

# CONCEPTS OF BIOLOGY

## BIOLOGY 100

### COURSE SYLLABUS

**Lecture Instructor:** Kris Burnell, Ph.D.  
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**Course Focus.** This course will introduce students to the basic concepts of biology. By the end of the semester, students should have a general understanding of molecular and cellular biology, genetics, evolution, ecology, and the structure and function of plant and animal systems.

This is a four-unit non-major's biology course which satisfies the SBCC General Education requirement in Natural Sciences. This course is transferable to both the UC and CSU as a general education laboratory science course. Biology majors are welcome to take this course, however they will not receive credit toward their major for this course.

**Texts.** *Campbell Biology: Concepts and Connections*, 2<sup>nd</sup> custom ed. by Reece, Taylor, Simon & Dickey and *Biology 100: Concepts of Biology Laboratory Studies*. The lecture text book is optional for my class, but you must purchase the set of laboratory exercises. Both are available in the SBCC bookstore.

#### **Course Requirements.**

**Attendance.** You are expected to attend one 3 hour lecture and one 3-hour lab each week. I have a strict policy regarding attendance and effort. Students with a week's worth of unexcused absences and a failure to complete two or more assignments will be dropped.

**Lecture:** Your attendance in lecture will effectively be monitored by the weekly quizzes or tests. If you're not in class, then you will not be able to turn in a quiz. No quiz = absent.

**Lab:** **You must enroll in and attend the lab** as well as the lecture **to pass this course**. This course fulfills the general education laboratory science requirement. As such, **you must pass the lab portion as well as the lecture portion to receive this credit**. If you do not attend lab, you will NOT pass the class. A failure to attend more than one lab session may result in your being dropped from the class.

**Lecture tests** are a combination of multiple choice, short answer and one short essay question. Test material is based on information presented in lecture. There are five (5) lecture tests, worth 50 points each and a cumulative final exam also worth 50 points. The final exam will include test 5 (new material) and cumulative information from the entire semester. All cumulative questions on the final will be multiple choice and will come from the previous 4 tests.

If, for some legitimate reason, you should miss a scheduled test a make-up test **may** be arranged. However, make-up tests will be given at the discretion of the instructor and **ONLY** if one of the following criteria is met:

- you arrange ahead of time (i.e. **before** the test is scheduled to be given) to take the test at another time, preferably at a time before the scheduled test date.
- unforeseen circumstances (sick, car accident, family emergency, etc.) on the day of the test keep you from making it to the test. If this happens, you **MUST** contact me **on or before the day of the test**, informing me that you will not be able to make it and why.

If any of these criteria are not met, you will NOT be given a make-up test. **NO EXCEPTIONS!** All **make up the tests must be taken within a week** after it is originally given.

**“Homework” Quizzes.** Each lecture will begin with a 20 point quiz. Quizzes will cover a variety of information – some will have questions about information addressed during previous lectures, some will cover pre-lecture prep information and others will address specific reading assignments. You will be informed of what material will be covered in each quiz during the previous week’s lecture. All quizzes will consist of two parts: 10 of the 20 points can be earned by answering the questions on your own (just like any normal test) and the remaining 10 points are earned by discussing the answers with your classmates and making corrections to your answers if necessary. Lecture notes, books, etc. **cannot be used for either part** of the quiz. Quiz questions will be multiple choice, require a short written explanation or a combination of both types. You will **need 2 short, 15 question scantrons for each quiz**. There will be 8 of these quizzes so you will need a total of 16 short scantrons for the semester. All quizzes **MUST** be submitted on a scantron of the proper size. A failure to do so will result in a 0 grade on the quiz.

If you arrive late to class and the first part of the quiz has already been collected, you will only be allowed to participate in the group part of the quiz (i.e. the max points you can earn will be 10/20). If you are absent on the day of a quiz, **make-up quizzes will be given only by prior arrangement or for excused absences for which proper documentation is provided.**

**“Pop” Quizzes.** In addition to the scheduled quizzes given at the beginning of each lecture, there will be 4 10 point quizzes given at the end of lecture. These quizzes are not scheduled nor will they be announced ahead of time. These quizzes will be given at the end of the lecture period and will cover information addressed during that night’s lecture. These quizzes can be of any format (multiple choice, short answer, etc.) and are open note and you can discuss the answers with your classmates. There are **NO make-up pop quizzes** given, even for excused absences.

**Lab Exercises** . These exercises consist of a worksheet with instructions, diagrams, and questions. Your job is to complete all parts of the exercise and answer all the questions during lab time. There are a total of 15 exercises, worth 10 points each.

**Lab Quizzes** are given most every week and will evaluate your understanding of material covered during previous lab sessions. Quizzes will be given at the beginning of lab and should not take more than 15 minutes. **Do not be late to class.** If you arrive after the quiz has begun, you will only be allowed the time remaining to take the quiz. If you arrive after the quiz has been collected, you will not be allowed to make it up. **No make-up**

**quizzes will be given** (except in certain circumstances and only by prior arrangement). There are a total of 10 quizzes worth 20 points each.

**Final Course Grade** is based on the following distribution of points:

	Points	Overall %	
<b>Lecture:</b>			
5 tests @ 50 points each	250	50%	29%
Final exam	50	10%	6%
8 homework quizzes @ 20 points each	160	32%	19%
4 pop quizzes @ 10 points each	40	8%	5%
<b>Total lecture</b>	<b>500</b>	<b>100%</b>	<b>59%</b>
<b>Lab:</b>			
15 worksheets @ 10 points each	150	43%	18%
10 quizzes @ 20 points each	200	57%	24%
<b>Total lab</b>	<b>350</b>	<b>100%</b>	<b>41%</b>
<b>Total for the course</b>	<b>850</b>	<b>100%</b>	

**IMPORTANT NOTE:** In order to pass this class, **you must pass both the lecture and the lab portions.** A **passing score in lecture** can be achieved by earning a minimum of **347 of the 500** points (70% of the lecture points available). A **passing score in lab** can be achieved by earning a minimum of **243 of the 350** points (70% of the lab points available).

The following scale will be used for determining the final course grade:

GRADE	TOTAL PERCENTAGE	TOTAL POINTS ACCRUED
A+	100-97%	850 - 820
A	96-90%	819 - 761
A-	89%	760 - 752
B+	88-87%	751 - 735
B	86-80%	734 - 676
B-	79	675 - 667
C+	78-77%	666 -650
C	76-70%	649 - 591
D	69-60%	590 - 506
F	59-0%	505 - 0

**More on Grades.** As you progress through the course and you complete each of the tests, lab assignments, etc., you will be accruing points towards a final letter grade for the course. Specific letter grades will not be given after each lecture test or assignment, but you will receive a percentile score that will give you a general idea of where you stand in the course.

It is important that you realize your grade is the result of your performance on the tests and other assignments. **You must take responsibility for your own grade!** As your instructor, my job is to provide you with the information you will need to know and

understand. I will try my hardest to do this through clear and interesting presentations of the material. Your job as a student is to learn it, use it, and understand it. If you are having difficulty doing this, **it is your responsibility to seek help**. Ask questions, come to my office hours, talk to other students—whatever is necessary to help you learn the information. Do NOT wait until the end of the semester to get help!

**Policy on Extra Credit.** (NOTE: I usually do NOT offer extra credit so this section is only applicable IF extra credit is offered.) My policy on extra credit is that it is “extra” credit offered to students who have already completed all of the regular credit. This means that if an appropriate extra credit opportunity comes up, **only those students who have completed ALL the regular credit (i.e. they haven’t missed any assignments or have any unexcused absences) will be eligible to complete the extra credit.**

**Policy on Cheating.** Santa Barbara City College has a strict policy on academic honesty and I maintain a **zero tolerance for any act of academic dishonesty.**

**Academic dishonesty**, as defined by myself and SBCC, **includes**, but is not limited to: **cheating on a test (e.g. looking at or copying from someone else’s test, talking to someone during a test, using cell phones or texting, bringing prepared “cheat sheets”, studying from old versions of the test or getting answers to a test from another student who has previously taken the test, using any type of translator or dictionary), copying someone else’s work or answers on worksheets or assignments, plagiarism, or submitting a paper or essay in which any part is written by someone else.**

**ALL instances of academic dishonesty will be reported** to the academic dean for institutional action. In addition, the dishonest student will receive a zero score for the test/paper/assignment on which the cheating occurred.

**Students with Disabilities.** Disabled Student Programs and Services (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have, or think you might have, a disability that impacts your educational experience in this class please contact DSPS to determine your eligibility for accommodations. (NOTE: This also includes students who are requesting to bring service animals into classes. The animals will be registered in DSPS. The procedure also includes requests to bring into classes personal service attendants who are not SBCC employees.) DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is 805-730-4164.

If you are already registered with DSPS please submit your accommodation requests via the ‘DSPS Online Services Student Portal’ as soon as possible. Once submitted and confirmed please visit with me about your specific accommodations.

Please complete this process in a timely manner to allow adequate time to provide accommodation.

**Student Learning Outcomes (SLO’s).** Upon successful completion of this course, students will be able to:

1. Lab - Use critical thinking skills to apply the Scientific Method, specifically to the collection and analysis of data and the development and testing of hypotheses.

2. Working Cell - Distinguish major groups of organisms based on cellular structure, acquisition of energy, and reproduction.
3. Evolution - Recognize evolution as the central paradigm of Biology, and explain how traits observed in living and extinct organisms are the result of natural selection and other evolutionary processes and serve to illustrate the ancestral relationships among all organisms.
4. Genetics - Define the relationships among DNA, genes, and the expression of traits in organisms. Describe the mechanisms by which genetic information is transmitted during reproduction.
5. Ecology - Recognize ecological relationships between organisms and their environment. Relate relevant topics in biology to the human experience and our impact on the natural world.