

## Bi322 Cell Biology

Winter 2019

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Office hours: Wednesday 11:00-12:00am, Huestis 334D

Assistant Instructor:  
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Office hours: Monday 14:00-15:00, B009 science library

### Lecture time and room

Tuesday and Thursday  
14:00 – 15:20  
101 LIB

### Discussion time and room

Thursday  
09:00 – 09:50; 10:00 – 10:50; 11:00 – 11:50  
112 HUE

### **Course Prerequisites**

Bi214 or Bi252 or equivalent are required. If you are uncertain about whether you have met the prerequisites, please email me. *If you lack the prerequisites, I encourage you to read Chapters 3, 4, and 13 of Essential Cell Biology (4th edition) on reserve in the science library before class.*

### **Course topics and goals**

This course covers eukaryotic cell biology. You will learn the components of a eukaryotic cell and how they are inter-related; methods cell biologists use to study cells (including light microscopy, laser scanning confocal microscopy, electron microscopy, biochemistry, DNA microarrays, transgenics, and other cutting edge techniques); and a glimpse of the role of cells in development and cancer. We will not cover plant cells or prokaryotic cells.

The goals of this course are to give you (1) a basic knowledge about the fundamental concepts of cell biology; (2) a working cell biology vocabulary; (3) an understanding of the methods used by cell biologists; and (4) practice thinking analytically and synthesizing information, so that you will be better equipped to read and critically analyze primary scientific literature or media reports on cell biology topics (e.g. stem cell research).

### **Course textbook**

Required readings are mostly from the new 4<sup>th</sup> edition of Essential Cell Biology (ECB). Multiple copies will be on reserve in the science library. Additional required reading beyond ECB3 will also be posted on the class website for free downloads.

Required reading is to help you understand the lectures, and help you do well on the quizzes. Quizzes will be limited to material covered in the reading; exams will be limited to the material covered in lecture.

### **Course website**

We will use Canvas as a course website. The site will contain class postings, details on the readings, links to cell biology movies and other resources that you will need to do well on the exams, and copies of important class materials. Please contact me immediately if you do not have the resources or knowledge to access this website.

### **Lectures**

Time and place listed above. I will post a PDF of the lecture slides prior to class so you can use the prints as note templates.

**iClickers**

We will be using iClickers during lectures and their use will contribute to your participation grade. Please make sure that you have an iClicker and know how to use it.

**Discussion sections**

Most sections will start with a short quiz on the readings or will be a review session for the midterms. Most discussion sections will emphasize methodology relevant to the class, including light, electron and confocal microscopy, antibody production and uses, DNA microarrays, etc. Several "field trips" are planned, including to the electron microscopy facility, and the genomics facility.

**Quizzes**

These will be available in Canvas and need to be completed before the relevant discussion section (see schedule) and will be based on the material in required reading. The quizzes will be discussed at the beginning of most discussion sections. The quizzes are designed to make sure you do the reading, and are not meant to be representative of the exams. You should not assume that if you get 100% on each quiz that you will get 100% on the exam, as the quizzes are much simpler – on the other hand, if you flunk the quizzes you need to immediately seek assistance before the midterms.

**Exams**

There will be two midterm exams and one final exam. The exams will cover material from both lectures and readings, but with an emphasis on the lectures. **EVERYONE IS REQUIRED TO TAKE THE FINAL EXAM. BE CAREFUL WHEN MAKING TRAVEL PLANS AS THERE WILL BE NO EARLY OR MAKE-UP FINAL EXAMS.**

**Grading**

Your grade will be based on the point distribution below. I do not grade on a fixed curve.

Quizzes:	10%
Participation:	5%
Midterm 1:	25%
Midterm 2:	25%
Final exam:	35%

**Professional Conduct**

You are expected to follow the student conduct code; academic dishonesty includes cheating, plagiarizing or knowingly supplying false information. If you are aware of academic dishonesty occurring, please see me.