

Basic Course Information

Semester:	Spring 2019	Instructor Name:	Dr. Steven Crum
Course Title & #:	General Botany- Biol 140	Email:	steven.crum@imperial.edu
CRN #:	21375	Office #:	2789.1
Classroom:	2732	Office Hours:	M, W 4:05 pm to 4:35 pm and T, R 12:50 pm to 1:20 pm or by appointment
Class Dates:	February 12 to June 6	Office Phone #:	760-355-6438
Class Days:	Tuesday and Thursday		
Class Times:	8:00 AM to 9:25 AM		
Units:	3		

Course Description

This introductory course covers the general principles of botany. The emphasis is on morphology, physiology, development, identification, systematics, ecological functions and the human uses of plants. Field trip(s)/activities are included within the course. (CSU, UC)

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Identify an important issue in botany, conduct research via literature, interviews with experts and hands-on projects, and clearly communicate content learned about the project by writing a research paper. (ILO1)
2. Use systems thinking to explain how a selected topic in botany interconnects with global communities, ecosystems or human societies and cultures. (ILO5)

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Identify plant structures and relate them to the functions of photosynthesis, transpiration, nutrient acquisition and hormone production.
2. Use a basic dichotomous key to identify common plants.
3. Describe the general taxonomic and evolutionary relationships within and among plant, photosynthetic protistan and fungal taxa.
4. Describe and contrast life cycles within and among plant, photosynthetic protistan and fungal taxa.
5. Describe how plants interact within and among biological populations and communities.
6. Describe how plants drive processes that occur within ecosystems including nutrient cycling, energy flow and maintenance of biodiversity.
7. Recognize common native plants and describe their economic, cultural and ecological functions.
8. Describe the agricultural, commercial, medicinal and cultural uses of plants.

Textbooks & Other Resources or Links

Books may be purchased at the campus bookstore or online.

Required:

- Bidlack, James E. 2017. *Stern's Introductory Plant Biology* 14. New York, NY. McGraw-Hill ISBN: 978-1259682742.
- Pavlik, Bruce M. 2008. *The California Deserts: An Ecological Rediscovery*. University of California Press ISBN: 978-0520251458

Course Requirements and Instructional Methods

This course consists of lectures, hands-on activities, a field trip, an essay and a group project.

Exams: The course will include three cumulative exams and one cumulative lecture final exam. There are no "make-up" exams except for excused illnesses.

In-class assignments: All lectures include in-class assignments worth 5 points each. While you will not be graded on attendance, you will be graded on these in-class activities. These activities provide you with low-stakes opportunities to assess your knowledge and study skills in the course.

Computer-based assignments: Each lecture may require the use of a computer to complete in-class assignments. If you do not have a laptop or tablet one will be provided for you.

Quizzes: There will be a quiz every Thursday that covers concepts from *The California Deserts: An Ecological Rediscovery*. Each quiz is worth 4 points.

Homework: Homework will be collected at the beginning of class most Tuesdays. Each assignment is worth 5 points. See "Homework Schedule" for assignments. Homework assignments will not cover every chapter, so I encourage you to complete problems not assigned. No late homework is accepted.

California desert native plant paper and mini presentation: Each student will write a paper of minimum length 2 pages (12 pt font, double spaced, 1" margins, not counting references) on the human uses and ecology of a California native desert plant. Additionally, each student will present a two slide PowerPoint presentation on their findings. Papers may be submitted in printed form or as an email attachment of a Word, PDF, or Google Document file. Slides will be emailed to the instructor. No late work is accepted. Due on 4/18

Field trip: We will have one field trip to survey native desert plants at Ocotillo, Ca. This field trip will be on a Saturday and is optional. All attendees will receive 10 extra credit points.

Group Presentation: Groups composed of four students will be established after our field trip. Each group will develop a 10 minute presentation on the ecology and human use of any plant found our field trip. Advice will be provided in during class.

The California Deserts extra credit: After reading pages 253-304, write a one page, double spaced, paper on what you think is the biggest threat to the California Deserts. Due on 5/30 (5 points extra)

Course Grading Based on Course Objectives

Exams	3 x 35 points	105 points
Final	1 x 70 points	70 points
In-class assignments	27 x 5 points	135 points
Quizzes	9 x 4 points	36 points
Homework	13 x 5 points	65 points
California desert native plant paper		25 points
California desert native plant mini presentation		10 points
<u>Group presentation</u>		<u>15 points</u>
Total:		461 points

Grades are assigned using the following percentage cutoffs:

A ≥ 90%; B ≥ 80%; C ≥ 70%; D ≥ 60%; F < 60%

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- **Plagiarism** is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- **Cheating** is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Additional Student Services

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **CANVAS Learning Management System.** Canvas is Imperial Valley College's main Learning Management System. To log onto Canvas follow the "Canvas" link under the "Home" menu on Imperial.edu. A 24/7 Canvas Support Hotline is available for students to use: 877-893-9853.
- **Learning Services.** There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- **Library Services.** There is more to our library than just books. You have access to tutors in the [Study Skills Center](#), study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the [Disabled Student Programs and Services](#) (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- **[Student Health Center](#)**. A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128 in Room 1536 for more information.
- **[Mental Health Counseling Services](#)**. Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC [Mental Health Counseling Services](#) at 760-355-6196 in Room 2109 for more information.

Veteran's Center

The mission of the [IVC Military and Veteran Success Center](#) is to provide a holistic approach to serving military/veteran students on three key areas: 1) Academics, 2) Health and Wellness, and 3) Camaraderie; to serve as a central hub that connects military/veteran students, as well as their families, to campus and community resources. Their goal is to ensure a seamless transition from military to civilian life. The Center is located in Building 600 (Office 624), telephone 760-355-6141.

Extended Opportunity Program and Services (EOPS)

The Extended Opportunity Program and Services (EOPS) offers services such as priority registration, personal/academic counseling, tutoring, book vouchers, and community referrals to qualifying low-income students. EOPS is composed of a group of professionals ready to assist you with the resolution of both academic and personal issues. Our staff is set up to understand the problems of our culturally diverse population and strives to meet student needs that are as diverse as our student population.

Also under the umbrella of EOPS our CARE (Cooperative Agency Resources for Education) Program for single parents is specifically designed to provide support services and assist with the resolution of issues that are particular to this population. Students that are single parents receiving TANF/Cash Aid assistance may qualify for our CARE program, for additional information on CARE please contact Lourdes Mercado, 760-355- 6448, lourdes.mercado@imperial.edu.

EOPS provides additional support and services that may identify with one of the following experiences:

- Current and former foster youth students that were in the foster care system at any point in their lives
- Students experiencing homelessness
- Formerly incarcerated students

To apply for EOPS and for additional information on EOPS services, please contact Alexis Ayala, 760-355-5713, alexis.ayala@imperial.edu.

Student Equity Program

- The Student Equity Program strives to improve Imperial Valley College's success outcomes, particularly for students who have been historically underrepresented and underserved. The college identifies strategies to monitor and address equity issues, making efforts to mitigate any disproportionate impact on student success and achievement. Our institutional data provides insight surrounding student populations who historically, are not fully represented. Student Equity addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, Veterans, foster youth, homelessness, and formerly incarcerated students. The Student Equity Program provides direct supportive services to empower students experiencing insecurities related to food, housing, transportation, textbooks, and shower access. We recognize that students who struggle meeting their basic needs are also at an academic and economic disadvantage, creating barriers to academic success and wellness. We strive to remove barriers that affect IVC students' access to education, degree and certificate completion, successful completion of developmental math and English courses, and the ability to transfer to a university. Contact: 760.355.5736 or 760.355.5733 Building 100.
- The Student Equity Program also houses IVC's Homeless Liaison, who provides direct services, campus, and community referrals to students experiencing homelessness as defined by the McKinney-Vento Act. Contact: 760.355.5736 Building 100.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC [General Catalog](#).

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC [Library Department](#) provides numerous [Information Literacy Tutorials](#) to assist students in this endeavor.

Anticipated Class Schedule

Week	Tuesday			Thursday		
	date	topic	Textbook Readings	date	topic	Textbook Readings
1	2/12	-What is Botany? -Corn and bean planting activity	Ch. 1	2/14	-The Nature of Life -Cells	Ch. 2, 3
2	2/19	-Tissues -Plant diversity activity	Ch. 4	2/21	-Roots and Soil -Soil analysis activity	Ch. 5
3	2/26	-Stems -Monocot/Dicot activity	Ch. 6	2/28	-Leaves -Stomata peel activity	Ch. 7
4	3/5	-Flowers, Fruits and Seeds -Wild seed activity	Ch. 8	3/7	Exam I (Ch. 1 to 7)	
Field trip! Saturday 3/9 (date may change)						
5	3/12	-Water in Plants	Ch. 9	3/14	-Plant Metabolism -Plant metabolism activity	Ch. 10
6	3/19	-Growth -Plant hormone activity	Ch. 11	3/21	-Meiosis and Alternation of Generations -Meiosis gummy worm activity	Ch. 12
7	3/26	-Genetics -Plant Breeding and Propagation -Plant cutting activity	Ch. 13, 14	3/28	-Evolution -Evolution activity	Ch. 15
8	4/2	-Plant Names and Classification -Domain Bacteria, Domain Archaea, and Viruses -Leaf pressing activity	Ch. 16, 17	4/4	Exam II (Ch. 8 to 15)	
9	4/9	-Kingdom Protista -Kingdom of Fungi -Microbial diversity activity	Ch. 18, 19	4/11	-Introduction to the Plant Kingdom: Bryophytes - Ferns and Their Relatives	Ch. 20, 21
10	4/16	- Gymnosperms -Angiosperms	Ch. 22, 23	4/18	California desert native plant mini presentation	
Spring Break 4/22 to 4/27 (no class)						
11	4/30	-Seed plants activity		5/2	Exam III (Ch. 16 to 23)	
12	5/7	-Ecology -Biomes -Book discussion activity	Ch.25, 26	5/9	-Plant blog activity	
13	5/14	-Flowering Plants and Civilization -Ag planting activity	Ch. 24	5/16	-Agriculture origins	Ch. 14, 24
14	5/21	-Fruit and Genetically Modified Crops	Ch.13, 14, 24	5/23	-Spice, Fiber, Psychoactive Plants and History	Ch. 14, 24
15	5/28	-Spice, Fiber, Psychoactive Plants and History	Ch.14, 24	5/30	Group Presentations	
16	6/4	-Review for final		6/6	Cumulative Lecture and Lab Finals	

Homework, Assignment and *The California Deserts* Schedule

- Homework is due at the beginning of class most Tuesdays. No late homework is accepted.
- Most Thursdays there will be a quiz on the assigned reading of *The California Deserts* book

Week	Date	Homework and Assignments	<i>The California Deserts</i> reading and quiz schedule
1	2/12	No Homework	
2	2/19 2/21	Ch. 1 Review Questions	Pg. 3-15, Quiz 1
3	2/26 2/28	Ch. 2 and 3 Review Questions	Pg. 17-39, Quiz 2
4	3/5 3/7	Ch. 4 and 7 Review Questions	Pg. 40-63
5	3/12 3/14	Ch. 8 Review Questions	Pg. 67-88, Quiz 3
6	3/19 3/21	Ch. 11 Review Questions	Pg. 88-96, Quiz 4
7	3/26 3/28	Ch. 12 and 13 Review Questions	Pg. 99-110, Quiz 5
8	4/2 4/4	Ch. 14 and 15 Review Questions	Pg. 110-128
9	4/9 4/11	Ch. 16 Review Questions	Pg. 129-146, Quiz 6
10	4/16 4/18	Ch. 21 Review Questions California desert native plant paper due California desert native plant mini presentation	Pg. 149-156, 166-171, 177-192
11	4/30 5/2	Ch. 22 Review Questions	Pg. 195-206
12	5/7 5/9	Ch. 23 Review Questions	Pg. 206-215, Quiz 7
13	5/14 5/16	Ch. 25 Review Questions	Pg. 216-233, Quiz 8
14	5/21 5/23	Ch. 24 and 26 Review Questions	Pg. 233-249, Quiz 9
15	5/28 5/30	No Homework or Readings Group Presentation	<i>The California Deserts</i> extra credit paper due
16	6/4	No Homework or Readings	

Study tips and advice

Suggested study approaches:

1. Come to every class and participate.
2. Read textbook chapters before class. They are relatively short and informative.
3. Do the questions at the end of each chapter. I will not grade these, but it is a good way to get ahead.
4. Review notes and slides on a weekly basis. Save yourself the stress of cramming the night before the exam and study continuously.
5. Come to office hours. Ask me any questions, even if you think they are "stupid questions." I won't judge!
6. Learning happens through discussion. Whenever we set aside time for group discussions take advantage of them.
7. Don't be discouraged by one bad grade, keep the larger picture in mind.

Time commitment: A minimum of 2 hours of studying for every hour of class (6 hours/week). Some of that time should be reading the book, and the rest reviewing notes.

Key points:

- **Learning is not entirely about what to think, but how to think. If you are not sure of the point of a learning activity, ask me. I will be happy to fill you in on the learning strategies and intended outcomes.**
- **People (students, teachers, friends, ect.) will try to scare you into thinking that you will fail. I've seen many highly capable students succumb to fear and intimidation.**