participation in iClicker Reef polling and group work daily for points contributing to the course grade. Lectures and Exams will be held during the scheduled class time MTWR 10:00-11:50 am.

Instructor: Dr. Cynthia Bayer

Email: Webcourses *Inbox*

Chat Office Hour: Tues 3:00 pm

Zoom Office Hour: Thurs 3:00 pm

Undergraduate Teaching Assistant: Rena

Zoom Hour: Mon 1:00 pm

Chat Hour: Wed 1:00pm

Course Description: To examine all aspects of the biology of the cell. We will study the structure and function of eukaryotic cells from the level of molecules to sub-cellular components, as well as the regulation of biological processes. Topics will emphasize integrating the physiologic, biochemical and genetic components of the cell and multicellular organisms.

Course Prerequisites: General Genetics (PCB 3063) and Organic Chemistry I (CHM 2210)

Student Learning Outcomes: Successful students will demonstrate a broad understanding of the basic principles of molecular and cell biology, demonstrate an ability to apply information to new scenarios, and be able to draw connections between concepts. Students will be expected to demonstrate understanding of:

- How molecular and cellular structure dictates cellular function
- How genes and genomes are organized and the mechanisms by which they evolve
- How cells acquire and generate energy to drive metabolic processes
- Cytoskeletal and membrane structure and roles in movement, support and transport
- Cell communication with and response to its environment via signal transduction pathways.
- The processes regulating the cell cycle, cell renewal, and cell death
- How defects in cell cycle control lead to cell over-proliferation and cancer

Students will be evaluated on meeting these objectives via participation in iClicker sessions during Zoom lectures and on-line exams.

Academic Activity - Course Expectations:

- To meet the registrar's requirement for documentation of your participation in this course, please complete the **Course Expectations/Syllabus Quiz**, found in our Webcourse Quiz section, by **5:00 pm Friday, June 26**. Failure to do so will result in a delay in the disbursement of your financial aid.
- All students will receive credit for completion of the Course Expectations/Syllabus Quiz.

Course website: Access our course website at Webcourses@UCF via the myUCF portal using your NID and password. You will find links to the **Syllabus, Lecture PowerPoints, Grades, Web Resources, Zoom** and **Chat** tools.

Communication via *Inbox*:

- Please contact me via Webcourses *Inbox*. Emails sent to my UCF address will not be answered.
- Compose a clear and succinct email message, including your name and course.
- I will refer your question to the Syllabus or Announcement if it is already answered there.
- Because I have >300 students in two courses this session, I will carve out time once per weekday to answer emails and attempt to answer your message within 24 hours.

REQUIRED Textbook: Essential Cell Biology, 5th edition by Alberts *et al.*, 2019. W.W. Norton, Inc.

- The 5th edition comes with access to the eBook and the digital resource *Smartwork5*, which contains animations, videos, and online assignments. I have chosen a subset of these assignments as recommended homework for students to preview, review and test their understanding. See the link on our Webcourses homepage for purchasing options.
- Although I strongly encourage students to use these digital *Smartwork5* resources (along with solutions) associated with the 5th edition, homework will not be submitted or graded, so you may choose to use an earlier 3rd or 4th ed of Essential Cell Biology as a resource instead.

REQUIRED iClicker Reef: I will use iClicker polling daily in Zoom for course points. You are required to participate with the **iClicker Reef** app on a smartphone, tablet, or laptop. See the link on our Webcourses homepage to create an iClicker Reef account by **Fri, June 26 at 11:59 pm**.

Grading:

90% = Best 3 out of 4 exams (100 points/exam)

10% = iClicker points (participation = 3 pts. & graded; correct = 1 pt., incorrect = 0.25 pt.)

- Students are responsible for keeping track of their grades and identifying issues within 2 days of any grade posting in Webcourses.
- Letter grades for the semester will be awarded according to the scale below. Letter grades will adhere to this percentage range with no exceptions. There will be **no curving** of final grades.

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = 59% and below

Online Exams: There will be 4 exams, each worth 100 points. There is no comprehensive final exam. Exams will be based on material covered in lecture, which includes some topics not covered in the textbook. ***Exams will be held during scheduled class time, beginning at 10:00 am.*** The lowest score of all exams will be dropped automatically.

iClicker points are earned from Zoom class participation and graded questions. For each Zoom lecture, 3 points are earned for participation (= answering at least 75% of the questions) plus

additional points for graded questions (1 point for each correct answer and 0.25 point for each incorrect answer). Only a subset of questions will be graded each day. The lowest iClicker day score will be dropped automatically.

Extra Credit: Each class meeting you will have the opportunity to earn extra credit points by working as a group of 5 students in a Zoom breakout room to compose an iClicker-type **Group Review Question**. Each member of a group will earn 0.5 pt. when a Review Question form is submitted as a Webcourses Assignments as a “Daily Review Question” by the end of the class, 12:00 noon. The completed form must include a properly formed question, appropriate answer choices (with the correct answer indicated), and the name of each participating group member. I will choose several of the best questions to use for review in the class prior to each exam day. Each student in each group that submits a question chosen for the review will earn an additional 1 pt. (*i.e.*, each student can earn a maximum of 2.5 to 3 extra credit points per exam.)

Zoom Lectures and Office Hours: Because of the challenges inherent with a large Zoom meeting, please be sure to follow the *Zoom Best Practices* link on Webcourses. Zoom meetings will be recorded and posted in Webcourses.

- Find the scheduled meeting invitation at the Zoom tab in our Webcourse.
- Join the meeting on time. Participants will be placed in a waiting room and permitted entry only during the first few minutes of the meeting to prevent unauthorized participants from joining.
- Keep your microphone muted unless asking or responding to a question.
- By joining a Zoom meeting you agree to be audio- and video-recorded.
- Practice patience.

- Anyone who violates UCF rules of conduct or fails to follow basic rules of courtesy will be removed from the meeting.

Taking Online Exams:

- All exams will held during the scheduled class time, beginning at 10:00 am.
 - Exam questions will be multiple choice.
 - Each exam is timed.
 - You are allowed 1 attempt to complete the exam.
 - You will see 1 question at a time and will not be able to change your answer once you move to the next question. You will not be permitted to view the previous question.
 - Each exam is available **ONLY** at the scheduled time.

Excused Missed Exams:

- If an exam is missed due to an official, documented, University-accepted absence, a makeup exam will be permitted. Excused absences include official UCF business at which your presence is required, U.S. Military-related business (e.g. Reserve Duty), legal obligation (e.g. jury duty).
 - You must provide to me documentation with your name and the date affected **1 week prior** to the scheduled exam date.
 - Because all testing is online and the summer session is only 6 weeks, any make-up exam will be given on the last day of class, **Thurs, July 30**, time TBD.
 - A make-up exam will include short answer questions in addition to multiple choice.

- A makeup exam **may** be permitted if any other legitimate* documented reason that circumstances beyond your control prevented you from taking the scheduled exam (including, but not limited to, major illness, death in the immediate family)
 - *Official documentation from an appropriate authority (doctor, police, judge, etc.) must be **provided within 24 hours of the missed exam**, *A doctor's note must be written on letterhead paper with a contact phone number and must indicate that a medical condition was treated.*
 - *If I approve your excuse, a make-up exam will be given on the last day of class, **Thurs, July 30**, time TBD.*

Unexcused Missed Exams: If a student misses an exam for an unexcused event (e.g. forgetting there was an exam, vacations, family gatherings) or *cannot provide acceptable documentation*, then they will receive a score of zero for that exam. The first zero score will be dropped as the lowest scoring exam. Any additional zero exam scores due to unexcused absences will count towards the final course grade.

Reviewing Exams: Your responses and correct answers will be available for viewing after all students, including students with SAS time extension accommodations, have completed their exams and the grades are posted.

Excused iClicker points: In order for any absence from class that results in missed iClicker points to be excused, documentation must be provided according to the same policy described above for missed exams.

Academic Integrity: As reflected in the UCF creed, integrity and scholarship are core values that should guide our conduct and decisions as members of the UCF community. Students enrolled at UCF are expected to familiarize themselves and uphold the standards of academic behavior defined in the University's *Rules of Conduct* in the Golden Rule handbook <http://goldenrule.sdes.ucf.edu>.

"Academic misconduct includes but is not limited to cheating, plagiarism assisting another in cheating or plagiarism, and commercial use of academic materials." (Section UCF-5.015 The Golden Rule handbook) This includes using unauthorized materials during an online exam, signing another student's name on an assignment, using another student's iClicker Reef app for them in their absence, or in any way falsifying or misrepresenting your academic work. Violations of the UCF *Rules of Conduct* may result in a 0 on an assignment, an F in the course, or formal documentation through an Academic Misconduct Report submitted to the Office of Student Conduct <http://osc.sdes.ucf.edu> for disciplinary action. Possible sanctions include Disciplinary Suspension, a "Z Designation" placed on the student's official transcript indicating academic dishonesty, <http://goldenrule.sdes.ucf.edu/zgrade>, or Disciplinary Expulsion from UCF.

Course Accessibility: It is my goal that this class be an accessible and welcoming experience for all students, including those with disabilities that may impact learning in this class. If anyone believes the design of this course poses barriers to effectively participating and/or demonstrating learning in this course, please meet with me (with or without a Student Accessibility Services (SAS) accommodation letter) to discuss reasonable options or adjustments. You may also want to

contact SAS <http://sas.sdes.ucf.edu> (Ferrell Commons 185; 407-823-2371) to talk about academic accommodations.

Help & SARC: Please ask for help if you need it! I am here to answer your questions. Additionally, help is available through SARC (Student Academic Resource Center, Howard Phillips Hall, Room 113; 407-823-5130; <http://www.sarc.sdes.ucf.edu>). Students can request a Learning Consultation with a Learning Skills Specialist or attend Academic Success Workshops to improve study skills & strategies.

UCF Cares: UCF and I care not only about your academic success, but also your overall well-being. Please visit UCFcares.com <http://cares.sdes.ucf.edu/> if you are seeking resources or support, or if you are worried about a friend or classmate. Free services and information are included for a variety of student concerns, including but not limited to alcohol use, bias incidents, mental health concerns, sexual harassment or assault, and financial challenges. You can also e-mail ucfcares@ucf.edu with questions or for additional assistance. You can reach a UCF Cares staff member Student Care Services, <http://scs.sdes.ucf.edu>, Ferrell Commons 142, between 8 a.m. and 5 p.m. by calling 407-823-5607.

If you are in immediate distress, please call Counseling and Psychological Services (CAPS), Counseling Center 101 <http://caps.sdes.ucf.edu> to speak directly with a counselor 24/7 at 407-823-2811, or call 911.

Academic Services and Resources: A list of available academic support and learning services is available at [UCF Student Services](#). Click on "Academic Support and Learning Services" on right-hand side to filter.

Non-Academic Services and Resources: A list of non-academic support and services is also available at [UCF Student Services](#). Click on "Support" on the right-hand side to filter.

Molecular Cell Biology – Summer 2020 Lecture Schedule MTWR 10:00 am

June 22: *Course introduction*

Chapter 1 - *Cells*

June 23: Chapter 2 - *Molecules*

Chapter 4 - *Proteins*

June 24: Chapter 4

Chapter 5 - *Genome Organization*

June 25: Chapter 5

Practice Exam

Thurs, June 25: DROP deadline 11:59 pm

Fri, June 26: ADD deadline 11:59 pm

June 29: Chapter 6 - *DNA Repair & Rearrangement*

Chapter 6

June 30: Catch-up & Review Qs

July 01: **Exam 1**

(Chapters 1, 2, 4, 5, 6)

July 02: Chapter 9 - *Evolution of Genes & Genomes*

Chapter 9

July 06: Chapter 11/12 - *The Cell Membrane*

Chapter 11/12 - *Membrane Transport*

July 07: Chapter 3 - *Energy*

Chapter 3

July 08: Chapter 13/14 - *Respiration*

Chapter 13/14

July 09: Chapter 13/14

Catch-up & Review Qs

July 13: **Exam 2**

(Chapters 9, 11, 12, 3, 13, 14)

July 14: Chapter 14 - *Biosynthesis*

Chapter 14

July 15: Chapter 15 - *Secretion*

Chapter 15/16 - *Cell Signaling*

July 16: Chapter 16

Chapter 16 - *Signal Transduction*

Thurs, July 16: Withdrawal deadline 11:59 pm

July 20: Chapter 16

Catch-up & Review Qs

July 21: **Exam 3**

(Chapters 14, 15, 16)

July 22: Chapter 17 - *Cytoskeleton*

Chapter 17

July 23: Chapter 18-20 - *Apoptosis/Cell Renewal*

Chapter 18-20

July 27: Chapter 18-20

Chapter 18 - *Cell Cycle*

July 28: Chapter 18

Chapter 20 - *Cancer*

July 29: Chapter 20

Catch-up & Review Qs

July 30: **Exam 4**

(Chapters 17, 18, 20)

Note that the instructor reserves the right to make changes to the syllabus or other aspects of the course at any time. These changes will be announced in Webcourses.