

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: HRT 127

Credits: 3

Course Title: Horticultural Botany

Course Description (including lecture hours, lab hours, total contacts)

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. 3 credits

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

None

Course Objectives (Each item should complete the following sentence.)

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
- 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/mid-term test
- f. Photosynthesis
- g. Respiration
- h. Transpirations, conduction, absorption, mineral nutrition
- i. Flower and plant life cycles
- j. Plant growth and development

Effective Date of Course Content Summary (Month, Date Year): 2/12/09