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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