

University School KAP Biology Syllabus 20011-2012

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Required Text:

Biological Science 4th edition, Scott Freeman editor. Benjamin-Cummings Publishing Co.

Other required material:

Lab notebook
Classroom binder for notes

KAP Course Description

KAP, is a collaborative educational project between Kenyon College and University School. KAP seeks to provide selected students with a college-level biology course supported by Kenyon faculty. This collaborative effort will provide students with the unique opportunity to experience the rigors of college by attending Kenyon and working with Kenyon faculty on select lab assignments. The KAP syllabus was designed as a year long course to fulfill the requirements for college credit for Biology 115 & 116 at Kenyon College.

Will I be prepared for the AP Biology Exam?

Yes, the course syllabus closely resembles the AP curricula. **However, you WILL need to do some preparation on your own to be successful on the AP exam.** Supplemental information will also be provided throughout the year to ensure that you will have all the necessary material to study for the exam. Several out of classroom review/ informational sessions will be held to prepare you for the exam if you chose to take the AP exam. Exams will be formatted to the AP test and sample AP questions will be used on exams whenever possible.

Homework Assignments:

You will be expected to read and take notes on each chapter assigned. Additional assignments will be given when appropriate to help increase understanding of the material. All assignments and due dates will be given in class. Long-term projects and assignments will be posted online. A weekly quiz will also be given each week. All tests will be announced in advance and posted on the online test calendar. It is your responsibility to see me about missed work and class material.

This is a fast paced class. To be successful in this class you will need to go above and beyond what is covered in class and come prepared for classroom discussion. Some material will be covered quickly; nightly reading will be essential to help ensure an engaging and active classroom atmosphere.

Late Assignments:

Late assignments are accepted with a 10% deduction for each day it is late (5% if handed in after class---if found working on a late assignment in class you will receive a 0). Please see or email me before class if you foresee having any problems getting assignments done on time, special arrangements may be made depending on the situation.

Please note that the acceptance and/or any extensions for late homework is at the teacher's discretion (US Handbook).

Labs:

Lab work and research projects are critical to understanding biological processes. All planned labs and projects are designed to solidify key concepts, enhance understanding, and spark your curiosity about biology. A formal lab write-up will be required for some labs, other labs will be graded based on participation and application.

You will be expected to come to scheduled lab blocks each week. Also, lab activities may take precedence over other activities you have scheduled during daily free blocks.

You will need to bring your lab notebook to all labs. You will be expected to take notes, record data and reflect on lab activities in your lab notebook. Your notebook will be collected on occasion as part of your lab and participation grade.

Grading

The majority of your grade will consist of unit/chapter exams and lab reports. The rest will consist of projects, quizzes, and participation. Grade breakdown is as follows:

Quizzes:	20%	Weekly quizzes; some unannounced
Tests:	25%	Announced in advance
Written assignments	25%	Lab/research reports, essays, & term papers
Participation	30%	Seminar participation, student lead discussion, lab interaction & attendance

Active class participation is heavily weighted in this course. Biology is fun! I hope to provide opportunities for hands-on lab activities and demonstrations as well as time for you to lead discussions and tailor the class to your interests. This is only possible if you come to class prepared and ready to actively take part in classroom discussion. As the old adage says “ you will get out of class what you put in”

Courses are graded using a letter scale of A+ to F from which a grade point is derived in the following manner.

100-97% => A+ => 4.33	79-77% => C+ => 2.33	< 60% => F => 0.00
96-93% => A => 4.00	76-73% => C => 2.00	
92-90% => A- => 3.67	72-70% => C- => 1.67	
89-87% => B+ => 3.33	69-67% => D+ => 1.33	
86-83% => B => 3.00	66-63% => D => 1.00	
82-80% => B- => 2.67	62-60% => D- => 0.6	

Computer Use

Computer use in class is allowed; however, I highly recommend taking notes by hand. Diagrams and figures presented in class tend to be hard to replicate on a laptop.

NO online activity is permitted in class! If caught online a demerit will be issued. The second offense will lead to a dismissal from class & 5 demerits. A third offense will lead to the loss of computer privileges. The same holds true if caught playing games or doing other work for other classes on your computer. The use of the computer for work other

than biology during class is not only disruptive to your learning but to those sitting around you.

Plagiarism/Cheating:

Plagiarism and cheating can range from discussing a quiz or test with another classmate or class that has not taken it yet or vice versa, copying homework or a lab report, or copying directly from a website. Please DO NOT participate in this behavior, US takes this issue seriously and could result in appearance before the disciplinary committee.

This is a tentative syllabus dates and material are subject to change

Week	Date	Topic	Chapter	Lab Topic	Journal Discussion
1	Aug 25-26	Biology/Tree of Life	Ch.1	Experimental Design/Analysis/Write-up	stats/sample readings
2	Aug. 29- Sept. 2	Evolutionary Processes & Patterns	Ch. 24-27	AP Lab 8: Pop'In Genetics & Evolution & Populus	
3	Sept 6-9 (no classes Mon 9/5)	Evolutionary Processes & Patterns	Ch. 24-27	Turtle Phylogeny	selected reading
4	Sept 12-16 (Founder's Day)	Test (Ch1 & Ch. 24-27) Diversification of Life	Ch. 28-30	Berlese Extraction	
5	Sept 19-23	Diversification of Life	Ch. 31-32	Field Notebook/Invert. Identification	
6	Sept 26-30	Diversification of Life	Ch. 33-35	Field Notebook/Invert. Identification	Selected reading
7	Oct 3-7	Diversification of Life	Ch. 33-35	Human Evolution	Selected reading
8	Oct 11-14 (no classes Mon. 10/11) Oct 17-20 (No classes Fri. 10/21)	Test (Ch. 31-35) start Ecology	Ch. 50-51	Field Notebook	
9	End of Interim I	Ecology	Ch. 52-53	AP Lab 11: Animal Behavior	selected reading
10	Oct. 24-28	Ecology	Ch . 54-55	AP Lab 12: Primary Productivity	
11	Oct.31-Nov. 4	Test (Ch. 50-55) start Molecules of Life	Ch.2-6	AP Lab #1 Diffusion & Osmosis	
12	Nov. 7- 11	Test (Ch. 2-6) Cell Structure & Function	Ch. 7 & 8	AP Lab #2 Enzyme Catalysis	selected reading
13	Nov. 14-18	Cell Structure & Function	Ch. 9	Start CO2 fermentation	
14	Nov. 21-23 (Thanksgiving break 11/23)	Cell Structure & Function	Ch. 10	AP Lab # 4 Plant Pigment & Photosynthesis	
15	Nov.28- Dec.2	Cell Structure & Function & Test (Ch. 7-10)	Ch. 10	AP Lab #3 Cell Respiration	
16	Dec. 5-9	Gene Structure & Expression	Ch. 11 & 12	AP Lab # 3 Mitosis & Meiosis (online)	
17	Dec. 12-16 (12/16 half day) End of Semester I	Gene Structure & Expression	Ch. 13-14	TBA	selected reading
Winter Break					

18	Jan. 3- 6 (No classes Mon. 1/2)	Review Week		Start Fast Plants	
19	Jan. 9-13	Exam Week	Ch. 15	Wisconsin Fast Plants	
20	Jan. 17-20 (No classes Mon. 1/16 MLK day)	Gene Structure & Expression	Ch. 15 -16	TBA	
21	Jan. 23-27	Gene Structure & Expression Test (Ch. 15-18) & Genomics	Ch. 17-18		selected reading
22	Jan. 30- Feb. 3	Developmental Biology	Ch 20	AP Lab Gel Electrophoresis	
23	Feb. 6 -10		Ch. 21-23	Developmental Slides	
24	Feb. 13-16 (No classes Fri. mid-winter break)	Test (Ch. 21-23) & Plant Form & Function	Ch. 36	TBA	
25	Feb.21-24 (No classes Mon. mid-winter break)	Plant Form & Function	Ch. 37-38	AP Lab Transpiration	
26	Feb. 27 - Mar. 2	Plant Form & Function & Test (Ch. 36-40)	Ch. 39-40	TBA	selected reading
27	Mar. 5 - 8 (No classes Fri. faculty work day) End of Interim III	Animal Form & Function	Ch. 41-42	TBA/Dissections	
28	Mar. 12-16	Animal Form & Function	Ch. 43-44	AP Lab #10 Physiology & Circulation	selected reading
Spring Break					
29	Apr. 3- 6 (No classes Mon. faculty work day)	Animal Form & Function	Ch. 45-46	Dissections	
30	Apr. 9 -13	Animal Form & Function	Ch. 47-48	Nutrient Analysis Lab	
31	Apr. 16 - 20	Animal Form & Function & Test (Ch.41-49)	Ch. 49	TBA	
32	Apr. 23- 27	Review/Student Lectures			
33	Apr. 30- May 4	Student Lectures			