

AG 51 Course Outline as of Fall 1981**CATALOG INFORMATION**

Dept and Nbr: AG 51 Title: INTRO PLANT SCI

Full Title: Introduction to Plant Science

Last Reviewed: 4/11/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

An introductory course in plant ecology, fundamental botany and taxonomy with emphasis on plant structure, function and identification. The principles and practices of crop production as they relate to plant, soil and climatic relationships will be stressed. C/B2 & B3

Prerequisites/Corequisites:**Recommended Preparation:**

Eligibility for English 100A or equivalent.

Limits on Enrollment:**Schedule of Classes Information:**

Description: Intro to plant ecology, fundamental botany & taxonomy. Principles and practices of crop production including environmental factors. (Grade Only)

Prerequisites/Corequisites:

Recommended: Eligibility for English 100A or equivalent.

Limits on Enrollment:

Transfer Credit: CSU;UC. (CAN AG8)

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:
	C	Natural Sciences	Fall 1981	
CSU GE:	Transfer Area		Effective:	Inactive:
	B2	Life Science	Fall 1981	
	B3	Laboratory Activity		

IGETC:	Transfer Area		Effective:	Inactive:
	5B	Biological Sciences	Fall 2019	
	5C	Fulfills Lab Requirement		

CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:
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UC Transfer:	Transferable	Effective:	Fall 1981	Inactive:
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CID:

CID Descriptor: AG - PS 106L Introduction to Plant Science (with Laboratory)

SRJC Equivalent Course(s): AGRI20

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

The student will:

1. Become familiar with and gain an understanding of the basics of plant form and function.
2. Apply knowledge to crop and landscape plant and soil management practices.
3. Appreciate the significance of higher plants to all human activity.
4. Identify charuotenstem and andiosperms, monocots and dicots.
5. Name and describe significant crop plants, including cultural requirements and economic value.

Topics and Scope:

- I. Crop Distribution
 - A. General crop pattern of the US according to the USDA
 - B. Influence of environment in determining where crops will grow profitably in the US
 - C. General crop pattern of California
- II. Crop Ecology
 - A. Influence of temperature upon crops
 - B. Accumulation of heat units in various California regions
 - C. Adaptation of California crops to regions
 - D. Effect of latitude, longitude and altitude upon crops
 - E. Cardinal growth temperatures for representative crops

- F. Influence of low temperatures
- G. Influence of moisture and soil solution upon a crop
- H. Influence of light intensity and duration upon a crop
- III. Crop Morphology
 - A. Structure and function of the plant cell
 - B. External structures of the plant
 - C. Root characteristics
 - D. Conductive tissues and fluid flow
 - E. Basic physiology of plant growth and food manufacture
 - F. Morphology and physiology of flowering parts
- IV. Crop Rotation
 - A. Value of crop rotation in weed, disease and insect control
 - B. Value and limitations of crop rotation as it effects soil and fertility
 - C. Local crop rotations and recommended practices
 - D. Practices and problems on students' home farms
- V. Major Weed Pests and Methods Commonly Used in Their Control
- VI. Seeds and Seeding
 - A. Factors affecting the selection and seeding of crops
 - B. Seed production, equipment and processing in the locality
 - C. Seed Certification
 - D. State regulations governing crops and seeds according to the Agriculture Code
- VII. Soils, Moisture and Plant Relationships
 - A. Characteristics of soil
 - B. Relationship between cultivation practices, moisture application and plant growth and development
 - C. Management practices and their influence on soils and plant growth
- VIII. Tillage Practices
 - A. Tillage implements and their use
 - B. Effects of cultivation and tillage
 - C. Fallow programs - their use and value
 - D. Types of erosion, causes and control erosion
- IX. Crop Improvement and Plant Breeding
 - A. Common terms used in plant breeding
 - B. Objectives of crop improvement and plant breeding
 - C. Methods of crop improvement
- X. Fertilizers and Green Manure
 - A. Factors affecting fertilizer use and selection
 - B. Common terms in fertilizer industry
 - C. Elements required by plants and their effect on plant growth
 - D. Green manure and organic matter
 - E. Barnyard manure

Assignment:

1. Plant collection of crop and weed plants.
 2. Report on crop/landscape management.
- student knowledge/skills as well as the students ability to assess, plan and implement corrective measures for common production problems associated with the growing of plants.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Reading reports, Lab reports, Essay exams, Term papers

Writing
20 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Field work, Lab reports, Quizzes, Exams

Problem solving
10 - 10%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion, ESSAY, SHORT ANSWERS

Exams
0 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

PLANT SCIENCE: GROWTH, DEVELOPMENT, AND UTILIZATION OF CULTIVATED PLANTS by Hartmann, Flocker, and Kofranek.