Biol 100: Concepts of Biology
Instructor: Michelle Berman Kowalewski
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Office hours: M, W 10:00-11:00 and by appointment

Lecture: EBS 309
Labs: all labs are in EBS 202
CRN: **54944 meets Tuesdays at 7:50 am**
54946 meets Tuesdays at 11:10 am
58354 meets Thursdays at 11:10 am

Textbook: Open Stax biology edition - Biology 2e - OpenStax This is a free text book with limited printed copies in the bookstore.

Lab manual: Your lab manual, **Biology 100 Concepts of Biology Laboratory Studies**, includes all content you will need for the lab portion of the course.

Course overview*:* Welcome to Bio 100. This course is an introduction to the diversity of life on earth and life's levels of complexity. The course is intended for non-biology majors, and my goal as your instructor is to help you achieve a good understanding of the basic principles of life on earth. I also hope that you will develop a lifelong appreciation of biology – you will see for yourself that understanding biology makes the world a much more interesting place. Upon successful completion of this course, students should be able to:

1. 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. Distinguish major groups of organisms based on cellular structure, acquisition of energy, and reproduction.
3. 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. 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. Recognize ecological relationships between organisms and their environment. Relate relevant topics in biology to the human experience and our impact on the natural world.

This course satisfies the SBCC general education requirement in Natural Sciences, and is transferable to both UC and CSU as a general education laboratory science course. This course does not apply toward the Biology major at SBCC.

Course Requirements and Expectations: **You are required to enroll in and attend both the lecture and lab portions of this course to receive course credit**. You are expected to attend every class meeting. If you miss a class, it is *your responsibility* to obtain information and materials dispensed in that class period **from a classmate**. If you miss more than two labs or three lectures, you may be dropped from the course.

Disruptive behavior will not be permitted in lecture or lab. Your instructor will determine what constitutes disruptive behavior at his/her discretion, and disruptive students may be asked to leave. Here are some general rules:

- Arrive to class on time, and do not leave early. Do not leave class and reenter during lecture.
- No use of cell phones, ipods, or other electronic devices during lecture or lab.
- You must receive special permission from the instructor to use a computer or other electronic device during lecture or lab. Computers are only to be used for taking notes.
- Do not converse with your classmates (or yourself!) while the instructor or other presenter is addressing the class. If you have a question or discussion item, please raise your hand.
- Be respectful of your instructor, college staff, and your fellow students.

Course Assignments:

Assignments	Points	% of course grade
Exam 1;	100	12.5 %
Exam 2;	100	12.5 %
Final Exam;	200	25 %
Lecture quizzes/activities	5 @ 10 pts. each = 50	6 %
Lab pre-quizzes	10 @5 pts. Each = 50	6%
Lab quizzes	10 @ 15 pts. each = 150	19 %
Lab assignments	15 @ 10 pts. each = 150	19 %
Total	800	100 %

Exams: Exams will primarily cover lecture material, although there may also be questions from labs and assigned text. I will go over exam structure as we approach each exam.

Exam Make up policy: I understand that sometimes unforeseen conflicts with exam times may arise. If you have a conflict or think you will have to miss an exam, contact your instructor **as soon as you become aware of a potential conflict** to see if we can arrange an alternative plan. I will consider each case individually and a make up exam is NEVER guaranteed. **Unless I hear from you prior to the exam and approve a request to take the exam on an alternative date, you will only be able to make up a missed exam if you have a *note from a hospital or doctor* stating that emergency circumstances beyond your control kept you from taking the exam.**

Lecture quizzes: There will be six unscheduled lecture quizzes or activities, which may include homework assignments. In-class quizzes/activities will address material covered in the previous and/or current lecture period or homework assignments. *Hint: Take good notes, and bring your class notes and assignments to lecture.* **There will be no make-ups**. Your lowest lecture quiz/activity grade will be dropped.

Lab pre-quizzes: There will be ten lab pre-quizzes worth 5 points each. These will be posted on canvas the for one week, prior to the lab. You must take the pre-quiz before coming to lab; it will be closed once lab begins. You may use your lab notes for this assignment. There will not be any make-ups or dropped quizzes for the pre-quiz.

Lab quizzes: There will be eleven lab quizzes that will generally take place in the first ten minutes of lab. You must attend lab to take the quiz. Each quiz is worth 15 pts. Your lowest lab quiz will be dropped. Quizzes will generally cover material from the previous weeks' labs as well as preparatory material for the current week's lab. Make sure you have correctly answered all questions before you leave lab each week – you may be quizzed on these the following week. Read each week's lab prior to the beginning of lab, so that you are aware of what to expect. If you arrive to lab late, you will have only what remains of the ten minute quiz period to complete the quiz. **There will be no quiz make-ups. If you miss a lab quiz, you miss those 15 points.**

Lab assignments: Lab is an integral part of this class. You may not take the final if you miss more than 3 labs. Therefore, you will not be able to pass the class without completing the labs as well. Lab assignments are to be turned in at the beginning of lab on the day that they are due. Completed lab assignments are sometimes graded at the end of the lab period, and are sometimes due at the beginning of the following week's lab.

Turn in assignments ON TIME: Assignments turned in late will be assessed a 10% penalty per day late. No assignments will be accepted after a week past their due date.

Your success*:* I want you to do well in this course. Please email or come see me if you have any questions or problems with the course, assignments, anything to do with your experience here at SBCC, or if you just want to chat. It is my job to help you succeed. If I am not able to help you, I will try to put you in touch with someone who can. Also, don't think that you should wait until a problem arises to come see me or talk to me. Come anytime, no question is too small – students that attend class regularly and keep an open line of communication with the instructor typically perform better in the course. You should take advantage of opportunities to talk with your professors – we're here to help you learn!

Pipeline: If you have not already done so, you should log into and familiarize yourself with Pipeline immediately. Your first assignment, the Learning Resources Worksheet, will guide you through this. I will use Pipeline to communicate with you via email, as well as post announcements, course documents and relevant links, so please access Pipeline regularly. To log into Pipeline: Go to the SBCC homepage (www.sbcc.edu) and click on "Pipeline". **If you have difficulty accessing or using Pipeline, fill out the Online Help Support form at http://www.sbcc.edu/support/contact/ or call 805-965-0581 (ext. 2949).**

Academic honesty: Academic dishonesty (including plagiarism) will not be tolerated in this course. Refer to SBCC's academic integrity statement (directions to website are on your Learning Resources Worksheet) for standards of conduct and penalties. ***All work submitted must be your own.***

Students with special needs:
Accommodations for 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. 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.

SBCC students with verified disabilities who are requesting academic accommodations should use the following procedure: (Please note that this procedure also applies to student requests to bring personal service attendants and/or service animals into class.) **Step 1:** Obtain documentation of your disability from a licensed professional. You may contact DSPS to request a Disability Verification Form. **Step 2:** Make an appointment to meet with a DSPS Specialist to review your documentation and discuss reasonable accommodations. To schedule a meeting, please call DSPS at (805) 730-4164. **Step 3:** Bring your disability documentation to your DSPS appointment. The DSPS office is located in room 160 of the Student Services building. **Step 4:** Each semester, reach written accommodation agreement with the DSPS Specialist and your instructor.

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

Lecture and Lab schedule. This schedule is subject to change by the instructor. However, every effort will be made to adhere strictly to the exam and assignment due dates given here. Updates to this schedule and/or reading assignments will be communicated in lecture and/or through email.

Week	Dates	Topics	Lab	Assignments
1	Jan 24-26	Introduction; The Scientific Method; Cell theory; Cells	Scientific Method	
2	Jan 31 - Feb 2	Eukaryotic Cells and Chemistry	Microscopes and Cells	**Pre-Lab Quiz 1** - Osmosis and Diffusion
3	Feb 7-9	Biomolecules, Energy and Cellular Transport	Movement of Molecules: Diffusion and Osmosis	**Pre-Lab Quiz 2**- Cellular Respiration **Lab Quiz 1** -Cells and Microscope
4	Feb 14-16	Cellular Respiration	Cellular Respiration and Enzymes	**Pre-Lab Quiz 3** - Scientific Method **Lab Quiz 2** - Diffusion and Osmosis
5	Feb 21-23	**EXAM 1** and Photosynthesis	Scientific Method presentation	**Pre-Lab Quiz 4** - Genetic and Heredity **Lab Quiz 3** -Cellular Respiration
6	Feb 28 - Mar 2	Mitosis and Meiosis; Genetic Anomalies	Genetics and Heredity	**Pre-Lab Quiz 5** - Transformation
7	Mar 7-9	DNA Replication	Biotechnology - Transformation	**Pre-Lab Quiz 6** - Electrophoresis **Lab Quiz 5** - Genetics and Heredity
8	Mar 14-16	Evolution and Natural Selection; Speciation	Biotechnology - DNA Fingerprinting	**Pre-Lab Quiz 7** - Evolution and Natural Selection **Lab Quiz 6** - Transformation
9	Mar 21-23	Biological Diversity	Evolution and Natural Selection	**Pre-Lab Quiz 8** - Plant Biology **Lab Quiz 7** - DNA Fingerprinting
	Mar 28-30	**Spring Break**		
10	Apr 4-6	EXAM 2	Plant Biology	**Pre-Lab Quiz 9** - Botanic Gardens **Lab Quiz 8** - Evolution and Natural Selection
11	Apr 11-13	Ecology and Population	Santa Barbara Botanic Gardens	**Lab Quiz 9** - Plant Biology
12	Apr 18-20	Anatomy/Physiology; Respiration and Circulation	Santa Barbara Museum of Natural History	no lab quizzes
13	Apr 25-27	Nervous System and Reproduction	Rocky Intertidal (on-line lab)	**Lab Quiz 10** - Field Trips
14	May 5-4	Summary	Sandy Beach Ecology and Biodiversity	**Pre-Lab Quiz 10** - Sandy Beach Ecology
15	May 9-11		Physical Fitness	**Lab Quiz 11** - Sandy Beach
FINAL	18-May			

Final Exam: **Thursday, May 18th 2:00 - 4:00 pm**

Grade Chart. Here's a chart to help you keep track of your grade. To calculate your grade throughout the semester, add up all the points you have earned and divide that by all the points that have been offered for those assignments. For example, if I got 80 out of 100 on Exam 1, 9 out of 10 on Lecture Quiz #1, 10 out of 10 on the Learning Resources Worksheet, and 7 out of 10 on Lab 1, I would add all my earned points (80+9+10+7) and divide by all the points offered for those assignments (100+10+10+10). This would give me 106 divided by 130, which equals .81. Multiply this number by 100 for your percentage score (in this example, the score is 81%).

Lecture grades:	Points earned / Points offered	Lab grades:	Points earned / Points offered
Exam 1	____ / 100	Lab 1	____ / 10
Exam 2	____ / 100	Lab 2	____ / 10
Final Exam	____ / 200	Lab 3	____ / 10
		Lab 4	____ / 10
		Lab 5	____ / 10
		Lab 6	____ / 10
		Lab 7	____ / 10
Lecture quiz 1	____ / 10	Lab 8	____ / 10
Lecture quiz 2	____ / 10	Lab 9	____ / 10
Lecture quiz 3	____ / 10	Lab 10	____ / 10
Lecture quiz 4	____ / 10	Lab 11	____ / 10
Lecture quiz 5	____ / 10	Lab 12	____ / 10
Lecture quiz 6	____ / 10*	Lab 13	____ / 10
		Lab 14	____ / 10
		Lab 15	____ / 10
Lab pre-quiz 1	____/5	Lab quiz 1	____ / 15
Lab pre-quiz 2	____/5	Lab quiz 2	____ / 15
Lab pre-quiz 3	____/5	Lab quiz 3	____ / 15
Lab pre-quiz 4	____/5	Lab quiz 4	____ / 15
Lab pre-quiz 5	____/5	Lab quiz 5	____ / 15
Lab pre-quiz 6	____/5	Lab quiz 6	____ / 15
Lab pre-quiz 7	____/5	Lab quiz 7	____ / 15
Lab pre-quiz 8	____/5	Lab quiz 8	____ / 15
Lab pre-quiz 9	____/5	Lab quiz 9	____ / 15
Lab pre-quiz 10	____/5	Lab quiz 10	____ / 15
		Lab quiz 11	____/ 15*

* When calculating your grade, don't forget to drop your lowest lecture and lab quiz scores in the final calculation.

Your grade: Your final grade will be based on the number of points you have earned over the course of the semester. The percentages corresponding to letter grades in the grading chart below are minimum guarantees. For example, if you earn 90-100% of all possible points, you are guaranteed an A. You are responsible for knowing where you stand in the course. I recommend you keep all graded assignments I return to you. **Use the chart on page 5 to help you keep track of your grade.**

Final Grade Determination

Course grade	Percentage of total points	Number of points earned
A	90-100%	720-800
B+	87-89%	696-719
B	83-86%	664-695
B-	80-82%	640-663
C+	77-79%	616-639
C	70-76%	560-616
D	55-69%	440-559
F	0-54%	