

Colorado CTE Course – Scope and Sequence

Course Name	Urban Farm Management		Course Details		
			Course = 0.50 Carnegie Unit Credit		
Course Description	This course will focus on purpose, site identification, land access, soil quality, water resources, infrastructure for both indoor and outdoor growing operations, production strategies, market development, and financing as it applies to Urban Farming.				
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered.				
SCED Identification #	18002	Schedule calculation based on 60 % of instructional time in semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.			
All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at https://www.cde.state.co.us/standardsandinstruction/essentialskills					
Instructional Unit Topic	Suggested % of Instructional Time	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration
Purpose of the Urban Farm	4%	PS.04. Apply principles of design in plant systems to enhance an environment (e.g. floral, forest landscape, and farm).	PS.04.01. Evaluating, identifying and preparing plants to enhance an environment. PS.04.02. Create designs using plants.	PS.04.01.01.a. Identify and categorize plants by their purpose (e.g., floral plants, landscape plants, house plants, etc.). PS.04.01.02.a. Summarize the applications of design in agriculture and ornamental plant systems. PS.04.02.03.a. Explain the concept of landscape ecology and summarize factors that shape the ecology of a landscape (e.g., composition, structure, function, etc.).	

Site Identification	6%	PS.01. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.	PS.01.01. Determine the influence of environmental factors on plant growth.	<p>PS.01.01.01.a. Identify and summarize the three measurements of light – color, intensity and duration – that affect plant growth.</p> <p>PS.01.01.02.a. Identify and summarize the effects of air and temperature on plant metabolism and growth.</p> <p>PS.01.01.03.a. Identify and summarize the effects of water quality on plant growth, (e.g., pH, dissolved solids, etc.).</p>	
Land Access <ul style="list-style-type: none"> Determining site suitability Infrastructure needs 	4%	PS.01. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.			
Soil Quality	10%	PS.01. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.	PS.01.02. Prepare and manage growing media for use in plant systems.	<p>PS.01.02.01.a. Identify the major components of growing media and describe how growing media support plant growth.</p> <p>PS.01.02.02.a. Identify the categories of soil water.</p> <p>PS.01.01. Performance Indicator: Determine the influence of environmental factors on plant growth.</p>	
Water Resources	10%	PS.01. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.	PS.01.01. Determine the influence of environmental factors on plant growth.	PS.01.01.03.a. Identify and summarize the effects of water quality on plant growth, (e.g., pH, dissolved solids, etc.).	

			<p>PS.03.03. Develop and implement a plan for integrated pest management for plant production.</p> <p>PS.03.04. Apply principles and practices of sustainable agriculture to plant production.</p>	<p>PS.03.02.04.c. Prepare and implement a plant production schedule based on predicted environmental conditions and desired market target (e.g., having plants ready to market on a specific day such as Mother’s Day, organic production, low maintenance landscape plants, etc.).</p> <p>PS.03.02.06.c. Research, select and defend technology for use in controlled atmosphere production.</p> <p>PS.03.02.07.c. Research, select and defend the use of a hydroponic or aquaponic plant system.</p> <p>PS.03.03.03.a. Identify and summarize pest control strategies associated with integrated pest management and the importance of determining economic threshold.</p> <p>PS.03.03.04.b. Examine and apply procedures for the safe handling, use and storage of pesticides including personal protective equipment and reentry interval.</p> <p>PS.03.04.01.a. Compare and contrast the alignment of different production systems (conventional and organic) with USDA sustainable practices criteria.</p>	
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Marketing	6%	<p>PS.03. Propagate, culture and harvest plants and plant products based on current industry standards.</p> <p>ABS.04. Develop a business plan for an AFNR business.</p> <p>ABS.05. Use sales and marketing principles to accomplish AFNR business objectives.</p>	<p>PS.03.04. Apply principles and practices of sustainable agriculture to plant production.</p> <p>ABS.04.01. Analyze characteristics and planning requirements associated with developing business plans for different types of AFNR businesses.</p> <p>ABS.05.03. Assess marketing principles and develop marketing plans to accomplish AFNR business objectives.</p>	<p>PS.03.04.02.b. Compare and contrast the impact on greenhouse gas, carbon footprint of the national/international production system with local/regional production system markets</p> <p>PS.03.04.02.c. Select and defend the use of nationally/internationally grown or locally/regionally grown for a production operation system.</p> <p>ABS.04.01.03.a. Research and describe the components to include in a business plan for an AFNR business.</p> <p>ABS.05.03.03.a. Research and summarize the purpose, components and process to develop marketing plans for AFNR businesses.</p>	