

**Biology 11**  
**Concepts of Biology – 4 Units**  
**Bakersfield College, Summer 2017**

Instructor:	Mrs. Kimberly Newton	CRN #50171	Lab M - R 8-10:10am (SE-31)
Office:	SE-41		Lec M - R 10:20-12:30pm (SE-51)
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Webpage:	<a href="http://kcnewton.weebly.com">http://kcnewton.weebly.com</a>	Office Hours	M & T 12:30– 1pm (SE-41)

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Course Description

This is a non-majors introductory course, which applies biological concepts to issues of everyday life. Concepts considered include scientific method; ecosystems and energy flow; organization, structure, function, behavior and evolution of organisms; inheritance; disease; and ethics. **Prerequisite:** Reading – one level prior to transfer.

Textbooks and Supplies

Lecture: Simon, et al., **Campbell Essential Biology with Physiology**, 5<sup>th</sup> edition (ISBN: 9780321967503)

Lab: **Laboratory Manual for Biology 11**, E. Mullins et. al. (Required by 6-13-17) – available only in BC bookstore

Semester Calendar

June 12	Instruction Begins
June 18	Last day to drop without a W
July 4	Holiday
July 5	Last day to drop with a W

Expectations and student evaluation

**Attendance & Participation:** Attendance is expected in every class meeting. It is very important for students to attend class in order to be successful in this course. However, things happen and if you must miss a class, please notify Mrs. Newton ahead of time (in person, via email or telephone). In the event of an absence the instructor strongly encourages you to contact a classmate in order to obtain missed materials.

Class will start as scheduled - please arrive on time.

Cell phone use (including text messaging) is NOT allowed in class - lecture or lab. All cell phones must be stowed at all times including during an exam.

**Withdrawing:** The instructor will **not** drop you from the course after the first meeting. Please be aware of all deadlines to prevent a “W” from appearing on your transcript. It is up to the student to drop themselves through Banweb. Any student enrolled in the course after the deadline to drop will receive a letter grade.

**Homework, Exams and Quizzes:** There will be NO MAKE-UP assignments, exams or quizzes. Late homework will not be accepted. There will be 5 lecture exams and a comprehensive final exam. If you do not show up to the final, you will receive an automatic “F” in the course. Material on the exams will come from both lecture and lab.

Cheating Policy

Cheating in any form (including, but not limited to, copying test answers or outside assignments, sharing answers, using pre-prepared notes or other information not available from your own mind) will not be tolerated and the student will fail that exam.

Special Accommodations

Students with disabilities who believe they may need accommodations in this class are encouraged to contact Disabled Student Programs & Services located at Student Services Building, 1st Floor, Counseling Center (661-395-4334), as soon as possible to better ensure such accommodations are implemented in a timely fashion.

Laboratory Policies and Procedures

**Attendance:** Missed labs cannot be made up. Any student who misses more than three labs for any reason before the final drop date will be dropped from the course. If the fourth absence occurs after the final drop date, that student will receive an “F” in the course.

**Quizzes:** Quizzes will usually be given orally and will cover material from the previous day's lab and lecture. Questions will not be repeated for students who come in late – please be on time.

Class Outline - Subject to change.

Date	Lecture	Readings	Lab	Miscellaneous
6/12	What is Life? Science?	Ch. 1	Welcome & Intro	
6/13	Chemistry & Molecules of Life	Ch. 2 & 3	Metric System & Graphing	- Quiz 1
6/14	The Cell/Working Cell	Ch. 4 & 5	Chemistry Lab	- Quiz 2
6/15	<b>Exam #1</b>			
6/19	Cellular Respiration	Ch. 6	Microscope Lab	
6/20	DNA & RNA	Ch. 10	Goldfish Lab	- Quiz 3
6/21	Genetics	Ch. 9	DNA Lab	- Quiz 4
6/22	<b>Exam #2</b> (*Genetics on exam 3)		Human Genetics	- Goldfish Report due
6/26	Mitosis & Meiosis	Ch. 8		- Genetics due
6/27	Evolution	Ch. 13	Mitosis Lab	
6/28	How Populations Evolve	Ch. 14	Red Queen Lab	- Quiz 5
6/29	<b>Exam #3</b> (Unit 3 plus genetics)			
7/3	Population Ecology	Ch. 19		
7/4	Holiday – Happy 4 <sup>th</sup> of July!			
7/5	Community Ecology & Ecosystems	Ch. 20	Owl Pellet Lab	
7/6	Plants Lecture & Lab * Morning lab 8-11:30 SE-31 * Afternoon lab 11:30-3 SE-31	Ch. 28		
7/10	<b>Exam #4</b>			
7/11	The Digestive System	Ch. 22	Reproduction Lab	
7/12	The Circulatory System	Ch. 23		- Quiz 6
7/13	The Immune System	Ch. 24	STD Lab	
7/17	<b>Exam #5</b>			
7/18	CALM Lab			
7/19	Lab Practicum: Start times, 8am & 10:20am			- CALM due
7/20	<b>Cumulative Final Exam</b>			

### Projects

Each student is required to complete ONE project/fieldtrip this summer. The options are listed and can be printed from the website (<http://kcnewton.weebly.com>) - see the *Project & Fieldtrip* link. **For trips taken on your own, please be sure attach your ticket/receipt to the assignment. Any project turned in without a ticket/receipt will not be given credit.** Late projects will not be accepted – thank you for your understanding. Please note, CALM is a lab that must be completed by all students and does not satisfy the project/fieldtrip requirement.

### Grading

This course operates on an objective point system. Grades will be assigned based on the following accumulated point scale:

5 Lecture Exams @ 100	500
1 Lecture Final @100	100
1 Lab Practicum @ 100	100
13 Lab Participation @5	65
6 Lab Quizzes @10	60
Homework Assignments	85
Respiration Report @30	
Genetics Problems @30	
CALM @25	
1 Project @ 30	30

**Total Points Possible: 940**

**940 – 846 = A, 845 – 752 = B, 751 – 658 = C, 657 – 564 = D, 563 – 000 = F**

Each student will have an opportunity to earn extra credit throughout the semester. Extra credit will be given to those who have turned in all homework assignments on time. More about this later ....

### Student Learning Outcomes

1. The scientific method: The students will be able to research a topic, design experiments, synthesize and evaluate the information, justify and express their opinions.
2. Cell Theory: The students will be able to identify various cells and their structural components and differentiate the functions of each of their components.
3. DNA and Heredity: The students will be able to 1) understand the significance of DNA as the basis for heredity, structure, function and disease in living organisms; 2) describe the DNA molecule and explain how it is used in living systems to create proteins; and 3) describe how proteins function in living cells.
4. Basic Human Anatomy and Physiology: The students will be able to describe the organs found in selected human organ systems, then explain the role played by each organ in the overall functioning of that system.
5. Diversity of Organisms: The students will be able to compare and contrast characteristics of various organisms particularly related to energy sources (feeding style), cellular composition, reproduction and relationship to the ecosystem.
6. Ecology and the Environment: The students will be able to 1) describe the flow of energy through the ecosystem, then construct a food web, placing specific species of organisms at each level; 2) choose a common ecosystem disturbance of human origin and predict the effects of that disturbance on a food web; and 3) understand the complexity of ecosystems and environmental issues.
7. Real World and Current Event Applications: The students will be able to 1) recognize, value and apply major biological concepts contributing to current issues in the biological realm; and 2) apply critical thinking skills to formulate and defend a position on a controversial issue of biological importance.