



Fundamental Horticulture

Career Cluster	Agriculture, Food and Natural Resources
Course Code	18052
Prerequisite(s)	Recommended: Introduction to AFNR
Credit	0.5 credit
Program of Study and Sequence	Cluster Course – Fundamental Horticulture – Horticulture Operations or Advanced Plant Science - Capstone
Student Organization	National FFA Organization
Coordinating Work-Based Learning	Job shadowing, mentoring, internships, entrepreneurships, service learning, workplace tours, apprenticeship, school-based enterprises, Supervised Agricultural Experience (SAE)
Industry Certifications	OSHA 10 Hour Safety Certification (General Industry), National Career Readiness Certificate (NCRC), Commercial Pesticide Applicators Certification, Private Pesticide Applicators Certification
Dual Credit or Dual Enrollment	https://sdmylife.com/images/Approved-CTE-Dual-Credit.pdf
Teacher Certification	Agriculture Food and Natural Resources Cluster Endorsement; Plant Systems Cluster Endorsement; *Agriculture Education
Resources	

Course Description

Fundamental Horticulture is designed to give students a background in horticultural science and the many career opportunities in nursery, garden, turf and landscape industries. Fundamental Horticulture addresses the biology and genetics involved in production, processing, and marketing of horticulture. Quality nursery and landscape operations require skilled, educated employees. In this course, students develop the necessary knowledge and skills for both entry-level employment and advancement within the horticulture industries. Topics covered include classifying and identifying plants, physiology and propagation, pest management, understanding soil, environmental, and fertility factors affecting plant growth, various horticulture industry sectors, and employability skills. Classroom and laboratory content may be enhanced by utilizing appropriate equipment and technology. Mathematics, biology, English and human relations skills will be reinforced in the course. This class is reinforced through the FFA and Supervised Agricultural Experience (SAE) activities such as the Nursery/Landscape and Floriculture Career Development Events, and related Proficiency Awards. Each student will be expected to maintain a SAE.

Program of Study Application

Fundamental Horticulture is a first pathway course in the Agriculture, Food and Natural Resources Program of Study, Plant Systems pathway. Fundamental Horticulture is preceded by a Cluster course and would be followed by Horticulture Operations or Advanced Plant Science.

Course Standards

HORT 1: Understand and use safe practices.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 1.1 Demonstrate safe use and knowledge of tools and equipment used in horticulture.
Two Skill/Concept	HORT 1.2 Demonstrate workplace/worksites safety procedures and protocols.

HORT 2: Explain horticultural plant classifications.

<i>Webb Level</i>	<i>Sub-indicator</i>
One Recall	HORT 2.1 Classify and identify horticultural plants.

HORT 3: Define basic principles of plant physiology and propagation.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 3.1 Explain basic principles of plant physiology and growth.
Two Skill/Concept	HORT 3.2 Demonstrate the propagation of plants by sexual and asexual methods.

HORT 4: Describe pest management in the horticultural industry.

<i>Webb Level</i>	<i>Sub-indicator</i>
One Recall	HORT 4.1 Identify principles of pest management.

HORT 5: Analyze soil, environment, and fertility properties as they affect plant growth.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 5.1 Examine soil and planting media management.
Three Strategic Thinking	HORT 5.2 Analyze information about the growing environment and its effect on plant growth.
One Recall	HORT 5.3 Identify plant nutrition practices for horticulture plants as they relate to plant growth and health.

HORT 6: Examine horticulture industry sectors.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 6.1 Explain the care and maintenance of vegetable/fruit crops.
Two Skill/Concept	HORT 6.2 Investigate the floriculture industry.
Two Skill/Concept	HORT 6.3 Investigate the nursery/landscape industry.
Two Skill/Concept	HORT 6.4 Investigate the care and management of turf grass.

HORT 7: Develop employability skills related to the Plant Systems Pathway.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 7.1 Develop soft skills to enhance employability.

HORT 8: Implement an individual project for career development through a Supervised Agriculture Experience/Work based Experience.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	HORT 8.1 Develop an individual project plan with goals and timeline.
Two Skill/Concept	HORT 8.2 Explore opportunities within AFNR industries.
Three Strategic Thinking	HORT 8.3 Apply concepts of financial management appropriate to agricultural projects and personal finances.
Three Strategic Thinking	HORT 8.4 Develop and document knowledge and skills to ensure workplace safety regarding personal health and environmental management.
Four Extended Thinking	HORT 8.5 Research and analyze how public policy, laws, and advocacy impact agricultural systems and agricultural literacy.