

Biology 113: From Cell to Organism

Course Description

This course covers the study of life from the biochemical to the physiological levels. Much of the focus will be on cellular processes that are vital to life. The course is designed to introduce students to the process of scientific thinking as well as to the principles of biochemistry, cell biology, and physiology. We will discuss current research methods and approaches to unanswered questions. This is one of the courses in Biology at the foundation level, the others are BIOL109, 110, 112 and 114. There are NO prerequisites, and enrollment is open to both majors and non-majors. BIOL 113 provides a background for more advanced courses in cellular and organismal biology.

Contact Information

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Office hours: Mon 3-5, Tue 10-11, Wed 3-4, Frid 8:30-9:30

Please feel free to stop by or schedule an appointment outside of office hours.

Textbook: *Biological Science* by Scott Freeman (Third Edition)

Grades (total 500 points)

In class Quizzes 1-11 (180 points): 18 points each (Best 10 of 11)

Exams 1-4 (320 points): 80 points each (#1-3 in class, #4 is the Final Exam)

Although exams will focus on the material since the last exam, exams will be cumulative since they will assume knowledge of earlier material. Quiz and exam dates are indicated and although it is unlikely that these dates will change, you will be informed in advance if they do.

Policy on Absences

Attendance will be monitored in this course. Absences can be authorized by the instructor, the Dean of Students or the Dean of Academic Advising. If you have an authorized excused absence for an exam or quiz the instructor must be informed before the exam or quiz, so that a make-up can be scheduled. Twenty-five points of your grade will be deducted for each set of 3 absences.

Academic Honesty

Students are expected to abide by Kenyon's policy on academic honesty and any infractions will be dealt with as described in the Kenyon College Catalog.

Disabilities

If you have a disability and feel that you need special accommodation please discuss it with me, and Erin Silva (PBX 5453; salvae@kenyon.edu) at the Office of Disability Services as soon as possible.

The syllabus may be changed.

<u>Date</u>	<u>Topics</u>	<u>Reading</u>	<u>Quizzes (Q)</u>
8/29 F	Introduction	p2-4, 11-15	
9/1 M	Chemistry	p19-25	
9/3 W	Water, pH	p25-31	
9/5 F	Energy	p31-37	
9/8 M	Overview biol. mols, Proteins I	p38-40, 3.1, 3.3, 3.4	Q1
9/10 W	Proteins II		
9/12 F	Nucleic Acids/RNA	4.1, 4.2, 4.3	
9/15 M	Lipids/Membranes I	6.1, 6.2, 6.3, 6.4	Q2
9/17 W	Lipids Membranes II		
9/19 F	Prokaryotic & Eukaryotic Cells I	120-147	
9/22 M	Prokaryotic & Eukaryotic Cells II		Q3
9/24 W	Prokaryotic & Eukaryotic Cells III		
9/26 F	Exam 1		
9/29 M	Viruses	p769-782	
10/1 W	Cell-Cell Interactions	Chap 8	
10/3 F	Carbohydrates	p82-86, p89-92	Q4
10/6 M	Overview Cell Metabolism	Chap 9	
10/8 W	Respiration I		Q5
10/10 F	–Reading day no class		
10/13 M	Respiration II		
10/15 W	Respiration III, Fermentation		
10/17 F	Photosynthesis I	Chap 10	Q6
10/20 M	Photosynthesis II		
10/22 W	Photosynthesis III		
10/24 F	Exam 2		
10/27 M	Plant Form and Function	Chap 36, p636-637	
10/29 W	Transport in Plants	Chap 37	
10/31 F	Nutrition/Nitrogen Fixation	Chap 38	Q7
11/3 M	Plant Responses/Hormones I	Chap 39	
11/5 W	Plant Responses/Hormones II		
11/7 F	Form/Function Animals	p916-924	Q8
11/10 M	Homeostasis	p925-931	
11/12 W	Water Balance I	Chap 42	Q9
11/14 F	Water Balance II		
11/17 M	Exam 3		
11/19 W	Respiratory & Circulation I	Chap 44	
11/21 F	Respiratory & Circulation II		
11/24-28 Mon-Frid Thanksgiving Break			
12/1 M	Endocrine System/Hormones I	Chap 47, 43.4	Q10
12/3 W	Endocrine System/Hormones II		
12/5 F	Nervous System I	Chap 45	Q11
12/8 M	Nervous System II		
12/10 W	Sensory Systems	p1031-1044	
12/12 F	Effector Systems	p1044-1051	
December 16@1:30-3:30 pm Final Exam (Exam 4)			