HORT A105: BOTANY FOR GARDENERS

Item	Value
Curriculum Committee Approval Date	12/02/2020
Top Code	010900 - Horticulture
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

The world of garden plants, their structure, form and how they function. A course for the plant professional and plant enthusiasts. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Successfully recognize different groups of plants and use the knowledge of water and light in plant growth and plant metabolism in the selection and care of interior plants and the pruning of landscape plants.
2. Use the knowledge of sexual and asexual reproduction, plant hormones and growth substances in the propagation of plants.

Course Objectives

- 1. Know the groups to which plants, encountered in horticulture, belong.
- 2. Learn the various structures of the plant.
- 3. Understand the functions of plants.
- 4. Know the elements of plant nomenclature.
- 5. Understand sexual reproduction in flowering plants.
- 6. Understand the significance of soil as a source of water and nutrients for the plant.
- 7. Know how it is thought water moves in the plant.
- 8. Understand how vital light is for plant growth and function.
- 9. Know the plant hormones and understand their uses in horticulture.

Lecture Content

Classification of organisms encountered in Horticulture: bacteria, cyanobacteria, viruses, fungi, algae, mosses, liverworts, horsetails, ferns, gymnosperms, angiosperms. Plant nomenclature. Cell structure, cell division, mutations, chimeras. Plant organization, shoot and root systems, primary and secondary growth. Specialized stems, roots and leaves. Flower structure, monoecism, dioecism, pollination, fertilization, hybridizing, Hybrids, Polyploids. Fruit development, seeds and germination. Soil, as a source of water and nutrients. Water movement in the plant, transpiration, root pressure, guttation, diffusion, osmosis. Light and the plant: light intensity, quality, duration, photosynthesis, photoperiodism, vernalization. Tropisms and nastic movements. Plant hormones and growth substances.

Method(s) of Instruction

- Lecture (02)

Instructional Techniques

Illustrated lecture presentations and hands-on practical exercise.

Reading Assignments

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Writing Assignments

Part of every examination is a number of questions requiring written answers to test the comprehension and writing skills of the students.

Out-of-class Assignments

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Demonstration of Critical Thinking

Quizzes, multiple choice and written answer examinations

Required Writing, Problem Solving, Skills Demonstration

Part of every examination is a number of questions requiring written answers to test the comprehension and writing skills of the students.

Other Resources

1. Handouts to be provided and distributed by the instructor.