

Bi322 Cell biology

Spring 2007

(updated 12-11-07)

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Office hours: Monday 3-4 pm, 365E Streisinger Hall

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Office hours: TBA in Klamath 25

Lecture time and room

Tuesday and Thursday

10:00-11:20

229 Mackenzie Hall

Discussion time and room

Friday

12pm, 1pm, 2pm, 3pm

130 Heustis

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 are in the class despite not meeting the prerequisites, I strongly encourage you to read Chapters 3, 4, and 13 prior to the second week of class; these chapters are not required reading for the class, but may help you catch up to your classmates who have taken the prerequisites.)*

Course topics

This course covers eukaryotic cell biology. You will learn the components of a eukaryotic cell and how they are inter-related; how cell biologists study cells at a methodological level (including light microscopy, laser scanning confocal microscopy, electron microscopy, biochemistry, DNA microarrays, transgenics, and other cutting edge techniques); and the role of cells in development. We will not cover plant cells nor will we cover prokaryotic cells.

Course Goals

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

The majority of the required readings are from the text Essential Cell Biology (ECB), second edition, by Alberts et al. (2004). Multiple copies (~5) will be on reserve in the science library if you wish to avoid purchasing the text. You will be given quizzes in discussion section on the text readings, but the course exams will focus on lecture material, so to do well you will need to read the text assignments and pay attention in class. Additional readings may be required for the last few lectures, and they will be accessible on the class web site or on reserve in the library.

Course website

The course web site is <http://biology.uoregon.edu/classes/bi322s08/> and all students are required to have access. The site it will contain class postings, changes in the reading, 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. Tuesday and Thursday, 10:00-11:20 in 229 Mackenzie Hall. I will post podcasts of the lecture audio (URL to be given in class), and post a PDF of the lecture slides prior to class so you can use the prints as note templates. Please do not use laptops in the classroom.

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, the monoclonal antibody facility, and the genomic microarray robotics facility.

Quizzes. These will be given at the beginning of most discussion sections and will be based on the material in the previous weeks lectures. The quizzes will only provide a superficial test of your comprehension and you should not assume that if you pass the quiz you have mastered the material – on the other hand, if you flunk the quizzes you need to seek assistance or work harder at keeping up with the reading.

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 FINAL EXAMS 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%
(Discussion section)	
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.