# *FLORICULTURE DESIGN AND MANAGEMENT CURRICULUM FRAMEWORK*

This document was prepared by:

Office of Career, Technical, and Adult Education
Nevada Department of Education
755 N. Roop Street, Suite 201
Carson City, NV 89701

# INTRODUCTION

The Nevada CTE Curriculum Frameworks are a resource for Nevada's public and charter schools to design, implement, and assess their CTE programs and curriculum. The content standards identified in this document are listed as a model for the development of local district programs and curriculum. They represent rigorous and relevant expectations for student performance, knowledge, and skill attainment which have been validated by industry representatives.

The intent of this document is to provide a resource to districts as they develop and implement CTE programs and curricula.

This program ensures the following thresholds are met:

- The CTE course and course sequence teaches the knowledge and skills required by industry through applied learning methodology and, where appropriate, work-based learning experiences that prepare students for careers in high-wage, high-skill and/or high-demand fields. Regional and state economic development priorities shall play an important role in determining program approval. Some courses also provide instruction focused on personal development.
- The CTE course and course sequence includes leadership and employability skills as an integral part of the curriculum.
- The CTE course and course sequence are part of a rigorous program of study and include sufficient technical challenge to meet state and/or industry-standards.

The CTE program components include the following items:

- Program of Study
- State Skill Standards
- Employability Skills for Career Readiness Standards
- Career Technical Student Organizations (CTSO)
- Curriculum Framework
- CTE Assessments:
    - Workplace Readiness Skills Assessment
    - End-of-Program Technical Assessment
- Certificate of Skill Attainment
- CTE Endorsement on a High School Diploma
- CTE College Credit

# NEVADA DEPARTMENT OF EDUCATION
## CURRICULUM FRAMEWORK FOR
## FLORICULTURE DESIGN AND MANAGEMENT

| | |
|---|---|
| **PROGRAM TITLE:** | **FLORICULTURE DESIGN AND MANAGEMENT** |
| **STATE SKILL STANDARDS:** | **FLORICULTURE DESIGN AND MANAGEMENT** |
| **STANDARDS REFERENCE CODE:** | **FLORI** |
| **CAREER CLUSTER:** | **AGRICULTURE, FOOD & NATURAL RESOURCES** |
| **CAREER PATHWAY:** | **PLANT SYSTEMS** |
| **PROGRAM LENGTH:** | **3 LEVELS (L1, L2, L3C)** |
| **PROGRAM ASSESSMENT** | **FLORICULTURE DESIGN AND MANAGEMENT**<br>**WORKPLACE READINESS SKILLS** |
| **CTSO:** | **FFA** |
| **GRADE LEVEL:** | **9-12** |
| **AVAILABLE INDUSTRY CERTIFICATIONS/LICENSES PROVIDERS:** | **AMERICAN INSTITUTE OF FLORAL DESIGN**<br>**CERTIFIED DESIGNER/ AMERICAN INSTITUTE OF FLORAL DESIGN** |

### PROGRAM PURPOSE

The purpose of this program is to prepare students for postsecondary education and employment in the Floriculture Design and Management industry.

The program includes the following state standards:

- Nevada CTE Skill Standards: Floriculture Design and Management
- Employability Skills for Career Readiness
- Nevada Academic Content Standards (alignment shown in the Nevada CTE Skill Standards):
    - Science (based on the Next Generation Science Standards)
    - English Language Arts (based on the Common Core State Standards)
    - Mathematics (based on the Common Core State Standards)
- Common Career Technical Core (alignment shown in the Nevada CTE Skill Standards)

### CAREER CLUSTERS

The National Career Clusters™ Framework provides a vital structure for organizing and delivering quality CTE programs through learning and comprehensive programs of study (POS). In total, there are 16 Career Clusters in the National Career Clusters™ Framework, representing more than 79 Career Pathways to help students navigate their way to greater success in college and career. As an organizing tool for curriculum design and instruction, Career Clusters™ provide the essential knowledge and skills for the 16 Career Clusters™ and their Career Pathways.*

*Cite: National Association of State Directors of Career Technical Education Consortium. (2012). Retrieved from http://www.careertech.org/career-clusters/glance/careerclusters.html

## PROGRAM OF STUDY

The program of study illustrates the sequence of academic and career and technical education coursework that is necessary for the student to successfully transition into postsecondary educational opportunities and employment in their chosen career path. (NAC 389.803)

## PROGRAM STRUCTURE

The core course sequencing provided in the following table serves as a guide to schools for their programs of study. Each course is listed in the order in which it should be taught and has a designated level. Complete program sequences are essential for the successful delivery of all state standards in each program area.

| FLORICULTURE DESIGN AND MANAGEMENT<br>Core Course Sequence | |
|---|---|
| **COURSE NAME** | **LEVEL** |
| Agriculture Science I or Horticulture Science | L1 |
| Plant Science and Ornamental Horticulture | L2 |
| Floriculture | L3C |

The core course sequencing with the complementary courses provided in the following table serves as a guide to schools for their programs of study. Each course is listed in the order in which it should be taught and has a designated level. A program does not have to utilize all of the complementary courses in order for their students to complete their program of study. Complete program sequences are essential for the successful delivery of all state standards in each program area.

| FLORICULTURE DESIGN AND MANAGEMENT<br>Core Course Sequence with Complementary Courses | |
|---|---|
| **COURSE NAME** | **LEVEL** |
| Agriculture Science I or Horticulture Science | L1 |
| Plant Science and Ornamental Horticulture | L2 |
| Floriculture | L3C |
| Floriculture Advanced Studies* | AS |

*Complementary Courses

## STATE SKILL STANDARDS

The state skill standards are designed to clearly state what the student should know and be able to do upon completion of an advanced high school career and technical education (CTE) program. The standards are designed for the student to complete all standards through their completion of a program of study. The standards are designed to prepare the student for the end-of-program technical assessment directly aligned to the standards. (Paragraph (a) of Subsection 1 of NAC 389.800)

### EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

Employability skills, often referred to as "soft skills", have for many years been a recognizable component of the standards and curriculum in career and technical education programs. The twenty-one standards are organized into three areas: (1) Personal Qualities and People Skills; (2) Professional Knowledge and Skills; and (3) Technology Knowledge and Skills. The standards are designed to ensure students graduate high school properly prepared with skills employers prioritize as the most important. Instruction on all twenty-one standards must be part of each course of the CTE program. (Paragraph (d) of Subsection 1 of NAC 389.800)

### CURRICULUM FRAMEWORK

The Nevada CTE Curriculum Frameworks are organized utilizing the recommended course sequencing listed in the Program of Study and the CTE Course Catalog. The framework identifies the recommended content standards, performance standards, and performance indicators that should be taught in each course

### CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSOS)

To further the development of leadership and technical skills, students must have opportunities to participate in one or more of the Career and Technical Student Organizations (CTSOs). CTSOs develop character, citizenship, and the technical, leadership and teamwork skills essential for the workforce and their further education. Their activities are considered a part of the instructional day when they are directly related to the competencies and objectives in the course. (Paragraph (a) of Subsection 3 of NAC 389.800)

### WORKPLACE READINESS SKILLS ASSESSMENT

The Workplace Readiness Skills Assessment has been developed to align with the Nevada CTE Employability Skills for Career Readiness Standards. This assessment provides a measurement of student employability skills attainment. Students who complete a program will be assessed on their skill attainment during the completion level course. Completion level courses are identified by the letter "C".
(e.g., Level = L3C) (Paragraph (d) of Subsection 1 of NAC 389.800)

### END-OF-PROGRAM TECHNICAL ASSESSMENT

An end-of-program technical assessment has been developed to align with the Nevada CTE Skill Standards for this program. This assessment provides a measurement of student technical skill attainment. Students who complete a program will be assessed on their skill attainment during the completion level course. Completion level courses are identified by the letter "C". (e.g., Level = L3C)
(Paragraph (e) of Subsection 1 of NAC 389.800)

### CERTIFICATE OF SKILL ATTAINMENT

Each student who completes a course of study must be awarded a certificate which states that they have attained specific skills in the industry being studied and meets the following criteria: A student must maintain a 3.0 grade point average in their approved course of study, pass the Workplace Readiness Skills Assessment, and pass the end-of-program technical assessment. (Subsection 4 of NAC 389.800)

### CTE ENDORSEMENT ON A HIGH SCHOOL DIPLOMA

A student qualifies for a CTE endorsement on their high school diploma after successfully completing the following criteria: 1) successful completion of a CTE course of study in a program area, 2) successful completion of academic requirements governing receipt of a standard diploma, and 3) meet all requirements for the issuance of the Certificate of Skill Attainment. (NAC 389.815)

## CTE COLLEGE CREDIT

CTE College Credit is awarded to students based on articulation agreements established by each college for the CTE program, where the colleges will determine the credit value of a full high school CTE program based on course alignment. An articulation agreement will be established for each CTE program designating the number of articulated credits each college will award to students who complete the program.

CTE College Credit is awarded to students who: (1) complete the CTE course sequence with a grade-point average of 3.0 or higher; (2) pass the state end-of-program technical assessment for the program; and (3) pass the Workplace Readiness Assessment for employability skills.

Pre-existing articulation agreements will be recognized until new agreements are established according to current state policy and the criteria shown above.

Please refer to the local high school's course catalog or contact the local high school counselor for more information. (Paragraph (b) of Subsection 3 of NAC 389.800)

## ACADEMIC CREDIT FOR CTE COURSEWORK

Career and technical education courses meet the credit requirements for high school graduation (1 unit of arts and humanities or career and technical education). Some career and technical education courses meet academic credit for high school graduation. Please refer to the local high school's course catalog or contact the local high school counselor for more information. (NAC 389.672)

# CORE COURSE:
## RECOMMENDED STUDENT PERFORMANCE STANDARDS
## AGRICULTURE SCIENCE OPTION

| | |
|---|---|
| **COURSE TITLE:** | **Agriculture Science I** |
| **ABBR. NAME:** | **AG SCIENCE I** |
| **CREDITS:** | **1** |
| **LEVEL:** | **L1** |
| **CIP CODE:** | **01.0000** |
| **PREREQUISITE:** | **None** |
| **CTSO:** | **FFA** |

**COURSE DESCRIPTION**

This course is an introduction and survey course of the many career areas in agriculture. Topics include scientific investigations in agriculture, basic animal science, basic plant and soil science, ornamental horticulture, natural resource management, business management, leadership and communication through FFA, and career skills. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

## TECHNICAL STANDARDS

**CONTENT STANDARD 1.0 : EXAMINE THE ROLE OF AG IN SOCIETY**

Performance Standard 1.1 : Recognize the Role of Ag in Society

*Performance Indicators :* 1.1.1-1.1.6

Performance Standard 1.2 : Understand the History of Production Agriculture

*Performance Indicators :* 1.2.1-1.2.3

Performance Standard 1.3 : Explore the World Food Supply

*Performance Indicators :* 1.3.1-1.3.2

**CONTENT STANDARD 2.0 : DEVELOP LEADERSHIP AND COMMUNICATION SKILLS THROUGH PARTICIPATION IN FFA**

Performance Standard 2.1 : Understand the History and Organization of FFA

*Performance Indicators :* 2.1.1-2.1.4

Performance Standard 2.2 : Understand the Opportunities in FFA

*Performance Indicators :* 2.2.1-2.2.3

Performance Standard 2.3 : Properly Use Skills in Parliamentary Procedure

*Performance Indicators :* 2.3.1-2.3.3

Performance Standard 2.4 : Understand the Importance of School and Community Awareness

*Performance Indicators :* 2.4.1-2.4.3

**CONTENT STANDARD 3.0 : DEVELOP A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) PROGRAM**

Performance Standard 3.1: Understand The Benefits of an SAE Program

*Performance Indicators*: 3.1.1-3.1.5

Performance Standard 3.2 : Understand the Benefits of SAE Records

*Performance Indicators:* 3.2.1-3.2.4

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**CONTENT STANDARD 4.0 : EXPLORING SCIENTIFIC INVESTIGATION IN AGRICULTURE**

Performance Standard 4.1 : Design and Conduct Agricultural Research
*Performance Indicators:* 4.1.1-4.1.2
Performance Standard 4.2 : Report Agricultural Research
*Performance Indicators:* 4.2.1-4.2.3
Performance Standard 4.3 : Understand Scientific Measurement
*Performance Indicators:* 4.3.1-4.3.3
Performance Standard 4.4 : Use Laboratory Tools and Equipment
*Performance Indicators:* 4.4.1-4.4.5
Performance Standard 4.5 : Explore Careers in Agricultural Science
*Performance Indicators:* 4.5.1-4.5.2

**CONTENT STANDARD 5.0 : DEVELOP AN UNDERSTANDING OF THE ANIMAL SCIENCE INDUSTRY**

Performance Standard 5.1 : Explore and Evaluate the Livestock Industry
*Performance Indicators:* 5.1.1-5.1.4
Performance Standard 5.2 : Understand Animal Cellular Biology
*Performance Indicators:* 5.2.1-5.2.2
Performance Standard 5.7 : Explore Careers in Animal Science
*Performance Indicators:* 5.7.1-5.7.2

**CONTENT STANDARD 6.0 : UNDERSTANDING PLANT SCIENCE**

Performance Standard 6.1 : Identify Different Plant Classification Systems
*Performance Indicators:* 6.1.1-6.1.3
Performance Standard 6.2 : Identify Parts and Functions of Plant Cells
*Performance Indicators:* 6.2.1-6.2.3
Performance Standard 6.3: Understand Plant Physiology
*Performance Indicators:* 6.3.1-6.3.4
Performance Standard 6.4 : Understand Flower Anatomy
*Performance Indicators:* 6.4.1-6.4.3
Performance Standard 6.5 : Understand Plant Propagation
*Performance Indicators:* 6.5.1-6.5.3
Performance Standard 6.6 : Understand Plant Nutrition
*Performance Indicators:* 6.6.1-6.6.5
Performance Standard 6.7 : Explore Careers in Plant Science
*Performance Indicators:* 6.7.1-6.7.2

## EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

**CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS**

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills
*Performance Indicators* : 1.1.1-1.1.7
Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills
*Performance Indicators* : 1.2.1-1.2.10
Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills
*Performance Indicators* : 1.3.1-1.3.4

## ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

**English Language Arts:** Reading Standards for Literacy in Science and Technical Subjects
Writing Standards for Literacy in Science and Technical Subjects
Speaking and Listening
Language

**Mathematics:** Mathematical Practices

**Science:** Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Agriculture Science I and II Standards for alignment by performance indicator

# CORE COURSE:
## RECOMMENDED STUDENT PERFORMANCE STANDARDS
## HORTICULTURE SCIENCE OPTION

| | |
|---|---|
| **COURSE TITLE:** | **Horticulture Science** |
| **ABBR. NAME:** | **HORTICULTURE SCIENCE** |
| **CREDITS:** | **1** |
| **LEVEL:** | **L1** |
| **CIP CODE:** | **01.1103** |
| **PREREQUISITE:** | **None** |
| **CTSO:** | **FFA** |

**COURSE DESCRIPTION**

This course is an introductory course into the horticulture industry. Areas of study include scientific investigations in horticulture, basic plant processes and anatomy, soils, plant propagation, plant growth requirements, cultivation practices, business management, horticulture and environment, and leadership and career skills. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

## TECHNICAL STANDARDS

**CONTENT STANDARD 1.0 : EXAMINE THE ROLE OF AG IN SOCIETY**

Performance Standard 1.1 : Recognize the Role of Ag in Society

*Performance Indicators :* 1.1.1-1.1.6

Performance Standard 1.2 : Understand the History of Production Agriculture

*Performance Indicators :* 1.2.1-1.2.3

Performance Standard 1.3 : Explore the World Food Supply

*Performance Indicators :* 1.3.1-1.3.2

**CONTENT STANDARD 2.0 : DEVELOP LEADERSHIP AND COMMUNICATION SKILLS THROUGH PARTICIPATION IN FFA**

Performance Standard 2.1 : Understand the History and Organization of FFA

*Performance Indicators :* 2.1.1-2.1.4

Performance Standard 2.2 : Understand the Opportunities in FFA

*Performance Indicators :* 2.2.1-2.2.3

Performance Standard 2.3 : Properly Use Skills in Parliamentary Procedure

*Performance Indicators :* 2.3.1-2.3.3

Performance Standard 2.4 : Understand the Importance of School and Community Awareness

*Performance Indicators :* 2.4.1-2.4.3

**CONTENT STANDARD 3.0 : DEVELOP A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) PROGRAM**

Performance Standard 3.1: Understand The Benefits of an SAE Program

*Performance Indicators*: 3.1.1-3.1.5

Performance Standard 3.2 : Understand the Benefits of SAE Records

*Performance Indicators:* 3.2.1-3.2.4

**CONTENT STANDARD 4.0 : EXPLORING THE HORTICULTURE INDUSTRY**

Performance Standard4.1 : Understand the Horticulture Industry

*Performance Indicators :* 4.1.1-4.1.3

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Performance Standard 4.2 : Describe the Importance of Different Areas of the Horticulture Industry
*Performance Indicators :* 4.2.1-4.2.4
Performance Standard 4.3 : Explore Horticulture Careers
*Performance Indicators :* 4.3.1-4.3.2
Performance Standard 4.4 : Practice Safety in Horticulture Practices
*Performance Indicators :* 4.4.1-4.4.3

**CONTENT STANDARD 5.0 : EXPLORING SCIENTIFIC INVESTIGATION IN AGRICULTURE**

Performance Standard 5.1 : Design and Conduct Agricultural Research
*Performance Indicators:* 5.1.1-5.1.2
Performance Standard 5.2 : Report Agricultural Research
*Performance Indicators:* 5.2.1-5.2.3
Performance Standard 5.3 : Understand Scientific Measurement
*Performance Indicators:* 5.3.1-5.3.3
Performance Standard 5.4 : Use Laboratory Tools and Equipment
*Performance Indicators:* 5.4.1-5.4.5
Performance Standard 5.5 : Explore Careers in Agricultural Science
*Performance Indicators :* 5.5.1-5.5.2

**CONTENT STANDARD 6.0 : UNDERSTAND BASIC PLANT PROCESSES**

Performance Standard 6.1 : Identify Different Plant Classification Systems
*Performance Indicators:* 6.1.16.1.3
Performance Standard 6.2 : Identify Parts and Functions of Plant Cells
*Performance Indicators:* 6.2.1-6.2.3
Performance Standard 6.3 : Understand Plant Physiology
*Performance Indicators:* 6.3.1-6.3.4

**CONTENT STANDARD 7.0 : UNDERSTANDING PLANT ANATOMY**

Performance Standard 7.1 : Understand Root Anatomy
*Performance Indicators:* 7.1.1-7.1.3
Performance Standard 7.2 : Understand Stem Anatomy
*Performance Indicators:* 7.2.1-7.2.3
Performance Standard 7.3: Understand Leaf Anatomy
*Performance Indicators:* 7.3.1-7.3.4
Performance Standard 7.4 : Understand Flower Anatomy
*Performance Indicators:* 7.4.1-7.4.7

**CONTENT STANDARD 8.0 : UNDERSTAND THE ROLE OF SOILS IN HORTICULTURE**

Performance Standard 8.1 : Understand Soil Texture and Structure
*Performance Indicators:* 8.1.1-8.1.4
Performance Standard 8.2 : Understand Moisture-Holding Capacity
*Performance Indicators:* 8.2.1-8.2.2
Performance Standard 8.3: Understand Growing Media Components
*Performance Indicators:* 8.3.1-8.3.2

**CONTENT STANDARD 9.0 : UNDERSTAND THE ROLE OF SOILS IN HORTICULTURE**

Performance Standard 9.1 : Understand Sexual Reproduction
*Performance Indicators:* 9.1.1-9.1.6
Performance Standard 9.2 : Demonstrate Propagation by Cuttings
*Performance Indicators:* 9.2.1-9.2.4

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**CONTENT STANDARD10.0: UNDERSTAND PLANT GROWTH REQUIREMENTS**

Performance Standard 10.1 : **Understand the Nutritional Requirements of Horticultural Crops**

*Performance Indicators:* 10.1.1-10.1.4

Performance Standard 10.2 : **Understand the Environmental Requirements for Plant Growth**

*Performance Indicators:* 10.2.1-10.2.5

## EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

**CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS**

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills

*Performance Indicators* : 1.1.1-1.1.7

Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills

*Performance Indicators* : 1.2.1-1.2.10

Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills

*Performance Indicators* : 1.3.1-1.3.4

## ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

**English Language Arts:** Reading Standards for Literacy in Science and Technical Subjects
Writing Standards for Literacy in Science and Technical Subjects
Speaking and Listening
Language

**Mathematics:** Mathematical Practices

**Science:** Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Horticulture Science Standards for alignment by performance indicator

## CORE COURSE:
### RECOMMENDED STUDENT PERFORMANCE STANDARDS

| | |
|---|---|
| **COURSE TITLE:** | **Plant Science and Ornamental Horticulture** |
| **ABBR. NAME:** | **PLANT SCI HORT** |
| **CREDITS:** | **1** |
| **LEVEL:** | **L2** |
| **CIP CODE:** | **01.063** |
| **PREREQUISITE:** | **Ag Science I or Horticulture Science** |
| **CTSO:** | **FFA** |

**COURSE DESCRIPTION**

This course is a continuation of Agriculture Science I or Horticulture Science. This course is designed to introduce the intermediate agriculture student to the skills and knowledge needed in order to successfully grow and care for plants. Areas emphasized include: plant anatomy and physiology, plant identification, propagation, growing media, nutrition, and plant technologies. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

## TECHNICAL STANDARDS

**CONTENT STANDARD 1.0 : PRACTICE SAFETY IN THE ORNAMENTAL HORTICULTURE AND GREENHOUSE INDUSTRY**

Performance Standard 1.1 : Properly Perform Safe Work Practices

*Performance Indicators* : 1.1.1-1.1.5

**CONTENT STANDARD 2.0 : UNDERSTANDING PLANT ANATOMY**

Performance Standard 2.1 : Understand Root Anatomy

*Performance Indicators* : 2.1.1-2.1.4

Performance Standard 2.2 : Understand Stem Anatomy

*Performance Indicators* : 2.2.1-2.2.4

Performance Standard 2.3 : Understand Leaf Anatomy

*Performance Indicators* : 2.3.1-2.3.5

Performance Standard 2.4 : Understand Flower Anatomy

*Performance Indicators* : 2.4.1-2.4.5

**CONTENT STANDARD 3.0 : UNDERSTANDING PLANT PHYSIOLOGY**

Performance Standard 3.1 : Examine Energy Conversion in Plants

*Performance Indicators* : 3.1.1-3.1.3

Performance Standard 3.2 : Examine Transport Within a Plant System

*Performance Indicators* : 3.2.1-3.2.3

Performance Standard 3.3 : Examine Environmental Requirements for Plant Growth

*Performance Indicators* : 3.3.1-3.3.3

**CONTENT STANDARD 4.0 : PLANT IDENTIFICATION**

Performance Standard 4.1 : Categorize Plants

*Performance Indicators* : 4.1.1-4.1.4

**CONTENT STANDARD 5.0 : GROWING MEDIA**

Performance Standard 5.1 : Understand Soil Texture and Structure

*Performance Indicators* : 5.1.1-5.1.4

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**CONTENT STANDARD 6.0 : EXPLORE PLANT NUTRITION**

Performance Standard 6.1 : Understand Soil Texture and Structure

*Performance Indicators* : 6.1.1-6.1.4

**CONTENT STANDARD 8.0 : DEMONSTRATE PLANT PROPAGATION**

Performance Standard 8.1 : Understand Propagation by Seed

*Performance Indicators* : 8.1.1-8.1.5

Performance Standard 8.2 : Understand Asexual Propagation

*Performance Indicators* : 8.2.1-8.2.5

**CONTENT STANDARD 11.0 : EXPLORING PLANT TECHNOLOGIES**

Performance Standard 11.1 : Explore Selective Plant Breeding

*Performance Indicators* : 11.1.1-11.1.5

Performance Standard 11.2 : Examine Genetic Engineering of Plants

*Performance Indicators* : 11.2.1-11.2.2

Performance Standard 11.3 : Describe Micropropagation Techniques

*Performance Indicators* : 11.3.1-11.3.3

Performance Standard 11.4: Explore Hydroponic Techniques

*Performance Indicators* : 11.4.1-11.4.3

**CONTENT STANDARD 13.0 : PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA**

Performance Standard 13.1 : Recognize the Traits of Effective Leaders and Participate in Leadership Training Through Involvement in FFA

*Performance Indicators* : 13.1.1-13.1.3

Performance Standard 13.2 : Understand the Importance of School and Community Awareness

*Performance Indicators :* 13.2.1

**CONTENT STANDARD 14.0 : DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE**

Performance Standard 14.1 : Maintain a Supervised Agricultural Experience

*Performance Indicators* : 14.1.1-14.1.3

## EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

**CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS**

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills

*Performance Indicators* : 1.1.1-1.1.7

Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills

*Performance Indicators* : 1.2.1-1.2.10

Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills

*Performance Indicators* : 1.3.1-1.3.4

## ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

**English Language Arts:** Reading Standards for Literacy in Science and Technical Subjects
Writing Standards for Literacy in Science and Technical Subjects
Speaking and Listening
Language

**Mathematics:** Mathematical Practices

**Science:** Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Plant Science and Ornamental Horticulture Standards for alignment by performance indicator

# CORE COURSE:
## RECOMMENDED STUDENT PERFORMANCE STANDARDS

| | |
|---|---|
| **COURSE TITLE:** | **Floriculture Design And Management** |
| **ABBR. NAME:** | **FLORICULTURE** |
| **CREDITS:** | **1** |
| **LEVEL:** | **L3C** |
| **CIP CODE:** | **01.0608** |
| **PREREQUISITE:** | **Ornamental Horticulture** |
| **CTSO:** | **FFA** |

**COURSE DESCRIPTION**

This course is a continuation of Ornamental Horticulture. This course is the study of the science, business and design principles of floriculture. Areas of study include the history of floral design, the use of color, tools and principles of design in floral arrangements, plant identification, care and processing of cut flowers, marketing and sales, record keeping and floral business management. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon completion of this course, students will have acquired entry-level skills for employment in this field.

## TECHNICAL STANDARDS

**CONTENT STANDARD 1.0 : HISTORY OF FLORAL DESIGN**

Performance Standard 1.1 : Describe the Development of Design Techniques Throughout History

*Performance Indicators* : 1.1.1-1.1.5

**CONTENT STANDARD 2.0 : EXPLORE THE USE OF COLOR IN FLORAL DESIGN**

Performance Standard 2.1 : Examine How Color is Used in Design

*Performance Indicators* : 2.1.1-2.16

**CONTENT STANDARD 3.0 : UNDERSTAND THE IMPORTANCE OF BUSINESS PRINCIPLES AND PRACTICES IN THE FLORICULTURE INDUSTRY**

Performance Standard 3.1 : Examine the Difference Between Retail, Wholesale, and Production Floriculture Businesses

*Performance Indicators* : 3.1.1-3.1.3

Performance Standard 3.2 : Explain how Supply and Demand Affects the Floriculture Industry

*Performance Indicators* : 3.2.1-3.2.2

Performance Standard 3.3 : Explore the Retail Florist Industry

*Performance Indicators* : 3.3.1-3.3.5

Performance Standard 3.4 : Calculate Profit

*Performance Indicators* : 3.4.1-3.4.8

**CONTENT STANDARD 4.0 : UNDERSTAND FLORAL DESIGN TOOLS AND SUPPLIES**

Performance Standard 4.1 : Recognize the Purpose of Floral Design Tools and Supplies

*Performance Indicators* : 4.1.1-4.1.3

Performance Standard 4.2 : Demonstrate Wire and Taping Techniques

*Performance Indicators* : 4.2.1-4.2.3

Performance Standard 4.3 : Demonstrate the Use of Ribbon in Design

*Performance Indicators* : 4.3.1-4.3.3

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**CONTENT STANDARD 5.0 : PLANT IDENTIFICATION**

Performance Standard 5.1 : Identify Flower and Foliage Forms

*Performance Indicators* : 5.1.1-5.1.3

Performance Standard 5.2 : Identify Common Plant Materials Used in Floral Design

*Performance Indicators* : 5.2.1-5.2.4

**CONTENT STANDARD 6.0 : DESCRIBE PROPER TECHNIQUES/PROCEDURES IN CUT FLOWER PROCESSING AND STORAGE**

Performance Standard 6.1 : Correctly Prepare Cut Flowers Received Dry

*Performance Indicators* : 6.1.1-6.1.4

Performance Standard 6.2 : Understand the "Chain of Life" in the Floral Industry

*Performance Indicators* : 6.2.1-6.2.3

**CONTENT STANDARD 7.0 : DEMONSTRATE AN UNDERSTANDING OF THE PRINCIPLES AND ELEMENTS OF FLORAL DESIGN**

Performance Standard 7.1 : Explore the Principles and Elements of Floral Design

*Performance Indicators* : 7.1.1-7.1.6

Performance Standard 7.2 : Create Examples That Follow Principles of Floral Design

*Performance Indicators* : 7.2.1-7.2.5

**CONTENT STANDARD 8.0 : DEMONSTRATE APPROPRIATE MARKETING AND SALES STRATEGIES IN THE FLORICULTURE INDUSTRY**

Performance Standard 8.1 : Explain the Basics of Displays

*Performance Indicators* : 8.1.1-8.1.2

Performance Standard 8.2 : Explain the Basics of Sales

*Performance Indicators* : 8.2.1-8.2.5

**CONTENT STANDARD 9.0 : EXPLORE CAREER OPPORTUNITIES IN THE FLORICULTURE INDUSTRY**

Performance Standard 5.1 : Understand Employment Fields in the Floriculture Industry

*Performance Indicators* : 9.1.1-9.1.3

**CONTENT STANDARD 10.0 : PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA**

Performance Standard 10.1 : Recognize the Traits of Effective Leaders and Participate in Leadership Training Through Involvement in FFA

*Performance Indicators* : 10.1.1-10.1.3

Performance Standard 10.2 : Understand the Importance of School and Community Awareness

*Performance Indicators* : 10.2.1

**CONTENT STANDARD 11.0 : DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE**

Performance Standard 11.1 : Maintain a Supervised Agricultural Experience

*Performance Indicators* : 11.1.1-11.1.3

## EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

**CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS**

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills

*Performance Indicators* : 1.1.1-1.1.7

Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills

*Performance Indicators* : 1.2.1-1.2.10

Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills

*Performance Indicators* : 1.3.1-1.3.4

## ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

**English Language Arts:** Reading Standards for Literacy in Science and Technical Subjects
Reading Standards for Informational Text
Writing Standards for Literacy in Science and Technical Subjects
Speaking and Listening
Language Standards

**Mathematics:** Mathematical Practices

**Science:** Life Science

***** Refer to the Floriculture Design and Management Standards for alignment by performance indicator

## COMPLEMENTARY COURSE(S):

Programs that utilize the complementary courses can include the following courses. The Advanced Studies course allows for additional study through investigation and in-depth research.

| | |
|---|---|
| **COURSE TITLE:** | **Floriculture Advanced Studies** |
| **ABBR. NAME:** | **FLORICULTURE AS** |
| **CREDITS:** | **1** |
| **LEVEL:** | **AS** |
| **CIP CODE:** | **01.0608** |
| **PREREQUISITE:** | **Floriculture** |
| **CTSO:** | **FFA** |

**COURSE DESCRIPTION**

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## TECHNICAL STANDARDS

Students have achieved all program content standards and will pursue advanced study through investigation and in-depth research.

## EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

Students have achieved all program content standards and will pursue advanced study through investigation and in-depth research.

## SAMPLE TOPICS

- Participate in individual/team competitions
- Investigate and utilize shop management techniques and procedures
- Participation in an internship or job shadow opportunities
- Explore college and career opportunities