

Dr. Jennifer Maupin

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Office hours: MW 11:05-12:30; T 2:30-3:30; R 8:30-9:20; and by appointment

CRN 64094 Lecture: 9:35-10:55 am MW; EBS 301

**Textbook: The Tangled Bank; An Introduction to Evolution, 2<sup>nd</sup> ed**, by Carl Zimmer. I recommend that you skim assigned chapter sections before coming to class and then refer back to specific topics after the lecture on that material. Throughout the semester, I will assign readings additional to those in the textbook. Links to these readings or pdfs will be posted at the course site in Canvas.

**Online Course Materials:** You will need to purchase access to up to two online simulations course assignments. The cost is approximately \$12 to 15 per student.

**Course overview:** Welcome to Biol 112, Evolution and Adaptation. The great biologist Theodosius Dobzhansky once said “Nothing in biology makes sense except in the light of evolution.” Today, evolution is considered to be the core theme of biology – the idea that unifies the study of life and makes sense of our observations of diverse natural phenomena. This course is an introduction to concepts of biological evolution, evolutionary processes, and major events in the evolution of life on earth. Upon successful completion of this course, students should be able to:

1. Describe principles of evolution.
2. Correlate historical events with advances in the understanding of evolutionary processes.
3. Describe the underlying genetic basis of inherited characteristics.
4. Solve elementary problems of Mendelian genetics and population genetics.
5. Explain the underlying bases of classification and taxonomy.
6. Describe the functional design of major taxa of each of five kingdoms with special emphasis on trends of vertebrate evolution.
7. Describe the trends of evolution within the major lineages.
8. Describe the chemical evolution of Universe & scientific theories relating to the origin of life.
9. Provide an annotated time scale of the history of life on Earth.

*This is a three unit non-major's biology course that satisfies the SBCC General Education requirement in Natural Sciences. This course is transferable to the UC & CSU as a general education life science course. Biol 112 satisfies a department requirement for an AA degree in Natural History, but does **not** count toward the AA in Biological Sciences.*

**Course Requirements and Expectations:** 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 three lectures, you may be dropped from the course.

**Inclusiveness:** The SBCC community supports ALL students without regard to race, ethnicity, religion, national origin, immigration status, age, gender identity, sexual orientation, language, socioeconomic status, medical status or disability. As your instructor, I am committed to upholding these ideals to the best of my ability. If you face discrimination or aggression inside or outside of the classroom I encourage you to come to me and I will help you identify resources and determine a plan of action. I am here to fully support you in your scholastic, professional, and personal growth. You can read the details of the official SBCC statement here: [http://www.sbcc.edu/boardoftrustees/files/board\\_resolutions/Resol%2017%20Student%20Success%20Support%20for%20all%20Students.pdf](http://www.sbcc.edu/boardoftrustees/files/board_resolutions/Resol%2017%20Student%20Success%20Support%20for%20all%20Students.pdf)

**Classroom Community Rules:** In order to achieve a positive learning environment for all, there are some rules that we need to observe as a class. Individuals engaging in disruptive or distracting behavior, as determined by the instructor, may be asked to leave. Here are some general guidelines:

- Arrive to class on time, and do not leave early. Do not leave class and reenter during lecture.
- Do not use cell phones, ear buds, or other electronic devices during lecture or lab.
- **You must receive special permission from the instructor to use a computer or tablet during lecture or lab.** Approved computers or tablets 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; Wed, Feb. 13	100	11 %
Exam 2; Wed, March 13	100	11 %
Fin Exam; Mon, May 6, 8 am	150	22 %
Learning Resources Worksheet	1 @ 10 pts. each = 10	2 %
Lecture quizzes/activities	5 @ 10 pts. each = 50	8 %
Homework or online assignments (announced)	5 @ 25 pts. each = 125	19 %
Group Presentation and associated assignments	125	19 %
Total	660	100 %

**Exams:** Exams will primarily cover lecture material, although there may also be questions from assigned readings, homework, and online activities. I will go over exam structure as we approach each exam.

**Exam Make up policy:** I understand that sometimes unforeseen conflicts with exam times 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/activities:** There will be six unscheduled lecture quizzes or activities, which may have homework components. In-class quizzes/activities will address material covered in the previous and/or current lecture period or homework assignments, and you will be allowed to use your notes. *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.

**Homework or Online Assignments:** Throughout the semester, I will assign five homework or online exercises to be completed and turned in on the announced date. You will have at least one week from the day they are assigned to complete each of these assignments.

**Group Presentation:** Students will prepare presentations on their chosen topics as groups and present an abstract, annotated bibliography, and lesson on their topics to the entire class. Groups of 2-3 students will be determined by Week 7 of the semester, and topics will be chosen by Week 8. I will give out a detailed assignment description and list of potential topics by around Week 6. Most topics will be related to key

evolutionary transitions in the history of life. Grades will be based both on quality of the group work and individual contributions. **Each student will get their own individual grade, based on their contributions.**

**Turn in assignments ON TIME:** Assignments are due **at the beginning of class** (9:35!) on their due date. Assignments turned in during or after class on the day that they are due will lose 10% of pts, and **an additional** 10% penalty will be assessed for each day that the assignment is overdue. No assignments will be accepted after a week past their due date.

**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. You should 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%	594 - 660
B+	87-89%	574 - 593
B	83-86%	548 - 573
B-	80-82%	528 - 547
C+	77-79%	508 - 527
C	70-76%	462 - 507
D	60-69%	396 - 461
F	0-59%	0 - 395

**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!

**Course Communication:** I will communicate with the class using Canvas Announcements and the Canvas course page. Your first assignment, the Learning Resources Worksheet, will guide you through this. Check Canvas communication regularly (daily).

**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.**

**Accommodations for Students with Disabilities:** Disability Services and Programs for Students (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, contact DSPS to determine your eligibility for accommodations.

DSPS is located in the Student Services (SS) Building, Room 160. Their phone number is [805-730-4164](tel:805-730-4164). If you have already registered with DSPS, please submit your accommodation requests via the **'DSPS Online Services Student Portal'** as soon as possible. This needs to be done each semester. *If you have any questions or concerns about your accommodations, please make an appointment with a DSPS Counselor.*

Complete this process in a timely manner to allow adequate time to provide accommodations.

**Lecture 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. Unannounced Lecture Quizzes/Activities are not on this schedule, nor are Homework or Online assignments (due date to be announced). Updates to this schedule and/or reading assignments will be communicated in lecture and/or through Canvas.

Week	Dates	Lecture Topics, Assignments, Exams	Textbook Reading
1	Jan. 14 & 16	Introduction; What is Science? What is Evolution? History of Evolutionary Thought	Chapters 1, 2
2	Jan. 21 & 23	<b>Mon: Martin Luther King Jr. Day; no lecture</b> Wed: Biodiversity; The Fossil Record <b>Learning Resource Worksheet due</b>	Chapters 3
3	Jan. 28 & 30	Biodiversity, <i>cont.</i> Life's Origins; Taxonomy: Classification & Phylogenetic Trees	Chapters 3, 4
4	Feb. 4 & 6	Molecules of Life; Genetics & Heredity	Chapter 5
5	Feb. 11 & 13	Mon: Evolution's Mechanisms: Natural Selection and Sexual Selection <b>Wed: Exam 1</b>	Chapter 6
6	Feb. 18 & 20	<b>Mon: Presidents' Day; no lecture</b> Evolution's Mechanisms, <i>cont.</i> : Selection, Drift, and Mutation; Molecular Evolution	Chapters 6, 7
7	Feb. 25 & 27	How Variation Arises; Evolution of New Species <b>Wed: Turn in names for group projects</b>	Chapters 8, 10
8	March 4 & 6	Evolution of New Species, <i>cont.</i> Sex and Relationships; Why Sex? <b>Wed: Group Presentation topics due</b>	Chapters 10, 9
9	March 11 & 13	Sex and Relationships, <i>cont.</i> <b>Wed: Exam 2</b>	Chapter 9
10	March 18 & 20	Macroevolution: Radiations and Extinctions Major events in history of life	Chapter 11
	March 25 – 29	<i>Spring Break – no class</i>	
11	April 1 & 3	Coevolution; Species interactions	Chapter 12
12	April 8 & 10	The Evolution of Behavior <b>Wed: Group Presentation Abstract Due</b>	Chapter 13
13	April 15 & 17	Human Evolution	Chapter 14
14	April 22 & 24	<b>Group Presentations</b>	
15	Apr 29 & May 1	<b>Group Presentations;</b> Evolution and Disease	Chapter 15

**Final Exam: Monday, May 6<sup>th</sup>, 8 am, EBS 301**