



Western Technical College

## 10001111 Introduction to Horticulture

### Course Outcome Summary

#### Course Information

<b>Description</b>	An overview and introduction to the horticulture profession, including its role and importance throughout history, current trends and the variety of career opportunities will be presented. Topics covered will include fundamentals of practical horticultural cultural practices, plant classification, plant structure, plant growth, plant propagation, landscape design, landscape maintenance, environmental and sustainable relations, and professional development for the student.
<b>Career Cluster</b>	Agriculture, Food and Natural Resources
<b>Instructional Level</b>	Associate Degree Courses
<b>Total Credits</b>	3
<b>Total Hours</b>	72

#### Textbooks

No textbook required.

#### High Impact Practices

1. **Community-Based Learning Service Hours:** a key learning experience of this course is connecting course work while helping a community partner. Learn more about civic responsibility and enhance your community.
2. **Work-Based Learning:** this course applies your learning to your desired profession by working in industry placements such as internships, practicums, clinicals, or co-ops.

#### Course Competencies

1. **Explore the horticulture industry and related careers.**

### **Assessment Strategies**

- 1.1. Oral, Written, Graphic Assessment, or Demonstration

### **Criteria**

*You will know you are successful when*

- 1.1. you identify key similarities and differences between sectors of horticulture.
- 1.2. you explain how your potential career choice reflects your personal interests.
- 1.3. you describe specifics on your top career choice such as pay, seasonality, daily routines.

### **Learning Objectives**

- 1.a. Explore urban landscape careers.
- 1.b. Explore Greenhouse and nursery careers.
- 1.c. Develop self-awareness of strengths, weaknesses, and interests as related to horticulture careers.
- 1.d. Investigate horticulture career options based on your interests.

## **2. Explore horticulture education resources.**

### **Assessment Strategies**

- 2.1. Oral, Written, Graphic Assessment, or Demonstration

### **Criteria**

*You will know you are successful when*

- 2.1. you communicate your resources used from industry communications / organizations / educational institutes.
- 2.2. you create a list of resources for each horticulture sector.
- 2.3. you create a list of professional horticulture certifications per industry sector.

### **Learning Objectives**

- 2.a. Develop plans, guidelines, and business materials that are validated by industry accepted resources.
- 2.b. Identify each horticulture sector and associated educational resources.
- 2.c. Research professional certifications in horticulture.

## **3. Explore site assessments.**

### **Assessment Strategies**

- 3.1. Oral, Written, Graphic Assessment, or Demonstration

### **Criteria**

*You will know you are successful when*

- 3.1. you identify biotic / abiotic factors affecting plant growth.
- 3.2. you follow best management practices when collecting a soil sample.
- 3.3. you interview the property owner on what horticultural practices are performed.

### **Learning Objectives**

- 3.a. Observe growing conditions of a specific area/micro-climate.
- 3.b. Collect a soil sample of the specific area/micro-climate.
- 3.c. Investigate how the property owner manages the area/micro-climate.

## **4. Explore plant growth, development, and ecology.**

### **Assessment Strategies**

- 4.1. Oral, Written, Graphic Assessment, or Demonstration

### **Criteria**

*You will know you are successful when*

- 4.1. you identify basic plant structures (morphology).
- 4.2. you describe how the plant structures function in relation to the whole plant.
- 4.3. you describe how plants interact with each other on the landscape.

### **Learning Objectives**

- 4.a. Distinguish between annual, biennial, perennial plants.
- 4.b. Identify external plant structures and their functions.

- 4.c. Explain the three metabolic processes of plants.
- 4.d. Describe plant succession as it relates to plant communities on the landscape.

## 5. Explore plant taxonomy.

### Assessment Strategies

- 5.1. Oral, Written, Graphic Assessment, or Demonstration

### Criteria

*You will know you are successful when*

- 5.1. you explain the purpose of plant taxonomy in horticulture.
- 5.2. you order the scientific naming structure.
- 5.3. you identify if a plant is a variety, cultivar, hybrid, or none of these based on the scientific name.

### Learning Objectives

- 5.a. Examine the purpose of plant taxonomy.
- 5.b. Explore the structure of scientific naming of plants.
- 5.c. Differentiate between family, genus, species, variety, cultivar, and hybrid.

## 6. Explore soil science.

### Assessment Strategies

- 6.1. Oral, Written, Graphic Assessment, or Demonstration

### Criteria

*You will know you are successful when*

- 6.1. you summarize ways to improve disturbed soil structure.
- 6.2. you rank soils based on their nutrient holding capacity.
- 6.3. you explore ways to improve soil organic matter and soil biology.

### Learning Objectives

- 6.a. Examine soil horizons and structure.
- 6.b. Examine soil cation exchange capacity and the impact on soil nutrient availability.
- 6.c. Examine soil organic matter and the relationship to soil biology.
- 6.d. Investigate ways to improve disturbed soil structure.

## 7. Explore plant health care.

### Assessment Strategies

- 7.1. Oral, Written, Graphic Assessment, or Demonstration

### Criteria

*You will know you are successful when*

- 7.1. you describe how biotic and abiotic factors harm plant growth and development.
- 7.2. you describe how beneficial factors enhance plant growth and development.
- 7.3. you summarize the theory integrated pest management.

### Learning Objectives

- 7.a. Investigate the biotic and abiotic factors harming plants.
- 7.b. Investigate the biotic and abiotic factors beneficial to plants.
- 7.c. Explore the theory of integrated pest management.

## 8. Explore horticultural crops and production.

### Assessment Strategies

- 8.1. Oral, Written, Graphic Assessment, or Demonstration

### Criteria

*You will know you are successful when*

- 8.1. you identify edible, non-edible, and ornamental horticultural crops.
- 8.2. you outline the site conditions that positively/negatively influence that specific horticultural crop's growth.
- 8.3. you describe the positive/negatives of sustainable and traditional production techniques.

### **Learning Objectives**

- 8.a. Identify the types of horticultural crops.
- 8.b. Explore how to match horticultural crops to growing conditions.
- 8.c. Explore the variety of crop production techniques.

## **9. Explore landscape design principles.**

### **Assessment Strategies**

- 9.1. Oral, Written, Graphic Assessment, or Demonstration

### **Criteria**

*You will know you are successful when*

- 9.1. you depict the planning process of designs.
- 9.2. you select plants that will have high vigor in the selected growing condition.
- 9.3. you design a planting that satisfies the client's goals.

### **Learning Objectives**

- 9.a. Explore each step in the landscape design process.
- 9.b. Select plantings that are suited for site's growing conditions.
- 9.c. Design plantings that based on clients wants and needs.