# Capstone in Agriculture Science Course No. 18003 Credit: 1.0

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

Pathways and CIP Codes:Diversified Agricultural Science (01.0000)

Course Description: A capstone course intended to provide students with opportunities to develop skills and knowledge from the diverse Agricultural industry. The course features a deep dive into the Business, Communications and Leadership, Animal Science, Agronomy, Plant Science and Biotechnology sectors of Agriculture. The broad-based Agricultural competencies addressed in this course will help prepare students for a wide variety of options in future careers in within Agriculture and related occupations.

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: Agribusiness - Sales

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identify, explain and organize components of the sales process. |  |
| 1.2 | Develop strategies to gain new customers. |  |
| 1.3 | Develop effective customer relationships using approaches that are consistent and comprehensive. |  |
| 1.4 | Demonstrate methods of building rapport. |  |
| 1.5 | Demonstrate methods of establishing credibility. |  |
| 1.6 | Practice proper phone etiquette. |  |
| 1.7 | Demonstrate methods of effective communication. |  |
| 1.8 | Devise sales practices to achieve goals. |  |
| 1.9 | Prepare and make sales presentations. |  |
| 1.10 | Use strategies to follow up sales to provide post-sales service. |  |
| 1.11 | Intercept, interpret and process customer complaints, needs and problems with products and services. |  |
| 1.12 | Identify and maintain needed sales records. |  |

## Benchmark 2: Animal Science - Anatomy

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Compare and Contrast desirable anatomical and physiological characteristics within and between species. |  |
| 2.2 | Explain the relation of animal tissues to growth, performance, and health. |  |
| 2.3 | Explain how the components and systems of animal anatomy and physiology relate to the production of animals. |  |
| 2.4 | Compare and contrast organ types and functions among animal species. |  |
| 2.5 | Explain the impact of body systems on performance, health, growth, and reproduction. |  |
| 2.6 | Explain the uses of the anatomical parts of the animal body’s in the agriculture industry. |  |
| 2.7 | Recognize common anatomical terms. |  |
| 2.8 | Identify all parts and functions of animals including bones, five major systems, muscles, and heart. |  |

## Benchmark 3: Animal science - health

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Fill and read a syringe. |  |
| 3.2 | Calculate medication amounts. |  |
| 3.3 | Properly read medication labels. |  |
| 3.4 | Identify withdrawal times for medications. |  |
| 3.5 | Describe the life cycle of internal and external parasites. |  |
| 3.6 | Describe the general clinical signs of an animal with a parasital and a bacterial infection. |  |
| 3.7 | Identify the different parasites that can be found within animals. |  |

## Benchmark 4: Agriculture Leadership and Communications – Career skills

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 4.1 | Prepare and Revise a Resume. |  |
| 4.2 | Write and Revise a Cover Letter. |  |
| 4.3 | Complete a Job Application. |  |
| 4.4 | Participate in a Job Interview. |  |
| 4.5 | Write a follow up letter. |  |

## Benchmark 5: Agriculture Leadership and Communications - Agriculture Trends and Policy Issues

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 5.1 | Research, examine, and discuss issues, trends, and policies that impact local, state, national and global agriculture. |  |
| 5.2 | Explain emerging trends and the opportunities they may create within agriculture. |  |
| 5.3 | Participate in a class debate over and agriculture issue, trend, or policy. |  |

## Benchmark 6: Agriculture Leadership and Communications - Ag Journalism and Communications

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 6.1 | Prepare an agricultural blog using credited sources of information. |  |
| 6.2 | Utilize appropriate software to design a magazine layout or newsletter for the FFA Chapter. |  |
| 6.3 | Design a video script and video for the promotion of the FFA Chapter or agriculture program. |  |
| 6.4 | Design and layout a web page for the FFA Chapter. |  |

## Benchmark 7: plant science - biotechnologty

### Competencies

| **#** | **Description** | **RATING** |
| --- | --- | --- |
| 7.1 | Define biotechnology and explore the historical impact it has had on agriculture. |  |
| 7.2 | Investigate current applications of biotechnology in agriculture. |  |
| 7.3 | Explore ethical, legal, and social biotechnology related issues. |  |
| 7.4 | Explain selective plant breeding. |  |
| 7.5 | Examine genetic engineering of plants. |  |
| 7.6 | Describe micropropagation techniques for plants. |  |

## Benchmark 8: Plant science – agronomy applications

### Competencies

| **#** | **Description** | **RATING** |
| --- | --- | --- |
| 8.1 | Define rangeland. |  |
| 8.2 | Evaluate range management systems, economics, and improvement techniques. |  |
| 8.3 | Determine livestock and wildlife use on rangeland. |  |
| 8.4 | Describe range management practices related to plant growth and development. |  |
| 8.5 | Evaluate the number and types of plant species in a rangeland area. |  |
| 8.6 | Evaluate how different tillage operations (plowing, chiseling, harrowing, discing, rototilling, etc.) affects the soil and water conservation, soil fertility, percolation, plant growth and development. |  |
| 8.7 | Describe input management practices related to plant growth and development, e.g., seed, fertilizer, irrigation, pest control, etc.. |  |
| 8.8 | Collect and prepare plant tissue and soil samples for analysis and interpret test results. |  |

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

Instructor Signature:

For more information, contact:

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