

## Standards and Competencies for Principles of Horticultural Sciences (Course # 5184)

|   | Begin-End Yr |
|---|--------------|
| Standard 1 - Specify and explain the various areas of the horticulture industry.  | 2009 -       |
| 1.1 - Evaluate and explain the function of the types of greenhouses in use today.   | 2009 -       |
| 1.2 - Evaluate the importance of plant nursery operations in Tennessee.   | 2009 -       |
| 1.3 - Evaluate the types of garden centers and their importance to today's society.   | 2009 -       |
| 1.4 - Discuss the aesthetic and economic value of landscaping and turf management.  | 2009 -       |
| 1.5 - Describe and explain examples of the floriculture industry, including grower, wholesaler, and retailer.                 | 2009 -       |
| 1.6 - Describe the importance of the fruit and vegetable production industry at the state, national and international levels. | 2009 -       |
| 1.7 - Discuss the business aspect of the horticulture industry, including marketing and selling products and services.        | 2009 -       |
| 1.8 - Demonstrate the ability to keep records on SAE programs.  | 2009 -       |
| Standard 2 - Access the role of the ornamental plant industry on society.   | 2009 -       |
| 2.1 - Discuss the importance of horticulture plants.  | 2009 -       |
| 2.2 - Describe career areas of the horticulture industry.   | 2009 -       |
| 2.3 - Relate the history of plant domestication and production and impact on society.   | 2009 -       |
| 2.4 - Identify the current technology, including biotechnology, in the horticulture industry.                                 | 2009 -       |
| Standard 3 - Evaluate and explain safety issues associated with the horticulture industry.                                    | 2009 -       |
| 3.1 - Assess and justify various safety situations in horticulture work.  | 2009 -       |
| 3.2 - Evaluate and explain appropriate safety practices required in the horticulture industry.                                | 2009 -       |
| 3.3 - Select and explain appropriate personal protective equipment for the job.   | 2009 -       |
| 3.4 - Demonstrate approved safety practices in a shop/lab environment.  | 2009 -       |
| 3.5 - Complete a safety test with 100 percent accuracy.   | 2009 -       |
| Standard 4 - Describe and explain the characteristic and function of horticulture plants.                                     | 2009 -       |
| 4.1 - Identify and explain the functions of floriculture plants.  | 2009 -       |
| 4.2 - Identify and explain the functions of nursery/landscape plants.   | 2009 -       |
| 4.3 - Identify and explain the functions of fruit and vegetable crop plants.  | 2009 -       |
| Standard 5 - Identify the basic plant biology skills required for plant growth.   | 2009 -       |
| 5.1 - Explain plant taxonomy and plant life cycle systems.  | 2009 -       |
| 5.2 - Identify and explain the parts, shape and functions of a plant cell.  | 2009 -       |
| 5.3 - Determine the relationship between cell growth and cell reproduction.   | 2009 -       |
| 5.4 - Describe the role of genetics in the agricultural industry.   | 2009 -       |
| 5.5 - Analyze the role of genes in determining hereditary characteristics.  | 2009 -       |
| 5.6 - Illustrate and explain the processes of photosynthesis and respiration.   | 2009 -       |
| 5.7 - Specify and explain the functions of the leaf, stem, and root parts of plants.  | 2009 -       |
| 5.8 - Distinguish between sexual and asexual reproduction of plants.  | 2009 -       |
| 5.9 - Explain the parts and functions of the reproduction system of plants.   | 2009 -       |
| 5.10 - Identify the parts of a seed and explain the functions of the parts.   | 2009 -       |
| 5.11 - Explain the conditions necessary for proper seed germination.  | 2009 -       |
| 5.12 - Demonstrate ability to reproduce plants from seed.   | 2009 -       |
| 5.13 - Identify the various methods of asexual plant propagation.   | 2009 -       |
| 5.14 - Demonstrate ability to reproduce plants asexually.   | 2009 -       |
| Standard 6 - Explain the relationship between soil and artificial media.  | 2009 -       |
| 6.1 - Describe the formation and importance of soil.  | 2009 -       |
| 6.2 - Determine soil texture and importance to plant growth.  | 2009 -       |
| 6.3 - Identify the essential elements for plant production.   | 2009 -       |
| 6.4 - Explain soil pH and identify ways of modifying pH.  | 2009 -       |
| 6.5 - Explain and evaluate the land classification system for agriculture.  | 2009 -       |
| 6.6 - Explain the qualities and list the components of artificial media.  | 2009 -       |
| 6.7 - Explain the relationship between water, soil media, and plants.   | 2009 -       |
| 6.8 - Specify and explain the relationship between soil and soil media mix for plant growth.                                  | 2009 -       |
| 6.9 - Prepare and utilize an artificial media for a crop.   | 2009 -       |
| Standard 7 - Demonstrate premier leadership and personal growth needed in the area of horticulture.                           | 2009 -       |
| 7.1 - Demonstrate a positive work ethic and attitude.   | 2009 -       |
| 7.2 - Demonstrate proper time management skills.  | 2009 -       |
| 7.3 - Apply problem-solving skills.   | 2009 -       |
| 7.4 - Describe career plans that develop critical life-long thinking skills and allow for life long learning.                 | 2009 -       |
| 7.5 - Demonstrate the ability to conduct a meeting in accordance with Roberts Rules of Order.                                 | 2009 -       |