

# PCB 3023 - Molecular Cell Biology - Summer 2019

Section A001: MTWR 10:00–11:50 am Lecture (CB2-206)

**Instructor:** Dr. Cynthia Bayer

**Email:** Webcourses *Inbox*

**Undergraduate Assistant:** Ken

**Office (BIO 202D) Hours:** Mon & Wed 12:00-1:00 pm

**Biology Main Office:** 407-823-2141

**Office (BIO 201) Hours:** Tues & Thurs 2:00-3:30 pm

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**Course Description:** *Credit Hours: 3 (3,0)*

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

*Purpose of the Course:* 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 Objectives:** *To understand:*

- 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
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**Required Textbook:** Essential Cell Biology, 4<sup>th</sup> edition by Alberts *et al.*, 2014. W.W. Norton, Inc.

**Required iClicker:** We will be using the iClicker classroom response system on a regular basis for class points. You will need to purchase an **iClicker remote** and bring it with you to every class lecture. It would be wise to bring extra batteries. The purchase of a remote is NOT optional; it will be used as an integral part of this course. You must register for this course no later than **May 17**.

**Course Website:** Access our course at Webcourses@UCF via the myUCF portal using your NID and NID password. There you will find a page of **Lecture PowerPoints** for you to print and bring to lecture, the **Syllabus**, **Gradebook**, and **iClicker information**.

**Classroom Conduct:** Please use common courtesy in class by arriving and departing on time, refraining from talking during class, and silencing cell phones and other electronic devices.

**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 or electronic devices during an exam, copying from another student's exam, signing another student's name on an exam or other assignment, using another student's iClicker remote 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.

**Grading: 90% = Best 4 out of 5 exams (100 points/exam x 4)**

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

There will be 4 regular exams plus a comprehensive final exam, each worth 100 points. The exams will be based on material covered in lecture, which includes topics not covered in the textbook. Some notes and diagrams presented in lecture are not included in the PowerPoint slides available at the Webcourses website. Therefore, students who routinely skip lectures will be at a significant disadvantage.

Exam scores will be posted on the Grades page at the Webcourses site. **90%** of your course grade will be based on the **best 4 out of 5** exam scores. The score of the final exam will be dropped if it turns out to be the lowest of your scores, or you may choose not to take the final exam. The points earned from iClicker class participation and graded questions will comprise **10%** of your course grade. Flat letter grades will be awarded according to the scale below with no exceptions.

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

**Missed Exam Policy:** If you miss an exam for any reason, that exam will receive a score of 0 and will be the exam that is dropped from the final grade calculation. If you miss a second or subsequent exam, you must provide acceptable documented evidence from an appropriate authority (doctor, police, judge, etc.) that circumstances beyond your control prevented you from taking the exam, or that you were required to participate in official UCF business. A doctor's note must be on letterhead with a contact phone number, and must indicate that a medical condition was treated. Documented evidence must be presented to me within 24 hours of the start of the exam. **ONLY** under these circumstances, a make-up exam may be given following the final exam or at a mutually convenient time to be arranged. In the absence of acceptable documentation, a grade of 0 will be assigned for the second missed exam.

**Taking Exams:** I will provide scantrons for all exams. You will need to bring a #2 pencil and your valid UCF Student ID card. Your name and ID must be printed on the scantron and answer sheet and will be checked as you leave the exam. If you arrive within 30 minutes of the start an exam, you will be allowed to take the exam. However, you must turn in your exam at the regular scheduled end of the exam period. You will not be allowed extra time unless a documentable emergency has occurred (see above). All electronic devices must be inaccessible during exams. Turn baseball caps backward while taking exams. Go to the restroom before the exam.

**Extra Credit:** Each class period you will have the opportunity to earn extra credit points by working in a group of 3 to 4 students to write an iClicker-type multiple choice **Review Question**. Each member of a group will earn 0.5 pt. when a Review Question form (printed from our Webcourses site) is turned in to me at the end of the mid-lecture break. The completed form must include a properly formed question, appropriate answer choices (with the correct answer circled), and the printed name and signature of each participating group member. I will choose several of the best questions to use for the review session prior to each exam day. Each student in the group that wrote each question chosen o 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.)

**Reviewing Exams:** Scantrons will not be returned to students. Individual test report sheets with all correct and incorrect responses marked will, however, be available. Scores will be posted on the Grades page at the Webcourses site. Exam papers and scantrons can be reviewed in my office, during regularly scheduled office hours, for the period of time up until the next exam (e.g., exam 1 can be reviewed up until exam 2 is administered).

**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://UCFCARES.com) 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 e-mail [ucfcares@ucf.edu](mailto:ucfcares@ucf.edu) with questions or for additional assistance. You can reach a UCF CARES staff member between 8 a.m. and 5 p.m. by calling 407-823-5607 or visit 142 Ferrell Commons. If you are in immediate distress, please call Counseling and Psychological Services to speak directly with a counselor 24/7 at 407-823-2811, or please call 911.

**Campus Safety:** Emergencies on campus are rare, but if one should arise in our class, we will all need to work together. Everyone should be aware of the surroundings and familiar with some basic safety and security concepts. Please see the *Campus Safety Link* on our Webcourse for more information.

To stay informed about emergency situations, sign up to receive UCF text alerts by going to [my.ucf.edu](http://my.ucf.edu) and logging in. Click on “Student Self Service” located on the left side of the screen in the tool bar, scroll down to the blue “Personal Information” heading on your Student Center screen, click on “UCF Alert”, fill out the information, including your e-mail address, cell phone number, and cell phone provider, click “Apply” to save the changes, and then click “OK.”

**Important Academic Dates:**

May 13	Classes begin
May 16	Drop/Swap deadline
May 17	Add deadline
June 6	Withdrawal/Grade forgiveness deadline
June 20	PCB 3023 Comprehensive Final Exam
June 28	Grades Available on myUCF

**Holidays:**

May 27 Memorial Day

**Academic Activity:** In order to document that you have participated in this course, please complete the *Syllabus Quiz* on our Webcourses page by **May 17** or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

## Lecture Schedule

May 13: <i>Course introduction</i> Chapter 1 - <i>Cells</i>	
May 14: Chapter 2 - <i>Molecules</i> Chapter 4 - <i>Proteins</i>	
May 15: Chapter 4 Chapter 5 - <i>Genome Organization</i>	
May 16: Chapter 5 Chapter 6/9 - <i>DNA Repair &amp; Rearrangement</i>	Thurs, May 16: DROP deadline 11:59 pm Fri, May 17: ADD deadline 11:59 pm
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May 20: Chapter 6/9 Catch-up & Review	
May 21: <b>Exam 1</b> <b>(Chapters 1, 2, 4, 5, 6, 9)</b>	
May 22: Chapter 9 - <i>Evolution of Genes &amp; Genomes</i> Chapter 9	
May 23: Chapter 11/12 - <i>The Cell Membrane</i> Chapter 11/12 - <i>Membrane Transport</i>	
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May 27: <b>MEMORIAL DAY HOLIDAY</b> <b>(No class)</b>	
May 28: Chapter 3 - <i>Energy</i> Chapter 3	
May 29: Chapter 13/14 - <i>Respiration</i> Chapter 13/14	
May 30: Chapter 13/14 Catch-up & Review	
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June 03: <b>Exam 2</b> <b>(Chapters 9, 11, 12, 3, 13, 14)</b>	
June 04: Chapter 14 - <i>Biosynthesis</i> Chapter 14	
June 05: Chapter 15 - <i>Secretion</i> Chapter 15/16 - <i>Cell Signaling</i>	
June 06: Chapter 16 Chapter 16 - <i>Signal Transduction</i>	Thurs, Jun 6: Withdrawal/Grade forgiveness deadline 11:59 pm
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June 10: Chapter 16 Catch-up & Review	
June 11: <b>Exam 3</b> <b>(Chapters 14, 15, 16)</b>	
June 12: Chapter 17 - <i>Cytoskeleton</i> Chapter 17	
June 13: Chapter 18-20 - <i>Apoptosis/Cell Renewal</i> Chapter 18-20	
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June 17: Chapter 18-20 Chapter 18 - <i>Cell Cycle</i>	
June 18: Chapter 18 Catch-up & Review	
June 19: <b>Exam 4</b> <b>(Chapters 17, 18, 20)</b>	
June 20: <b>Final Exam</b> <b>Comprehensive</b>	
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*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 class.*