

Introduction to Horticulture – AGRI 108
Tech Prep Articulation Competencies

Course Content Objectives & Competencies:

1. Describe how early plants were discovered and adapted to the modern forms, use the binomial system for naming plants and discuss the role of plants on the environment and their economical impacts.
2. Describe the role and challenges of Horticulture and the Global Food Supply Systems. Describe the advances made by Horticulture and how Horticultural has benefited the consumer and improved living conditions throughout the world.
3. Describe the anatomy of the primary root, stems and leaves. Discuss all vegetative parts and functions of the plant.
4. Describe the function and parts of the plant cell, the basic chemical composition and major plant tissue types of the complex plant.
5. Describe the differences between sexual and asexual plant reproduction and differentiate between self and cross-fertilization. Discuss plant cell division, plant growth regions and the function and location of plant meristem tissue.
6. Identify the steps of plant germination, describe the differences between annuals, biennials and perennials, define and discuss dormancy.
7. Describe how plants depend on soil, the role of water in plant, name the essential plant nutrients and describe their role in plant growth.
8. Describe how insects, weeds and diseases reduce or alter yields and species characteristics, the symptoms of an unhealthy or stressed plant and care and maintenance of horticultural plants.
9. List the effects of temperature and light may have on plants and calculate growing degree-days.
10. Discuss the basic principles of heredity and genetics, how and why we improve plants and the environmental, ethical, control, and conflicts brought about by horticulture and biotechnology research.
11. Name ten different fruit and nut crops. Discuss the evolution of Pomology and the production fruit industries, changes in cultural practices and the future of these industries.
12. Name ten different vegetable and wine crops. Discuss the evolution of Olericulture and Viticulture and the production food crop industries, changes in cultural practices and the future of these industries.
13. Describe the types of foliage and flowers grown and the economic impact of Floriculture industry. Discuss commercial greenhouse and nursery production operations and the type of crops each produce.
14. Identify four turf-grass crops; the Turf-grass industry, describe the cultural requirements to consider for maintaining a turf plant.
15. Survey a variety of agricultural careers opportunities and prepare an education plan for entering a rewarding career in agriculture.
16. Present a collection of educational activities and experiences as evidence documenting your skills, abilities and interest in Horticulture or a related industry.
17. Prepare a systematic series of flexible educational steps for securing the education, specialized training and experience necessary for a successful career in Horticulture or related industries.