

## Bi214 General Biology IV: Mechanisms

This course is about how stuff works: the mechanisms by which biological processes, practiced by all cellular life, operate. Through a combination of lectures, problem solving, and laboratory exercises we will explore amino acid chemistry, the structures and functions of proteins, the genetics of biochemical pathways, the structure, replication, and mutation of DNA, the structure and regulation of prokaryotic and eukaryotic genes, and the genetics and molecular biology underlying development. Bi211 or the equivalent and a full year of General Chemistry are prerequisites.

### **Staff**

#### **Instructor**

Dr. Alan Kelly  
ajkelly@uoregon.edu  
Phone: 346-6118  
Office: 15B Klamath

#### **Teaching Assistants**

Heather Archer (GTF) archer@uoregon.edu	Margaret Bildsprecher (BTU) bildspre@uoregon.edu	Annaleigh Boggess (BTU) annaleig@uoregon.edu
Joey Calcagno (BTU) calcagno@uoregon.edu	Annabel Chen (BULA) annabel@uoregon.edu	Zac DeMeo (BTU) zdemeo@uoregon.edu
David Dodge (BULA) dodge@uoregon.edu	Kohl Dorrington Thacker (BULA) kohld@uoregon.edu	Spencer Larson (BULA) slarson2@uoregon.edu
Christine Lykken (GTF) clykken@uoregon.edu	Sandra Mayne (BTU) smayne@uoregon.edu	Steven McAllister (GTF) smcalli1@uoregon.edu
Rebecca Sacks (BTU) rsacks@uoregon.edu	Eleni Schvaneveldt (BULA) elenis@uoregon.edu	Josh Sweigert (BULA) sweigert@uoregon.edu
Kate Walsh (GTF) kwalsh2@uoregon.edu		

Current office hours are posted on the Staff page of the course website.

### **Text and course packets**

The required book is a customized text that incorporates material from *Biochemistry* (Mathews, et al., 4<sup>th</sup> ed.) and *Molecular Biology of the Gene* (Watson, et al., 6<sup>th</sup> ed.). The general text used in Bi211-213, *Biological Science* (Freeman, 3<sup>rd</sup> or 4<sup>th</sup> ed.), may be helpful, but is not required. If you have *Biological Science* in your possession you should keep it for this term; however, I do not recommend that you purchase the book solely for this course.

A laboratory manual and a course packet that includes lecture figures and problem sets are required. The text, lab manual, and course packet can be purchased at the UO Bookstore. If a manual or packet is not available, request one at the Bookstore and they will have it for you within 24 hours. Note that it is your responsibility to order these; we will not have copies available in class or lab. Texts will be placed on 2-hour reserve in the Science Library.

### **Grading**

Scores from the lecture portion of the course will comprise 60% of your course grade, with lab accounting for the remaining 40%. The course grade will be determined from the highest score calculated by three methods:

	Method 1	Method 2	Method 3
Exam 1	11%	14.7%	–
Exam 2	11%	–	14.7%
Final exam	22%	29.3%	29.3%
Quizzes	11%	11%	11%
Participation	5%	5%	5%
Lab	40%	40%	40%

The second exam is not cumulative, but the final exam is cumulative. **Make-up and early exams will not be offered.** Lecture quizzes, each worth 15 points, will be administered each Friday except for weeks during which an exam is scheduled. They will be based upon the reading, lectures, and relevant problems and material for that week. The lowest quiz score will be dropped; **make-up and early quizzes will not be offered.** **All exams and quizzes must be written in pencil; use an eraser to remove mistakes and unwanted writing.**

Participation is in the form of i►clicker responses. There typically will be three to five questions per lecture (excluding the first lecture) counted with clickers. Ninety percent of the responses will be counted for credit (answers do not have to be correct for you to receive credit). Responses beyond 90% will not be counted, so that you won't necessarily be penalized for a few missed sessions. If you forget your clicker for any session you will not be able to receive clicker points for that day (we will not count responses written on scraps of paper). See below for i►clicker policy and registration.

**No other opportunities for points will be offered. Please do not ask.**

A problem set has been provided in the course packet, but will not be turned in for grading. However, working the problems will be your best form of preparation for the exams, so you are encouraged to make a sincere effort in solving them. Problem set answers are posted on the website.

### **Laboratories**

Laboratories begin during the second week. We will do a total of 7 laboratory exercises. The exercises, background information, and report pages are contained within the lab manual. You must read the material BEFORE coming to your lab. Details of the lab format, assignments, and grading are included in the lab manual. This course is full, so you may not switch lab sections if a conflict arises for you in any given week.

### **Course website**

The course website address is <http://biology.uoregon.edu/classes/bi214f12/>. This is not a Blackboard website, but is accessible through Blackboard under “Announcements.” It contains course information, schedules, staff contacts and office hours, i-clicker keys, lab announcements, problems set keys, links to relevant websites, and grade access.

### **Accommodations for students with disabilities**

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me as soon as soon as possible, and not later than October 1. Please bring a notification letter from Disability Services outlining your approved accommodations.

### **Class conduct and academic honesty**

Class starts promptly at 10:00 and ends at 10:50. Please arrive on time and do not pack up before the conclusion of the lecture. Arriving late and leaving early is disruptive to others around you and to the speaker. Do not talk during lecture in a volume audible to anyone but the intended recipient. Please do not use any electronic devices during class; they are of no help to your learning, and are distracting to those around you and to the instructor.

Computers will not be allowed in lecture. If you have a requirement for using a computer to take notes, please make accommodations with me on the first day of class. Your use of the computer will be monitored by a teaching assistant.

All work submitted in this course must be your own. Instances of suspected cheating or plagiarism on exams, quizzes, and reports will be referred to the Office of Student Conduct and Community Standards. I take such cases seriously, and pursue charges of academic misconduct and their sanctions to the fullest extent allowable, including but not limited to a failing mark for the course. For definitions of violations, a description of the hearing process, and a summary of penalties for findings of academic misconduct, go to

<http://studentlife.uoregon.edu/StudentConductandCommunityStandards/ConductCode/tabid/69/Default.aspx>

### **Bi214 i►clicker policy and registration**

Since lecture participation via polling by i►clickers constitutes 5% of your total score in this course, it is recommended that you purchase an i►clicker from the UO Bookstore (these can be sold back to the UO Bookstore at the end of the term for about 50% of the new purchase cost).

In order to receive credit for in-class use of the clicker, you will need to register your i►clicker online within the first two weeks of class. You must have come to class at least once and responded on all questions posed during that lecture in order to complete this registration properly. Once you have responded in at least one class meeting, go to the “Course Documents” section in the **Bi214 Blackboard site** (registrations on the iclicker.com website will not be incorporated). Complete the fields with your first name, last name, Duck ID (not student ID number), and remote ID.

The i►clicker response system will be used every day in class (with the exception of the first lecture and the four exam days), and you are responsible for bringing your remote daily. Since the use of clickers in this course contributes to each student’s final grade, in-class misuse of these devices may be considered as an act of academic dishonesty; this includes the loaning your clicker to a classmate who registers responses in your absence from lecture. If a student is caught using two clickers, both that student and the owner of the loaned device will receive a grade of “F” in the course. A few points of the 900 or so possible of your course score is not worth the risk of a failing grade.