Biol 101: Plant Biology

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Student Hours (EBS 321): Mon 11-12, Thurs 10-11;
or by appointment in person or via Zoom
Lecture: 9:35-10:55 am M & W; EBS 309
Labs: (all labs are in EBS 201)
CRN 30936: Wed 11:10-2:15
CRN 39126: Thurs 11:10-2:15
CRN 42967: Thurs 2:30-5:35

Welcome to Plant Biology! Life's diversity is vast, and organisms are complex. In this course, we will spend most of our time talking about plants, but will also explore bacteria, algae, and fungi - pretty much every group of living things besides animals! We will examine the structure and function of these organisms, in addition to their evolution, ecological relationships, and special importance to our lives. I am excited that you are here at SBCC and taking this class. It is my goal to foster your curiosity in the natural world and help you connect biological concepts toward a deeper understanding of life.

This course is required for the Biological Sciences major and satisfies the SBCC General Education requirement in Natural Sciences.

Student Hours: **Mon 11-12, Thurs 10-11, and by appointment:** During Student Hours, I am available in my office for appointments or drop-ins. If these times do not work for you, let me know and we can set up an appointment at another time. **My office is EBS 321.**

Your Success:
I want you to do well in this course. The material and workload are challenging, but I am confident that you can thrive. Time management will be key, as is forming relationships with your classmates. Please email or come see me if you have any questions about 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.

Student Learning Objectives:
Upon successful completion of this course, students should be able to:

- Explain the anatomy and morphology of plants and plant-like organisms as well as the functional characteristics of these organisms including their physiology and adaptation to the environment.
- Describe the diversity of existing and fossil plants and plant-like organisms including lifecycles and relationships with one another.
- Discuss, from a scientific perspective, the molecular nature of living organisms including their chemical composition, replication, and growth.

How I will communicate with you: I will use Canvas and your Pipeline email for class communication. Check these regularly (at least daily) to receive important course announcements. I recommend you set the *Notifications* in Canvas to have Announcements, Submission Comments, and Conversation Messages sent to your email and/or phone, so you get time-sensitive information quickly. I will post assignment grades in Canvas, as they are available.

How to contact me: The best way to reach me is through email (jlmaupin@pipeline.sbcc.edu) or via Canvas Conversations. To access Canvas Conversations, select the Inbox icon on the left panel of

Canvas. My office phone number is (805) 730-4196, but I am often out of the office (in class) during working hours. Of course, you can always come see me in Student Hours as well!

Course Materials:

Textbook: *Raven Biology of Plants.* *Ray Evert, Susan Eichhorn. 8th Ed.*
This textbook is a supplement to lecture material, and I recommend that you skim relevant chapter sections before lecture or lab then refer back to the book for help as needed while you study. There is much more information in the book than you are expected to know – it can seem quite overwhelming! Don't worry, though: You are not responsible for material from the textbook that is not covered in lecture or specifically mentioned in lecture or lab materials.

There are copies of this textbook available in my office, as well as in the Biology Office, EBS 212, should you like to use them. If you are unable to obtain access to a textbook due to financial or other reasons, please ask me about loan options.

Lab manual: Your **Plant Biology Lab Manual** is available in the SBCC bookstore. Because this contains the fundamental information you will need for lab each week, plan to bring your lab manual to your lab class. I recommend you get a 3-ring binder for your lab manual and use this to help ensure you have the pages you need each week.

Course attendance: You are required to attend both the lecture and lab portions of this course to receive course credit. If you have to miss a lecture, I suggest you reach out to a classmate to get a copy of the notes and materials from that class. You must attend labs in order to get credit for lab completion. If you are unable to attend a lab due to illness or other unavoidable circumstances, please contact me as soon as possible (*and prior to your lab time*) to discuss make up options. Because course material builds on itself, regularly attendance is necessary in order to succeed.
If you miss more than two labs or three lectures, you may be dropped from the course.

Yes, you belong here! 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.

Classroom Community Agreements: A positive learning environment is important for the success of us all. If you engage in behavior that is disruptive or distracting, you may be asked to change the behavior, or (as a last resort) to leave. Here are some general guidelines:

- Make every effort to enter class on time. If you arrive late, or leave and re-enter, please do so quietly.
- Remove earbuds or headphones during class times.
- **If you wish to use a computer or tablet during lecture or lab, please check in with your instructor first.** Computers or tablets are only to be used for coursework/taking notes.
- Please 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.
- Show respect to all others in our community.

Course Assignments:

Assignments	Points	% of grade
Exam 1; Wednesday, Oct 4	120	15 %
Exam 2; Wednesday, Nov 1	120	15 %
Fin Exam; Wed, Dec 13, 8 am	120	15 %
Syllabus Quiz & Student Survey	10	2 %
Lecture Assignments	70-80	10 %
Research Summary	50	6 %
Lab quizzes	14 @ 10 pts. each = 140	18 %
Lab assignments	15 @ 10 pts. each = 150	19 %

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.

Lecture Assignments: There will be multiple assignments such as discussions, online work, and open-note quizzes scattered throughout the course for a total of 70-80 pts. Some of these assignments will be completed during our lecture period, and attendance at lecture is required in order to complete them.

Research Summary: Using published scientific studies, you will research a topic in plant biology and write a short (3-5 page) summary of your findings. Your research summary is due in Week 12, and topics and more information will be given in Week 6.

Lab quizzes: There will be proctored online Lab Quizzes each week, worth 10 points each. Your lowest lab quiz score will be dropped.

Lab assignments: Completed lab assignments are usually graded at the end of the lab period, but are sometimes due at the beginning of the following week's lab. Plan to come to lab prepared, finish your lab within the 3-hour lab time, and be given a grade before leaving lab.

Late work: If you need to turn in an assignment late due to extenuating circumstances, please reach out to your instructor (me) prior to its due date to ask for an extension. Without prior arrangement, you will lose 10% of points per day (or part of a day) late. I understand that unforeseen events and circumstances out of your control sometimes arise, and I want you to reach out if you need deadline adjustments. I do, however, expect you to plan ahead and arrange your schedules reasonably so that you can complete your work each week.

Exams and Lab Quizzes close at their due date/time: If you have a conflict or think you will have to miss an exam or quiz, contact me when you become aware of the potential conflict to work with me on an alternative plan. It is important that I hear from you prior to the exam/quiz to arrange for a make up option or extension. If emergency circumstances have prevented you from reaching out prior to the due date/time, please email me so we can discuss your situation and determine how best to proceed.

Academic honesty: Academic honesty is of fundamental importance in the sciences, and in this course. Scientific data is powerful only if there is confidence in its integrity. Refer to SBCC's academic integrity statement (posted in the *Getting Started* module in Canvas) for standards of conduct and consequences of violating the policy. ***All work submitted must be your own.*** If a submitted assignment, quiz, or exam does not meet these standards, it will receive a score of zero. Please reach out to me if you have any questions about how to ensure your work is free of plagiarism.

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 listed below are ***minimum guarantees***. For example, if you earn 90-100% of all possible points, you are guaranteed an A. I recommend you keep all graded assignments I return to you.

Course grade	Percentage of total points
A	92-100%
A-	90-91.9%
B+	87-89.9%
B	83-86.9%
B-	80-82.9%
C+	77-79.9%
C	70-76.9%
D	55-69.9%
F	0-54.9%

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 can be reached by phone or email. The phone number is 805-730-4164 or send email to dsps@sbcc.edu.

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, make an appointment with a DSPS Counselor. Please complete this process in a timely manner to allow adequate time to provide accommodations.

Sexual Misconduct/Title IX

Sexual Misconduct and gender discrimination is not tolerated at SBCC. Title IX is the law that prohibits this kind of behavior. Please contact our Title IX Coordinator, Linda Esparza Dozer, if you have questions, or concerns about an incident, our reporting procedures, resources available to survivors, or if you just want to talk. Contact Linda at lmesparza@pipeline.sbcc.edu, 805.730.4303, or in A122, More information as well as training opportunities are also available on the college's Title IX website: http://www.sbcc.edu/titleix/.

TENTATIVE COURSE SCHEDULE IS ON THE FOLLOWING PAGE

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 Canvas or email.

Week	Lecture Dates	Lecture	Textbook Pages	Lab
1	Aug 28 & 30	Course Intro; What is Science?; The Diversity of Life; Start Cells	Chapter **1**, and pages 234-235; 243-250	Lab 1: Intro, Campus Walk, DNA Isolation
2	Sept 4 & 6	***Monday holiday: No Lecture*** Plant Diversity; Plant Cells: Mitosis; Start Chemistry of Life ***Wed: Syllabus Quiz Due***	Chapter **3** and pages 246-249	Lab 2: Microscopes and Cells
3	Sept 11 & 13	Chemistry of Life DNA and Genetics	Chapter **2** Chapters **8, 9**	Lab 3: Mitosis and Genetics
4	Sept 18 & 20	Plant Tissues Plant Roots Cellular Respiration	Chapter **23** (538-555) Chapter **24** (558-576) Chapter **5** (95-96, 99-105); Chapter **6**	Lab 4: Plant Tissues, Roots, and Respiration
5	Sept 25 & 27	Wed: Leaves, Photosynthesis Stems	Chapter **25** (590-604, 607-612) Chapter **7** Chapter **26** (583-588, 614-634)	Lab 5: Leaves and Photosynthesis
6	Oct 2 & 4	Stems, cont. **Wed: Exam 1**		Lab 6: Plant Primary Stems, Secondary Growth, and Nutrients
7	Oct 9 & 11	Water and Solutes Hormones Evolution	Chapter **4** Chapter **27** (638-655) Chapter **11** (209-230)	Lab 7: Osmosis, Diffusion, and Plant Growth Regulators
8	Oct 16 & 18	Speciation and Classification; Prokaryotes	Chapter **11** (220-230) Chapter **12** (236-248) Chapter **13** (256-270)	Lab 8: Bacteria
9	Oct 23 & 25	Fungi: Diversity, Life Cycles, Ecological Roles	Chapter 14 (278-285, 288-315) Chapter **15** (360-365)	Lab 9: Fungi, Lichens, and Slime Molds
10	Oct 30 & Nov 1	Mon: Algae **Wed: Exam 2**	Chapter **15** (326-333, 335-360)	Lab 11: Botanic Garden Field Trip
11	Nov 6 & 8	Seedless Vascular Plants Plant Ecology	Chapter **12** (250-254) Chapter **16** Chapter **17**	Lab 10: Algae
12	Nov 13 & 15	Gymnosperms and Seeds Fire Ecology	Chapter **18**	Lab 12: Chaparral Community Field Trip
13	Nov 20 & 22	Angiosperms: Flower Structure, Pollination Biology, Fruits, Seed Dispersal	Chapter **19** Chapter **20**	Lab 13: Spore-Producing Plants (online)
14	Nov 27 & 29	Plant- Animal Interactions	Parts of Chapter 20	Lab 14: Meiosis and Gymnosperms
15	Dec 4 & 6	Conservation Biology		Lab 15: Angiosperms

Final Exam: Wed, Dec 13, 8 am, EBS 309