

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: HRT 127

Credits: 3

Course Title: Horticultural Botany

Course Description: Studies taxonomy, anatomy, morphology, physiology, and genetics of plants as applied to identification, propagation, and culture. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

General Course Purpose: Help students develop a greater appreciation of all plant processes, as it relates to the impact and usefulness to horticulturists.

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Relate the metabolic plant cell to the functions of a plant;
- b. Relate the anatomy of a plant to the function of a plant;
- c. Relate the processes of photosynthesis, respiration, digestion, assimilation, and differentiation to the functions of the whole plant;
- d. Relate the processes of plant growth and development to the overall plant growth;
and
- e. Relate the hormonal balance of plant growth to the growth regulations of horticultural plants.

Major Topics to Be Included:

- a. Introduction, classification, plant body
- b. Metabolic plant cell, cell cycle
- c. Chemistry and physiology
- d. Primary growth, secondary growth
- e. Roots and leaves
- f. Photosynthesis
- g. Respiration
- h. Transpiration, conduction, absorption, mineral nutrition
- i. Flower and plant life cycles
- j. Plant growth and development

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