## 2. General Information

### Date

11/04/2016

### Department

Environmental Conservation & Horticulture

### Course Prefix:

HRT

### Course Number:

110

### Course Title:

Introduction to Horticulture

## 3. Course Information

### Credit Hours

3

### Lecture Contact Hours

3

### Laboratory Contact Hours

### Other Contact Hours

### Catalog Description

This is a hands-on course that emphasizes the numerous specialties in the horticulture field. It includes a study of plants as living organisms, the fundamentals of integrated pest management and plant growth requirements. An introduction to a variety of plant care techniques is included. This is a required beginning course in both Horticulture and Viticulture and Wine Technology degree programs.

### New Analysis Question

### Prerequisites

### Co-requisites

### Grading Scheme

This course can be taken more than once for credit
This course is designated as satisfying a requirement in the following SUNY Gen Ed category

First Year Experience
Yes

Capstone

4. FLCC Values

College Learning Outcomes Addressed by the Course

- Inquiry
- Interconnectedness
- Vitality
- Perseverance

5. Course Learning Outcomes

Course Learning Outcomes

1. Identify professional career opportunities incorporating the basics of resume creation and recognize the characteristics of a strong work ethic.
2. Demonstrate practical resource exploration gleaning information from proper sources (i.e. research universities and professional organizations), apply scientific citation format, and exercise use of college support resources for written assignments.
3. Identify the fundamentals of integrated pest management.
4. Describe proper maintenance, propagation, and installation practices for a variety of plant materials.
5. Describe the fundamentals of plant growth requirements and subsequent contributing factors.

6. Program Affiliation

This course is required as a core program course in the following program(s)

- AAS Horticulture
- Horticulture Certificate
- AAS Viticulture and Wine Technology - Main Track
- AAS Viticulture and Wine Technology - Viticulture Track

8. Outline of Topics Covered

Outline of Topics Covered in Course

New Analysis Question

Outline of Topics Covered

1. Library tour – resource familiarization
   a. Periodicals
   b. On-line Access
   c. CSE – proper citing in scientific format
2. Introduction to the history of horticulture
a. Brief review of historical transitions relative to horticulture
b. Contributions made by Rochester, NY area business to the industry
c. Brief review of major landscape designers and landscape architects

3. Introduction to internal combustion engines & components
a. General overview of small gasoline engines
b. Limitations of utility vehicles commonly used in horticulture

4. Introduction to plant parts and processes
a. Internal vascular system
b. Roots
   i. Identification of parts
   ii. Monocot vs Dicot root systems
   iii. Location of feeder roots
c. Stems
   i. Woody components
   ii. Herbaceous components
   iii. Monocot vs Dicot stem systems
d. Leaves
   i. Discussion of function
   ii. Identification of features
   iii. Monocot vs Dicot leaf attributes
e. Flowers
   i. Discussion of functions
   ii. Identification of features
   iii. Introduction to various flower shapes with terms
   iv. Monocot vs Dicot flower features
f. Plant Processes
   i. Transpiration
   ii. Respiration
   iii. Photosynthesis

5. Plant taxonomy
a. Botanical nomenclature
b. Terms used in plant identification
c. Introduction to dichotomous keys
d. Introduction to USDA hardiness zone maps

6. Introduction to soils
a. Components
b. Soil separates
c. Texture classes and standard texture triangle
d. Horizons and Profile
e. Structure and Aggregate types

7. Introduction to plant nutrients
a. Introduction to Primary and Secondary Macronutrients
b. Introduction to Micronutrients
c. Introduction to signs of deficiencies of macro- and micronutrients
d. pH and adjusting compounds
e. Introduction to fertilizer math

8. Introduction to plant growth regulators
a. Introduction of five (5) key regulators
b. Introduction to the effects of the five key regulators on plant growth
c. Introduction to commercial, scientific growth regulators

9. Introduction to plant reproduction and propagation
a. Propagation tools
b. Introduction to sexual reproduction
i. Introduction to seed propagation and usage  
c. Introduction to asexual reproduction  
i. Introduction to various asexual propagation techniques  
10. Introduction to plant pests  
a. Introduction to insects  
b. Introduction to pathogens  
c. Introduction to weeds  
i. Definition of weeds  
ii. Introduction to identification of several common weeds  
d. Control methods and formulations  
e. Resistance  
f. Introduction of Integrated Pest Management  
i. Basic premise  
ii. When and how to apply the premise  
11. Introduction to plant installation  
a. Installation tools  
b. Herbaceous  
i. Installation of seedlings & larger potted plants  
ii. Installation of divisions  
c. Woody  
i. Techniques in woody installation  
d. Care of new installations  
i. Water requirements  
ii. Staking – if an when necessary  
12. Introduction to pruning and maintenance  
a. Pruning tools  
b. Introduction to tree pruning  
i. Correct limb pruning techniques when keeping the tree  
ii. Introduction to pruning safety  
c. Introduction to shrub pruning  
i. Round over pros and cons  
ii. Selective branch pruning of shrubs  
iii. Hedge pruning  
d. Introduction to pruning vines  
e. Tree and Shrub Maintenance  
i. Correct watering  
ii. Correct fertilizing techniques and timing  
iii. Correct mulching  
13. Introduction to horticultural career opportunities  
a. Myers Briggs testing and analysis  
b. Work ethic discussions  
c. Introduction to a variety of career opportunities afforded through horticulture