

BIOL-6A & -6AH (Honors):

Biological Form & Function

BIOLOGY-006A & -006AH: Lecture	Tue & Thu 11:30–1:20	MLC 103
BIOLOGY-006A-03: CRN 00239 Lab or BIOLOGY-006AH-03: CRN 23923 Lab	Mon & Wed 12:30–3:20	SC 2108
BIOLOGY-006A-04: CRN 00240 Lab or BIOLOGY-006AH-04: CRN 23924 Lab	Mon & Wed 3:30–6:20	SC 2108
“E-Greensheet”: Detailed course syllabus, schedule, lecture slides, and lab materials on the course website: http://www.deanza.edu/faculty/heyerbruce/bio6a.html		
<ul style="list-style-type: none"> Required Text: Campbell Biology, 10th ed., Reese, J.B., et al; Pearson Education, 2014. Required Mastering Biology supplemental instruction-homework-quiz website: — http://www.masteringbio.com/ Required Lab Manual: Biology 6A Lab Manual, McCauley, B. & B. Heyer; DeAnza College, 2014. — download and print from the class website. Recommended Lab Supplement: A Photographic Atlas for the Biology Laboratory, 7th ed., Van De Graaff, K & J. Crawley; Morton Publishers, 2013. 		
Instructor: Bruce Heyer	Office: SC 1212 Office Hours: Tu & Th — 9:30 –11:20	Email: heyerbruce @ deanza.edu
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COURSE DESCRIPTION

Biology-6A is the first of three courses for serious enthusiasts of the biological sciences to present the foundations of life's processes and the methods for scientific investigation. In this first course we shall elaborate on organismal biology - the comparative structure (form) and physiology (function) of the diverse range of living inhabitants of our planet relevant to the basic universal necessities of being alive. Central themes include producing and maintaining a stable internal body environment while exchanging energy, nutrients, water, gases, and wastes with the outside world; sensing and responding to stimuli; and transporting materials and coordinating actions in a multicellular organism.

The class lectures examine specific biological phenomena across a wide variety of organisms, but the laboratory portion focuses on the overall structure of specific groups of multicellular organisms. Thus, while the concepts presented in lectures are applied to this survey of the major plant, fungus, and animal body plans, the lab exercises do not directly parallel the lectures and much of the content is presented only in lab. Therefore, it is mandatory to fully participate in both the lecture and laboratory components to pass the class.

GRADING

- Lab Exercises & Quizzes:** ~12 exercises and/or quizzes. Average percent of all scores = 100 points.
- On-line Homework & Problem sets:** ~20 sets. Percent total score of all problem sets = 100 points.
- Lab Exams:** Two lab practical exams. Average of lab exam scores counts 100 points.
- Lecture Exams:** There are three non-cumulative exams based upon material covered in lecture. (The final exam is Exam 3.) Each exam counts 100 points. (3 x 100 = 300 points)
- The final class grade will be determined as a percentage of the maximum total 600 points:
 | 92-100%= A | 89-91%= A- | 86-88%= B+ | 80-85%= B | 77-79%= B- |
 | 74-76%= C+ | 65-73%= C | 53-64%= D | <53%= F

Week	Date	Day	Lecture Topic	Chapter	Lab Topic
1	Sep 26	Mon	01: Scientific Method		
	Sep 27	Tue	Life & Science	1	
	Sep 28	Wed	02: Systematics		
	Sep 29	Thu	Classification Systems	26	
2	Oct 03	Mon	03: Plants I		
	Oct 04	Tue	Life Cycles	12.1; 13.1-2; 28.2-6	
	Oct 05	Wed	04: Plants II		
	Oct 06	Thu	Plant Development & Tissues	35	
3	Oct 10	Mon	05: Plants III		
	Oct 11	Tue	Plant Vasculture & Transport	36	
	Oct 12	Wed	06: Plants IV		
	Oct 13	Thu	Gas Exchange in Animals	42	
4	Oct 17	Mon	SE-1: Gas Exchange		
	Oct 18	Tue	Circulation	"	
	Oct 19	Wed	07: Fungi		
	Oct 20	Thu	Exam 1		
5	Oct 24	Mon	Review for lab exam		
	Oct 25	Tue	Animal Development & Tissues	47	
	Oct 26	Wed	Lab Exam 1		
	Oct 27	Thu	Homeostasis & Thermoregulation	40	
6	Oct 31	Mon	08: Animals I		
	Nov 01	Tue	Feeding & Ingestion	41	
	Nov 02	Wed	09: Animals II		
	Nov 03	Thu	Digestion & Assimilation	"	
7	Nov 07	Mon	10: Animals III		
	Nov 08	Tue	Osmoregulation	44	
	Nov 09	Wed	SE-2: Osmoregulation & Excretion		
	Nov 10	Thu	Excretion	"	
8	Nov 14	Mon	11: Animals IV		
	Nov 15	Tue	Exam 2		
	Nov 16	Wed	12: Animals V		
	Nov 17	Thu	Coordination of Body Functions	45	
9	Nov 21	Mon	13: Fish Anatomy		
	Nov 22	Tue	Animal Senses	50	
	Nov 23	Wed	14: Mammalian Anatomy		
	Nov 24	Thu	Thanksgiving holiday		
10	Nov 28	Mon	15: Vertebrate Skeletons		
	Nov 29	Tue	Animal Senses – cont.	"	
	Nov 30	Wed	"		
	Dec 01	Thu	Locomotion & Motor Systems	"	
11	Dec 05	Mon	Review for lab exam		
	Dec 06	Tue	Muscles & Skeletons	"	
	Dec 07	Wed	Lab Exam 2		
	Dec 08	Thu	Animal Reproduction	46	
12					
	Dec 13	Tue	(11:30–1:30) Exam 3		