

# Career and Technical Education Course Blueprint of Essential Standards

## Agricultural Education

### *6841 Horticulture I*

Public Schools of North Carolina  
State Board of Education • Department of Public Instruction  
Division of Career and Technical Education  
Consultant, Project Director

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This blueprint is an update of the work of over 25 professional educators as well as business and industry representatives in the horticulture industry.

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## Updated CTE Course Blueprint of Essential Standards

Essential standards are big, powerful ideas that are necessary and essential for students to know to be successful in a course. Essential standards identify the appropriate verb and cognitive process intended for the student to accomplish. Essential standards provide value throughout a student's career, in other courses, and translate to the next level of education or world of work.

This document lays out the essential standards and objectives for the course and reflects the intended level of learning as C1, C2, or C3. Also included are the relative weights of the units, essential standards, and objectives within the course.

This document will help teachers plan for curriculum delivery for the course, prepare daily lesson plans, and construct valid formative, benchmark, and summative assessments. Assessment for this course is written at the level of the objective.

Career and Technical Student Organizations (CTSO) are an integral part of this curriculum. CTSOs are strategies used to teach course content, develop leadership, citizenship, responsibility, and proficiencies related to workplace needs.

For additional information about this blueprint, contact the Division of Career and Technical Education, North Carolina Department of Public Instruction, 6361 Mail Service Center, Raleigh, North Carolina 27699-6361.

**Interpretation of Columns on the NCDPI Updated CTE Course Blueprint**

No.	1	2	3	4	5	6
<b>Heading</b>	Essential Std # Obj #	Unit Titles, Essential Standards, and Indicators	Local Use	Course Weight	Cognitive Process	Core or Supplemental
<b>Column information</b>	Essential standard and objective numbers.	Statements of unit titles, essential standards per unit, and specific indicators per essential standard. If applicable, includes % for each indicator.	Space for use by Local Education Agencies.	Shows the relative importance of each unit and essential standard. Course weight is used to help determine the percentage of total class time to be spent on each essential standard.	Classification of outcome behavior in essential standards and objectives: C1 is Remember C2 is Understand C3 is Apply, analyze, evaluate.	Indicates whether the content is core (essential for student learning) or supplemental (enhances student learning beyond core). Only core content is included on CTE post assessments.

*Career and Technical Education conducts all activities and procedures without regard to race, color, creed, national origin, gender, or disability. The responsibility to adhere to safety standards and best professional practices is the duty of the practitioners, teachers, students, and/or others who apply the contents of this document.*

**CTE Course Blueprint of Essential Standards for  
6841 Horticulture I**  
(Recommended hours of instruction: 135-180)

ES # Obj. #	Units, Essential Standards, and Objectives (The Learner will be able to:)	Local Use	Course Weight	Cognitive Process	Core or Supp.
1	2	3	4	5	6
	<b>Total Course Weight</b>		<b>100%</b>		
<b>A</b>	<b>Leadership, Careers and SAE</b>		<b>20%</b>		
<b>1.00</b>	<b>Examine leadership opportunities related to the horticulture industry.</b>		<b>10%</b>	<b>C3</b>	<b>Core</b>
1.01	<i>Discuss the organization available for students in horticulture.</i>		5%	C2	Core
1.02	<i>Demonstrate parliamentary procedures and public speaking used in horticulture business meetings.</i>		5%	C3	Core
<b>2.00</b>	<b>Examine careers related to horticulture.</b>		<b>10%</b>	<b>C3</b>	<b>Core</b>
2.01	<i>Discuss careers and skills necessary for employment in the horticulture industry.</i>		5%	C2	Core
2.02	<i>Implement an SAE.</i>		5%	C3	Core
<b>B</b>	<b>Plant Physiology</b>		<b>30%</b>		
<b>3.00</b>	<b>Summarize plant anatomy.</b>		<b>20%</b>	<b>C2</b>	<b>Core</b>
3.01	<i>Discuss biological terms used to describe plants.</i>		5%	C2	Core
3.02	<i>Discuss the anatomy and functions of plants.</i>		5%	C2	Core
3.03	<i>Discuss floriculture and landscape plants.</i>		10%	C2	Core
<b>4.00</b>	<b>Examine factors relating to plant growth and development.</b>		<b>10%</b>	<b>C3</b>	<b>Core</b>
4.01	<i>Explain the growth process of plants.</i>		5%	C2	Core
4.02	<i>Use sexual and asexual methods of propagation.</i>		5%	C3	Core
<b>C</b>	<b>Soils, Nutrients, and Fertilizers</b>		<b>30%</b>		
<b>5.00</b>	<b>Explain properties of soils.</b>		<b>10%</b>	<b>C2</b>	<b>Core</b>
5.01	<i>Discuss horticultural soils.</i>		5%	C2	Core
5.02	<i>Discuss the soil profile and soil sampling for surface and subsurface layers.</i>		5%	C2	Core
<b>6.00</b>	<b>Explain the role of nutrients and fertilizers.</b>		<b>10%</b>	<b>C2</b>	<b>Core</b>
6.01	<i>Discuss macro and micro nutrients and the role they play in plant deficiencies.</i>		5%	C2	Core
6.02	<i>Discuss the advantages and disadvantages of various fertilizers.</i>		5%	C2	Core
<b>7.00</b>	<b>Apply procedures to plant a garden.</b>		<b>10%</b>	<b>C3</b>	<b>Core</b>
7.01	<i>Plan a garden.</i>		5%	C3	Core

ES # Obj. #	Units, Essential Standards, and Objectives (The Learner will be able to:)	Local Use	Course Weight	Cognitive Process	Core or Supp.
1	2	3	4	5	6
7.02	<i>Establish a garden.</i>		5%	C3	Core
<b>D</b>	<b>Pest Management</b>		<b>20%</b>		
<b>8.00</b>	<b>Compare distinguishing characteristics of pests.</b>		<b>10%</b>	<b>C2</b>	<b>Core</b>
8.01	<i>Discuss the anatomy and life cycle of pests.</i>		5%	C2	Core
8.02	<i>Discuss diseases and viruses.</i>		5%	C2	Core
<b>9.00</b>	<b>Explain Integrated Pest Management and pesticides.</b>		<b>10%</b>	<b>C2</b>	<b>Core</b>
9.01	<i>Discuss integrated pest management strategies.</i>		5%	C2	Core
9.02	<i>Discuss key signal words and safety precautions on pesticide labels.</i>		5%	C2	Core