IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Spring 2024**	Instructor Name:	**Baldev Singh**
Course Title & #:	**Principles of Plant Science AG :140**	Email:	**Baldev.singh@imperial.edu**
CRN #:	**21169**	Webpage (optional):	
Classroom:	**2732**	Office #:	**N/A**
Class Dates:	**Feb,12 -June 08,2024**	Office Hours:	**50%By email / 50%8-8:15p.m. TR (in person after class)**
Class Days:	**T , R**	Office Phone #:	**N/A**
Class Times:	5:00-7:55 p.m.	Emergency Contact:	Tisha NelsonEconomic & WorkforceDevelopment (760) 355-6361/ (760) 355-6161Silvia M 760-355-6155 Math &Sci Div
Units:	4.0	Class Format/Modality:	Face to Face

Course Description

An introduction to plant science that examines agricultural, forest, landscape and other significant uses of plants. Included are structure, growth processes, propagation, physiology, genetic improvement and biotechnology, ecology, soil environment, biological competitors and symbionts of plants. The production, harvest, and utilization of the principle crops grown in California and the Imperial Valley will be included. Laboratory work is required. (C-ID: AG-PS 106 L) (CSU/UC)

Course Prerequisite(s) and/or Corequisite(s)

Although There is no prerequisite requirement as such for this course, However adequate knowledge of general high school Science & Biology is expected.

Student Learning Outcomes

After course completion with Pass Grade -C, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to: 1. Identify and discuss the basic needs of plant crops found in Imperial County, California & major crop-producing states in the US (ILO1, ILO2, ILO4). 2. Accurately discuss and explaining a crop rotation program fallowed in county as well as the benefits that are derived from that production system (ILO1, ILO2, ILO4). 3. Identify and discuss major crops commodities grown in Imperial County as well as the season that those crops are planted and harvested (ILO1, ILO2, ILO4). 4. Identify and discuss basic IPM/ pest avoidance methods for commonly grown crops in Imperial County (ILO1, ILO2, ILO4).

Course Objectives

Upon satisfactory completion of the course, students with a grade of "C" or better will be able to:• Identify Plant & soils as a natural resource that must be managed and preserved; • Identify and describe methods of irrigation that are best suited to applicable crops; • Understand macro and micro plant nutrients and

the related nutrient cycle; • Describe biological temperature ranges, climate classifications, growing degree days and temperature stress; • Understand the role that light plays in plant growth and energy storage; • Describe biological interactions including weeds, growth regulators, disease, pests and integrated pest management (IPM); • Understand photosynthesis, plant photosystem, transition of light energy to chemical energy, and the Carbon Cycle; • Understand regional differences affecting plant species compatibility, basic genetics, hybrid superiority, measurement of plant growth and applied knowledge; • Understand germination, roots and their development, shoot growth and factors affecting plant growth; • Understand plant propagation including sexual and asexual processes; • Understanding biotechnology advancements including genetic engineering, transgenetic plants and related policy;

Textbooks & Other Resources or Links

The resources will be available here on Canvas and will be organized in weekly modules. The main reference textbook and manual information is provided below.

Plant Science Growth, Deveiopment,and Utilization of cultivated plants by Margaret J. McMahon,AM Kofranek andV.E.Rubatzky ISBN-13:978-0-13-501407-3 5th edit

ISBN-13: 978-0-13-518482-0 6th edit

Plant Science Lab manual By Dr B. Singh- (Work Sheet Will be available every Week **)**

However other (OER) ,Internet/Online resources will be used to supplement Explainations

Introduction to Agronomy Food Crops and Environment Craig .C.Sheaffer& Kristine M. Moncada

Biology -The Essentials by Matthew S Taylor 3rd Edition

Michaels, T., Clark, M., Hoover, E., Irish, L., Smith, A., and Tepe, E. (2022). The Science of Plants: Understanding Plants and How They Grow. University of Minnesota Press. ISBN 13: 9781946135872

Course Requirements and Instructional Methods

Learning activities in this class will include, but not limited to recorded lectures, instructional YouTube videos, reading handouts, participating in instructor's guided discussions in class/ canvas, experiential learning, assignments, quizzes and tests. Participation in class learning activities is highly encouraged and will have an impact on the final grade. Critical thinking and analytical approach to learning are emphasized.All quizzes/assignments/homework **must be turned in by due date**.

This is a Face -to Face(on Ground) Class. You're therefore advised to dedicate ample time for the daily instructional activities and assignments. Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Course Grading Based on Course Objectives

Students are advised to acquaint themselves with all rules and regulations of Standards of Student Conduct outlined in the Imperial Valley College General Catalog.

For writing assignments, it is expected that each student will demonstrate proficiency in the use of the English Language. Grammatical errors and writing that do not express ideas clearly will affect your grade.

Weekly discussion and Quizzes There will be weekly quizzes home work in canvas that will align with the module covered in that week. These quizzes will be in any format convenient with the subject matter of the module. Regular submission will carry 15=25 points.**NO POINTS For LATE SUBMISSIONS**

Timely submission of all assignments, quizzes, discussion posts, tests, and other tasks by the due date is required. Therefore, "no late work and submissions policy" will be followed. Minimally, legitimate circumstances that potentially threaten this policy must be communicated and excusal granted in advance of the submission's due date. There will be a 10% deduction of possible points for a late submission with excusal. If a submission is not made by the due date, and there was no prior excusal, then a zero (0) score will result.

Additional assignments There will be assignments /work Projects , including lab experiments assigned as per course learning requirements. The due date will be communicated via CANVAS announcements.

Tests /Examination

There will be Ist hourly Exam, two Mid-term Exams and a Final comprehensive Exam/Test.

The final will be a comprehensive test that will cover all the modules with emphasis on Post-Midterm modules. Test questions may include true/false, multiple choice and single mix or match answers

All students are advised to strictly adhere to the dates and times for the tests which will be communicated. There will be **no make-up tests**. Distribution of points is tentative may change depending on class performance

Distribution of grading points

Distribution of grading points •Special assigned project/ Paper • Quizzes and participation 150 points •Ist/ Mid-term tests (2/3) 75 points each • Final Exam 100 points Final score will be calculated out of a possible* 475 points (100%).Weightage for points is tentative*** (Weightage can change according to performance of class/ changed situations) * **Tentative**- Can change by announcement in Class

Final grade will be as follows: • A= 100-90% • B = 89-80% • C = 79-70% • D = 69-60% • F =<59

NO MAKE UP EXAM

Final grade will be calculated out of the possible total of 100%

Grading Legend • A= 100-90% • B = 89-80% • C = 79-70% • D = 69-60% • F =<59%

All information regarding Quizzes/Tests will be posted on CANVAS updated every week. It is student's responsibility to check on CANVAS for **announcements** or these schedules.**It is student's responsibility to drop the course as per IVC Policy if you need to do so*.**

Anticipated Class Schedule/Calendar

Please see attached class schedule to end of this page .

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes

against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Policies

***[Required Information**: The below information is the IVC attendance policy.*

- 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.

***[Required Information**: Describe your policies regarding classroom conduct. The below is suggested language and may be modified for your course.]*

- 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.
- Children in the classroom: Due to college rules and state laws, only students enrolled in the class may attend; children are not allowed.
- ALL APPLICABLE RULES AS DESCRIBED BY IVC NEEDS TO BE FALLOWED IN CLASSROOM

Other Course Information

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;using any Kind of AI or Instrument connected to AI.

NO POINTS FOR LATE SUBMISSIONS OF ASSIGNMENTS /PROJECTS /LAB REPORTS

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.
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/Calendar

[Provide a tentative overview of the readings, assignments, tests, and/or other activities for the duration of the course. A table format as in the example below may be used for this purpose.]

Date or Week	Activity, Assignment, and/or Topic	Chapter #
Week 1 Feb 13-15	Syllabus & Introduction History,trends & Challenges in Plant science	MODULE 1 -Chap 1
Week 2 Feb 20-22	Ecosystem & Cultivated Plants	MODULE -2Chap2-3
Week 3 Feb27-29	Effects of Climate &Soil on plants	MODULE-3 Chap4-5
March5-7	Plant Structure , Gropwth & Development	MODULE -4Chap6-7
March 12-14	Classification of Plants, Genetics & Propagation	MODULE -5Chap9-10

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Date or Week	Activity, Assignment, and/or Topic	Chapter #
March 19-21	Photosynthesis and Water relations	MODULE -6Chap11-12
Mar 26-28	Soil Water, Mineral Nutrition & fertility management	MODULE -7Chap13-14
April 9-11	Weeds, Insects, Diseases & Pest management. Post harvest aspects	MODULE -8Chap15-16
April 16-18	Field Crops, Special Crops including Imperial Valley	MODULE -9Chap 17
April 23-25	Forages, Imperial Valley hay crops and Rangelands	MODULE -10Chap18
Apr.30-May2	Vegetable Crops Including Imperial Valley	MODULE -11Chap 19
May 7-9	Horticultural & Orchard Crops	MODULE 12Chap 20
May 14-16	Production ,Harvest and Utilization of Crops	MODULE 13Chap17-20
May 21-23	Crops Grown in California and Imperial Valley	MODULE -14 Chap 22
May 28-30	Controlled Environment Agriculture, Nursery Production etc	MODULE-15 Chap 23
Feb 13-May 30	Different Lab Presentations and On Hand Training will be Conducted in Last Part of every lecture (Topics) Measurement of plant growth phenomena . Understand germination, roots and their development, shoot growth physiology, Understanding plant propagation including sexual and asexual processes. Identify major agronomic, vegetable, grain, forage, legume & fruit crop species. Study of Different planting Tecniques/ field trip Study Of Different Irrigation methods /Field Trips Identification of Different Plant Nutrients &manures Identify different types of insects pests & diseases Learn to read, understand, interpret and apply the information contained in research reports.	Lab Work Sheet will be provided every week. Lab EXAM MAY 28-30*

The Schedule is Tentative can be changed according to resources, time and prevailing Situations The students therefore advised to follow the announcements/ instructions provided at the start of each module(IN CANVAS) per week. Any changes to the schedule, including tests and due dates, will be communicated. S

*****Subject to change without prior notice*****

Updated 6/2023