# Floriculture & Greenhouse Management Course No. 18057 Credit: 1.0

|  |  |  |  |
| --- | --- | --- | --- |
| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes:Plant Systems (01.1101)

Course Description:

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Career Opportunities

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identifies various careers in floral design and greenhouse management  |  |
| 1.2 | Summarizes different educational requirements |  |
| 1.3 | Identify scope of floriculture and greenhouse operations in Kansas, domestically, and nationally |  |

## Benchmark 2: Safety

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Identify tools used in floriculture and greenhouses  |  |
| 2.2 | Describe and demonstrate proper hand tool safety  |  |
| 2.3 | Demonstrate proper use of power tools  |  |
| 2.4 | Explain proper pesticide safety procedures  |  |
| 2.5 | Demonstrate safe use of plant growth regulators  |  |
| 2.6 | Be aware of electrical hazards and water in the greenhouse  |  |

## Benchmark 3: Plant Identification & Classification

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Use scientific plant names correctly  |  |
| 3.2 | Describe plants using taxonomic terms  |  |
| 3.3 | Identify 20 plants commonly found in a greenhouse or floral shop (cut flowers, bedding flowers, house plants, nursery stock, and bulbs)  |  |

## Benchmark 4: Greenhouse Structures

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 4.1 | Determine location and orientation of greenhouses  |  |
| 4.2 | Discuss the difference in greenhouse designs  |  |
| 4.3 | Identify different types of benches  |  |
| 4.4 | Discuss different environmental controls (heating, cooling, air circulation, lighting, and humidity) |  |
| 4.5 | Differentiate between different irrigation and watering systems. |  |
| 4.6 | Calculate operation costs and greenhouse structure costs  |  |

## Benchmark 5: Plant Media & Growing Containers

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 5.1 | Prepare and grow plants in a soil-less media  |  |
| 5.2 | Identify basic types and sizes of containers used in commercial greenhouses  |  |
| 5.3 | Explain the components of a soil-less media |  |
| 5.4 | Calculate soil amounts for different pots  |  |

## Benchmark 6: Greenhouse Cultural Practices

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 6.1 | Identify different light requirements for different greenhouse crops  |  |
| 6.2 | Determine different temperature requirements for different greenhouse crops  |  |
| 6.3 | Describe humidity requirements for different greenhouse crops  |  |
| 6.4 | Identify factors that promote good air quality in a greenhouse |  |
| 6.5 | Determine the amount of water needed for common greenhouse crops  |  |

## Benchmark 7: Greenhouse Management

### Competencies

| **#** | **Description** | **RATING** |
| --- | --- | --- |
| 7.1 | Propagate plants sexually and asexually  |  |
| 7.2 | Calculate fertigation requirements  |  |
| 7.3 | Calculate bench space for different sizes of pots  |  |
| 7.4 | Regulate pH in soil and water  |  |

## Benchmark 8: Greenhouse Production

### Competencies

| **#** | **Description** | **RATING** |
| --- | --- | --- |
| 8.1 | Learn proper technique for poinsettia, Easter lily, and Chrysanthemum production  |  |
| 8.2 | Demonstrate bedding plant production methods  |  |
| 8.3 | Learn hydroponic methods of plant production  |  |
| 8.4 | Design or develop a greenhouse planting schedule  |  |

## Benchmark 9: Integrated Pest Management

### Competencies

| **#** | **Description** | **Rating** |
| --- | --- | --- |
| 9.1 | Identify common pests and diseases in Kansas greenhouses  |  |
| 9.2 | Describe control methods, sanitation, chemical formulations, and equipment used to control pests in the greenhouse  |  |
| 9.3 | Identify safety guidelines for pesticide use  |  |
| 9.4 | Read chemical label and use the chemical properly |  |
| 9.5 | Dispose of chemicals according to EPA recommendations |  |

## Benchmark 10: Perform basic principles of floral design

### Competencies

| **#** | **Description** | **rating** |
| --- | --- | --- |
| 10.1 | Identify basic principles of floral arranging and floral design |  |
| 10.2 | Identify basic design shapes |  |
| 10.3 | Identify color relationships  |  |

## Benchmark 11: Discuss the necessary mechanics of floral design

### Competencies

| **#** | **Description** | **Rating** |
| --- | --- | --- |
| 11.1 | Identify and safely use design tools and supplies  |  |
| 11.2 | Construct bows using basic ribbon widths  |  |
| 11.3 | Select and prepare appropriate containers  |  |
| 11.4 | Perform basic wiring and taping techniques  |  |
| 11.5 | Package flowers and arrangements for delivery  |  |

## Benchmark 12: Demonstrate creation of a variety of floral designs

### Competencies

| **#** | **Description** | **Rating** |
| --- | --- | --- |
| 12.1 | Identify how floral designs are used  |  |
| 12.2 | Construct corsages and boutonnieres  |  |
| 12.3 | Construct a bud vase  |  |
| 12.4 | Construct a one sided arrangement  |  |
| 12.5 | Construct a centerpiece  |  |
| 12.6 | Construct an evergreen wreath |  |
| 12.7 | Construct a silk arrangement  |  |
| 12.8 | Construct a dried arrangement |  |
| 12.9 | Construct a dish garden  |  |

## Benchmark 13: Discuss Post-harvest Handling Procedures

### Competencies

| **#** | **Description** | **Rating** |
| --- | --- | --- |
| 13.1 | Describe how plant processes affect shelf life  |  |
| 13.2 | Demonstrate techniques for the processing of cut plant materials |  |
| 13.3 | Demonstrate the care of potted plants |  |

## Benchmark 14: Business

### Competencies

| **#** | **Description** | **Rating** |
| --- | --- | --- |
| 14.1 | Demonstrate appropriate customer relations skills  |  |
| 14.2 | Calculate the price for floral designs and corsages  |  |
| 14.3 | Calculate prices for different sizes of potted plants  |  |
| 14.4 | Create displays for a floral shop |  |
| 14.5 | Understand financial records for floral shop management |  |
| 14.6 | Understand advertising and marketing of floral shop products  |  |
| 14.7 | Demonstrate different public relations concepts  |  |
| 14.8 | Describe how computers and technology are used in the floral industry  |  |
| 14.9 | Complete a mock job application, resume and interview  |  |
| 14.10 | Discuss global perspectives on the floral industry |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

pathwayshelpdesk@ksde.org



900 S.W. Jackson Street, Suite 102

Topeka, Kansas 66612-1212

[https://www.ksde.org](https://www.ksde.org/)

The Kansas State Department of Education does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities and provides equal access to any group officially affiliated with the Boy Scouts of America and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201.