

# PCB 3023 - Molecular Cell Biology - Spring 2014

Section 0001: MWF 1:30–2:20 Lecture (BA1-119)

**Instructor:** Dr. Cynthia Bayer

**Email:** Webcourses@UCF

**Phone:** 407-823-1460

**Office (BIO 439) Hours:** Mon & Wed: 2:30-4:00 pm

Wed & Fri: 10:30-11:20 am

(or by appointment)

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**Course objectives:** To examine 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 include genome structure and dynamics, DNA repair and recombination, bioenergetics, metabolism, membrane structure and transport, intracellular vesicle trafficking, organization and function of the cytoskeleton and extracellular matrix, cell signaling, apoptosis and cell cycle control.

**Prerequisites:** Some topics covered in General Genetics (PCB 3063) and Organic Chemistry I (CHM 2210) may be reviewed briefly in this course, but not discussed in depth. These 2 courses are required as prerequisites in order to help you succeed in this course. If an error in Peoplesoft allowed you to register for this course without the proper prerequisites, I would strongly encourage you to re-consider the wisdom of remaining in this course.

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**Required Textbook:** Essential Cell Biology, 3rd edition by Alberts *et al.*, 2010. Garland Science.

**Required i>clicker:** We will be using the i>clicker classroom response system on a daily basis. You will need to purchase an i>clicker remote and bring it with you to every class lecture. It would be wise to bring extra batteries as well, as we will be using the remotes in activities that count for class points. The purchase of a remote is NOT optional; it will be used as an integral part of this course. *Note: Students need purchase only one remote because the same unit can be used in every course that uses the i>clicker system.* You must register your remote no later than **JANUARY 13, 2014**. **TO REGISTER:** Log into your **Webcourses** account. Choose our course and click on the i>clicker link. Follow the instructions to type in your clicker ID (which is directly under the barcode on the back of your remote). You may use either the original multiple choice-only **i>clicker**, **i>clicker+**, or the alphanumeric-capable **i>clicker2** remote, as I will only utilize multiple-choice responses to questions in this course.

Students may choose instead to use **i>clicker GO** on their WiFi-enabled mobile device.

**However, no one can guarantee me that the WiFi system in our classroom can handle a high volume of i>clicker GO traffic, so we will have to experiment to see if it will work for our class.** To access i>clicker GO, students must purchase a license at the i>clicker website. Students with iOS or Android devices can download an application from the App Store or Google Play to use with their activated account. Instructions for registering your i>clicker remote or i>clicker GO, as well as information about refunds, and related policies are posted at the end of this syllabus, as well as at our Webcourses website.

**Course Website & Communication:** Access our course website at Webcourses@UCF via the myUCF portal using your PID and PID password. There you will find a folder of **Lecture PowerPoints** for you to print and bring to lecture. I will use the **Inbox** link to the **Conversations** page at our Webcourses site for communication with students.

**Classroom Conduct:** By enrolling at UCF, all students have agreed to abide by the *Golden Rule*. Please become familiar with this document at: <http://www.goldenrule.sdes.ucf.edu/> It is assumed that all students will act in a mature manner in the classroom showing consideration for their peers and the instructor. Please also use common courtesy in class by arriving and departing on time, refraining from talking during class, and silencing cell phones and other electronic devices.

**Grading:**      **90%** = Best 4 out of 5 lecture exams (100 points/exam x 4)  
                  **10%** = i>clicker points (class participation and graded questions)

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 Webcourse 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 i>clicker class participation and graded questions will comprise **10%** of your course grade. Letter grades for the semester will be awarded according to the scale below. Letter grades will adhere to these grade ranges with no exceptions. **Note: This is a 3-credit course.**

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. Make-up exams will 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 or subsequent missed exam.

**Taking Exams:** All electronic devices must be inaccessible during exams. Use or display of any unauthorized electronic device will result in a zero for the exam, referral to the Office of Student Conduct, and a "Z Designation" on the student's official transcript (see below). All exams will use scantrons that will be provided to each student. It is your responsibility to bubble in the scantron answers completely and erase clearly. You will need to bring a #2 pencil and your valid UCF Student ID card. Your name and PID number must be printed on the answer sheet and will be checked as you leave the exam. If you arrive late to a test, you will be allowed to take the test. However, you must turn in the test paper at the regular scheduled end of the test. You will not be allowed extra time unless a documentable emergency has occurred (see above).

**Cheating will not be tolerated!** Turn baseball caps backward while taking exams. Go to the restroom before the exam. Any student caught using unauthorized materials, including electronic devices, in an exam, copying off another paper, signing in for someone else on an exam, or in any way misrepresenting their work will receive an automatic F and the matter will immediately be referred to the UCF Office of Student Conduct for disciplinary action. In addition, a "Z Designation" will be placed on the student's official transcript indicating academic dishonesty, where the letter Z will precede the final grade for this course. For more information about the Z Designation, see <http://z.ucf.edu/>.

**Reviewing Exams:** Scantrons will not be returned to students. Individual test report sheets with all correct and incorrect responses marked on it 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).

**Disability Access Statement:** The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations in this course must contact the instructor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the instructor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons 7F, Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, <http://sds.sdes.ucf.edu/> before requesting accommodations from the instructor.

**Help & SARC:** Please ask for help if you need it! I am here to answer your questions. Additionally, there is help 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.

**Important Academic Dates:**

Jan 6	Classes begin
Jan 9	Drop/Swap deadline
Jan 10	Add deadline
Mar 18	Withdrawal/Grade forgiveness deadline
Apr 21	Classes end
Apr 23 – 29	Final Exam Period
Apr 28	PCB 3023 Final Exam (Monday) 1:00 – 3:50 pm
May 5	Grades Available on myUCF
May 1-3	Commencement

**Holidays:**

Jan 20	Martin Luther King Jr. Day
March 3-8	Spring Break

*Note that the instructor reserves the right to make changes to the syllabus or other aspects of the course at anytime. These changes will be announced in class.*

**Tentative Lecture Schedule (subject to change):**

Jan 6: *Course introduction*

Jan 8: Chapter 1 – *Cells*

Jan 10: Chapter 1

Jan 09: Drop deadline 11:59 pm

Jan 10: Add deadline 11:59 pm

Jan 13: Chapter 2 - *Molecules of the Cell*

Jan 15: Chapter 2/4 - *Proteins*

Jan 17: Chapter 4

Jan 20: **MLK Holiday**

Jan 22: Chapter 5 - *Genome Organization*

Jan 24: Chapter 5

Jan 27: Chapter 6 - *DNA Repair & Recombination*

Jan 29: Chapter 6

Jan 31: **Exam 1 (Chapters 1, 2, 4, 5, 6)**

Feb 3: Chapter 8 - *Cell Differentiation*

Feb 5: Chapter 9 - *Evolution of Genes & Genomes*

Feb 7: Chapter 11/12 - *The Cell Membrane*

Feb 10: Chapter 11/12 - *Membrane Transport*

Feb 12: Chapter 3 - *Energy*

Feb 14: Chapter 3

Feb 17: Chapter 13/14 - *Respiration*

Feb 19: Chapter 13/14

Feb 21: Chapter 14

Feb 24: **Exam 2 (Chapters 8, 9, 11, 12, 3, 13, 14)**

Feb 26: Chapter 14 - *Biosynthesis*

Feb 28: Chapter 14

Mar 3-8: **Spring Break**

Mar 10: Chapter 15 - *Secretion*

Mar 12: Chapter 15

Mar 14: Chapter 16 - *Cell Communication*

Mar 17: Chapter 16

Mar 18: Withdrawal/Grade forgiveness deadline 11:59 pm

Mar 19: Chapter 16 - *Signal Transduction*

Mar 21: Chapter 16

Mar 24: Chapter 16

Mar 26: **Exam 3 (Chapters 14, 15, 16)**

Mar 28: Chapter 17 - *Cytoskeleton*

Mar 31: Chapter 17

Apr 2: Chapter 17/18-20 - *Apoptosis/Cell Renewal*

Apr 4: Chapter 18-20

Apr 7: Chapter 18-20

Apr 9: Chapter 18 - *Cell Cycle*

Apr 11: Chapter 18

Apr 14: Chapter 18

Apr 16: **Exam 4 (Chapters 17, 18, 20)**

Apr 18: Chapter 20 - *Cancer*

Apr 21: Chapter 20

Mon, Apr 28: **Comprehensive Final Exam (1:00-3:50 pm)**

## **i>clicker Instructions**

**Required i>clicker:** We will be using the i>clicker classroom response system on a daily basis. You will need to purchase an i>clicker remote and bring it with you to every class lecture. It would be wise to bring extra batteries as well, as we will be using the remotes in activities that count for class points. The purchase of a remote is NOT optional; it will be used as an integral part of this course.

You have the option of using the original **i>clicker** remote, the newer **i>clicker+** (ISBN: 1464120153), or the alphanumeric-capable **i>clicker2** remote (ISBN: 1429280476). You may purchase a remote at the UCF Bookstore or online <http://iclicker.com/purchase/>. Instructions are on the back of the remote.

### **IMPORTANT INFORMATION BEFORE PURCHASING YOUR i>CLICKER:**

- **When purchasing your clicker, be sure to consider which of your other courses may require an i>clicker or i>clicker2 remote.** I will only ask Multiple Choice questions in class. However, you may need an i>clicker2 remote for answering numeric/alphanumeric questions in another course.
- **I have enabled i>clicker GO for this course, but no one can guarantee me that the WiFi system in our classroom can handle a high volume of web>clicker traffic.** You have the option of using **i>clicker GO**, which enables you to vote via a web-enabled device like a laptop or smart phone. PLEASE NOTE that i>clicker GO cannot be used in a course where your instructor has not enabled i>clicker GO. Check with your other instructors to ensure that i>clicker GO is permitted in each course you take—otherwise, you may want to consider purchasing a remote so that you can use it in all your courses. *Only purchase an i>clicker GO subscription if:*
  1. You will not be using i>clicker in another course that does not allow i>clicker GO.
  2. You do not plan to sell back a remote to the bookstore.
  3. You have access to a wireless device (i.e. a laptop, iPhone, iPod Touch, or Android) running a browser that supports AJAX, JavaScript, and HTTPS requests such as Internet Explorer, Firefox, Chrome or Safari.

**INSTRUCTIONS FOR i>CLICKER COURSE REGISTRATION:** i>clicker is a response system that allows you to respond to questions I pose during class, and you will be graded on that feedback and/or your in-class participation. In order to receive this credit, you will need to register your i>clicker remote or set up your i>clicker GO account by **JANUARY 13, 2014**. You must have come to class at least once and voted on at least one question in order to complete this registration.

### **i>clicker remote registration:**

Log into your **Webcourses** account. Choose our course and click on the i>clicker link. Follow the instructions to type in your clicker ID (directly under the barcode on the back of your remote). i>clicker will be used every day in class, and you are responsible for bringing your remote daily.

### **i>clicker GO registration:**

To create an i>clicker GO account, visit <https://iclickergo.com> or download the app for [iOS](#) or [Android](#). Creating an account automatically starts a free 14-day trial subscription. **Please use this trial period to make sure i>clicker GO will work for all of your i>clicker classes before purchasing a subscription as there are no refunds afterwards.**

Once you create your i>clicker GO account, you do not need to do anything else to register. Just be sure that your account has the following profile information:

Student ID: Your UCF NID  
School ZIP/Postal Code: 32816  
School Name: University of Central Florida

At the end of your trial, should you decide to purchase i>clicker GO, you can purchase access to i>clicker GO in a variety of subscription lengths using your credit card online or through in-app purchase with your smartphone; this subscription includes an unlimited number of courses.

If you have an activation code from purchasing an access card in the bookstore or from a package with a textbook, you will need to redeem the code from the i>clicker GO website. Once redeemed, the activation will take affect for iOS and Android apps. You cannot redeem access cards from within the iOS or Android apps. To redeem on the website, visit <https://iclickergo.com> and log into your account. Enter your code from your account profile page if you do not see an entry field upon logging into i>clicker GO.

If you have more questions on i>clicker registration, please visit <http://support.iclicker.com> for FAQs and other resources.

### **i>CLICKER POLICIES:**

#### **Cheating policy:**

I consider bringing a fellow student's i>clicker to class to be cheating and a violation of the University Honor Code. If you are caught with a remote other than your own or have votes in a class that you did not attend, you will forfeit all clicker points and may face additional disciplinary action.

#### **Forgotten clicker policy:**

Note that we will be using i>clicker in almost every class and clicker points will make up 10% of your final grade. Please remember that it is your responsibility to come prepared to participate with a functioning remote every day. However, I do realize that difficult circumstances do arise, and for this reason I will drop the 2 lowest i>clicker days from your total participation grade.

#### **Broken/lost clicker policy:**

If you have lost or broken your i>clicker remote, you will have to purchase another one. Please email me with your new remote ID so that I can manually register your new remote.

**i>clicker Refunds and Exchanges:** Unopened i>clicker remotes can be returned to the UCF Bookstore for a full refund during the first week of classes with a receipt. Creating an i>clicker GO account automatically starts a free 14-day trial subscription.