

CATALOG INFORMATION

Dept and Nbr: HORT 50.1      Title: INTRO HORTICULTURAL SCI  
Full Title: Introduction to Horticultural Science  
Last Reviewed: 12/14/2015

| Units   |      | Course Hours per Week |      | Nbr of Weeks | Course Hours Total |       |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 1.50 | Lecture Scheduled     | 3.00 | 9            | Lecture Scheduled  | 27.00 |
| Minimum | 1.50 | Lab Scheduled         | 0    | 8            | Lab Scheduled      | 0     |
|         |      | Contact DHR           | 0    |              | Contact DHR        | 0     |
|         |      | Contact Total         | 3.00 |              | Contact Total      | 27.00 |
|         |      | Non-contact DHR       | 0    |              | Non-contact DHR    | 0     |

Total Out of Class Hours: 54.00

Total Student Learning Hours: 81.00

Title 5 Category: AA Degree Applicable  
Grading: Grade or P/NP  
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP  
Also Listed As:  
Formerly: AG 90

**Catalog Description:**  
Introduction to horticulture with an emphasis on the basics of plant growth and development, plant descriptions and classification, plant propagation, soils, fertilizers, and water management. This is the first half of a two-part series exploring (1) horticulture as an applied science and (2) horticultural careers.

**Prerequisites/Corequisites:**

**Recommended Preparation:**  
Eligibility for ENGL 100 or ESL 100.

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Introduction to horticulture, emphasizing the basics of plant growth and development, plant descriptions and classification, plant propagation, soils, fertilizers, and water management. First of a 2-part series. (Grade or P/NP)  
Prerequisites/Corequisites:  
Recommended: Eligibility for ENGL 100 or ESL 100.

Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

|                      |                      |            |           |            |           |
|----------------------|----------------------|------------|-----------|------------|-----------|
| <b>AS Degree:</b>    | <b>Area</b>          |            |           | Effective: | Inactive: |
| <b>CSU GE:</b>       | <b>Transfer Area</b> |            |           | Effective: | Inactive: |
| <b>IGETC:</b>        | <b>Transfer Area</b> |            |           | Effective: | Inactive: |
| <b>CSU Transfer:</b> | Transferable         | Effective: | Fall 1981 | Inactive:  | Fall 2023 |
| <b>UC Transfer:</b>  |                      | Effective: |           | Inactive:  |           |

### **CID:**

**Certificate/Major Applicable:**  
Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon successful completion of this course the student will be able to:

1. Assess the important roles played by green plants in our lives and the earth's ecosystem.
2. Describe the natural classification system for the plant kingdom.
3. Identify the parts of a typical higher green plant and describe their functions.
4. Define the processes of photosynthesis, respiration, and transpiration.
5. Summarize the environmental factors that affect plant growth.
6. Differentiate between sexual and asexual reproduction in plants and describe the characteristics of each process.
7. Distinguish between mitosis and meiosis in plants and describe the processes of each.
8. Describe the contributions of Mendel to the science of genetics.
9. Classify and describe plants using plant keys, taxonomic terms, and botanical nomenclature.
10. Demonstrate techniques of propagation using various media and by a variety of methods, such as cuttings and seeds.
11. Differentiate among types of soils and explain how and why they differ.
12. Describe the four components of soils, the major soil separates, and soil textural and structural characteristics.
13. List the available forms of the elements essential to plant growth and describe their functions and deficiency symptoms in plants.
14. Define soil acidity and alkalinity in terms of pH.

### **Topics and Scope:**

1. Definition and History of Horticulture

2. Plant Growth and Development
  - a. Parts of a plant
  - b. Structure of plant parts
  - c. Juvenility and maturity
  - d. Major plant processes
  - c. What plants need for growth
3. Plant Reproduction
  - a. Defined
  - b. Sexual and asexual reproduction
4. Plant Classification
  - a. Plant taxonomy
  - b. Horticultural descriptions
  - c. How plants are identified
  - d. Visual descriptions
5. Plant propagation methods
  - a. Sexual
  - b. Asexual
6. Soils
  - a. Soil separates
  - b. Texture
  - c. Structure
  - d. Water holding
  - e. Porosity
  - f. pH
7. Fertilizers and Fertilization Methods
  - a. Essential nutrients
  - b. Organic & synthetic characteristics
  - c. Methods of application
  - d. Analysis & fertilizer label

### Assignment:

1. Chapter reviews.
2. Worksheets for videos and lectures.
3. Plant classification exercises.
4. Plant propagation activities.

### 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.

|                               |
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| Written homework, Essay exams |
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|                     |
|---------------------|
| Writing<br>10 - 30% |
|---------------------|

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

|                                   |
|-----------------------------------|
| Homework problems, Quizzes, Exams |
|-----------------------------------|

|                             |
|-----------------------------|
| Problem solving<br>10 - 20% |
|-----------------------------|

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

Class performances, Performance exams

Skill Demonstrations  
5 - 10%

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

Multiple choice, True/false, Matching items, Completion

Exams  
40 - 60%

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

None

Other Category  
0 - 0%

**Representative Textbooks and Materials:**

ORNAMENTAL HORTICULTURE: SCIENCE, OPERATIONS & MANAGEMENT. DelMar, 2001.

INTRODUCTION TO HORTICULTURE: SCIENCE & TECHNOLOGY. Interstate, 1997.

HORTICULTURE: PRINCIPLES & PRACTICES. Prentice Hall, 2002.