

### Basic Course Information

Semester:	Spring 2024	Instructor Name:	Dr. Michael Kanyi
Course No. & Title	AG 245 Plant Propagation	Email:	michael.kanyi@imperial.edu
CRN #:	20563	Webpage (optional):	
Classroom:	2732	Office	406
Class Dates:	Feb 12, 2024 – June 7, 2024	Office hours: Virtual (email, text canvas, pronto, zoom)	MTWR 1:00 pm – 2:00 pm
Class Days:	Monday & Wednesday	Office Phone #:	(760)355-5717
Class Times:	9:40 am – 11:05 am	Emergency Contact:	Tisha Nelson, Economic & Workforce Development (760) 355-6361/ (760) 355-6161
Units:	4	Format	Hybrid (Face-to-face and online)

### Course Description

Plant propagation and production practices with an emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest, and disease control; structures and site layout; preparation and use of propagating and planting mediums; use and maintenance of common tools and equipment; regulations on plant production. Laboratory work is required. (C-ID AG-EH 116 L) (CSU/UC).  
(For Labster Simulations, you will need a computer and internet).

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

Although there is no prerequisite requirement for this course, adequate knowledge of general high school biology is expected.

### 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 and discuss biotechnical advancements in plant propagation. (ILO1, ILO2, ILO4)
2. Identify and discuss trends that influence plant propagation and production here and abroad. (ILO1, ILO2, ILO4, ILO5)
3. Identify and discuss relevant crop propagation to Imperial Valley California and the United States. (ILO1, ILO2, ILO4)

### Course Objectives

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

1. Explain the effect of temperature, water, humidity, and fertility on plant growth.
2. Describe the principles of plant reproduction, sexual and asexual.
3. Demonstrate the ability to grow plants from propagation to salable size by showing a mastery of the following skills: plant propagating methods including seed, cuttings, budding, grafting, layering, division, micro-propagation (tissue culture); proper timing for the various propagation and production techniques appropriate to the plant species and propagation method; formulating planting and propagating media as specified in a recipe; measuring and mixing fertilizers and applying them following label directions; planting and transplanting a variety of plants into appropriate containers.
4. Exhibit the personal skills (attitude, work habits, etc.) for successful employment in the wholesale nursery business.
5. Discuss control procedures for at least ten common gardens, landscapes or crops, and greenhouse pests.

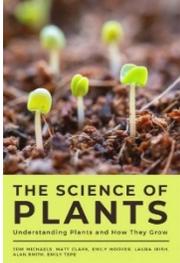
6. Identify, use, and maintain common propagation and nursery tools and equipment.
7. Plan and design a nursery layout given a set of parameters.
8. Develop a presentation of and demonstrate a selected propagation method.
9. Describe the various types of wholesale plant production industries locally and in California.

### Textbooks & Other Resources or Links

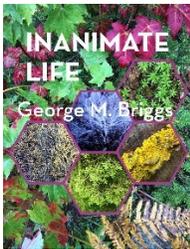
This course will use Open Educational Resources (OERs), which are free of charge for students. The weekly/module readings will be available on Canvas in the form of OERs at the beginning of each week.

#### OERs for this Course

- 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

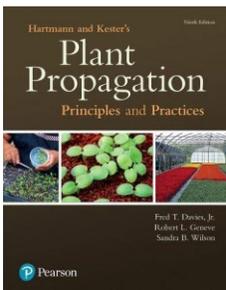


- Briggs, G.M. [\*Inanimate Life\*](#). Open Textbook



#### Optional Reference Textbook

- Hartmann, H.T., Kester, D.E., Davies, F.T., Geneve, R., Wilson, S.E. (2018). *Hartmann & Kester's Plant Propagation: Principles and Practices*, 9th ed. Prentice Hall ISBN-13: 9780134480893



- Note - We are using free open educational resources (OERs), which will be embedded in the weekly modules.

### Course Requirements and Instructional Methods

- Notes posted in Canvas, instructional YouTube videos, simulated laboratory activities, outside/field practical experience, assignments, quizzes, and tests. Effective participation in all course activities (discussion in Canvas) is highly encouraged and will impact the final grade. Critical thinking approaches to solving agricultural economic issues at the regional, state, national, and global levels will be emphasized.

- Out of Class Assignments (mainly f2f): 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 for a semester. WASC has adopted a similar requirement.
- You will conduct virtual lab simulations that will require a computer (not a mobile phone) and reliable internet.

### 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.

### Tests

There will be a **mid-term test (or cumulative quizzes)** and a **final comprehensive test covering all the modules**. Test questions may include true/false, multiple choice, matching, and short answer questions. All students are advised to strictly adhere to the dates and times for the tests which will be communicated. Late submission of assignments must be communicated to the professor before the due date to avoid loss of points.

### Late Submission Policy

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.

**There will be no make-up tests.**

*The distribution of grading points towards the final grade will be as follows.*

• Discussion	15%
• Lab /assignments	25%
• Quizzes	20%
• Final test (All modules)	40%
<b>Total</b>	<b>100%</b>

### Grading Legend

A= 100-90%

B = 89-80%

C = 79-70%

D = 69-60%

F =<59%

### 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

#### Attendance

- A student who fails to attend the first meeting of this class will be dropped by the instructor as of the first official meeting. 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. More information is found in the [General Catalog](#).

- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absence exceeds 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.

### **What does it mean to “attend” an online class?**

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference
- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor.
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters.
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

**Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.**

### **Classroom Etiquette (face-to-face on-ground class)**

- **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, no one who is not enrolled in the class may attend; children are not allowed.

### **Online Netiquette**

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others’ opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### **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 importance 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.

Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

### Other Course Information

*Late submissions will not be accepted.*

### 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 the [IVC students' resources](#) or click the heart icon in Canvas.

### Anticipated Class Schedule/Calendar

The week of	Topics, subtopics, and Textbook Chapters	Module/ Chapters
2/12	Orientation to the course and syllabus review	Orientation & Module 1
2/12	Introduction to Plant Propagation	Module 1
2/19	Biology of Plant Propagation and Plant Classification	Module 2
2/26	Ecological/Plant Environment Requirements	Module 3
3/4	Seed Germination and Development	Module 4
3/11	Breeding and Crop Selection	Module 5
3/18	Techniques of Seed Production and Handling	Module 6
3/25	Propagation Structures (nurseries, greenhouse) Tools & Equipment	Module 7
<b>4/1</b>	<b>SPRING BREAK</b>	<b>BREAK</b>
4/8	Seed Handling (sales & marketing)	Module 8
4/15	Principles and Practices of Clonal Selection	Module 9
4/22	Principles & Techniques of Propagation by Cuttings	Module 10
4/29	Principles and Techniques of Grafting and Budding	Module 11
5/6	Layering & Specialized Stems and Roots	Module 12
5/13	Tissue Culture	Module 13
5/20	Nursery Management (Pest and disease management)	Module 14
5/27	Plant Transcriptomics and Planting Schedule for Imperial County	Module 15
6/3	<b>Final Test -Covers all the modules, and accounts for 40% of the final grade</b>	

This schedule is very tentative and can change without notice. You are therefore advised to follow the instructions provided at the start of each module or week. Any changes to the schedule, including tests and due dates, will be communicated.

