

**Agriculture, Food & Natural Resources Career Cluster**  
**Equine Science**  
**Course Number: 02.42200**

**Course Description:**

This laboratory course is designed to introduce students to the scientific principles of breeding and husbandry of horses, including the production, care, and management of horses. Students will be introduced to classification of breeds of horses, as well as nutrition, reproduction, and disease prevention and management.

**Course Standard 1**

**AFNR-ES-1**

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

**Standard: Demonstrate employability skills required by business and industry.**

The following elements should be integrated throughout the content of this course.

**1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.**

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé

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Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

### 1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

### 1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

### 1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss
Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict

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Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

### 1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

### 1.6 Present a professional image through appearance, behavior and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism
International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

### Support of CTAE Foundation Course Standards and Georgia Standards of Excellence L9-10RST 1-10 and L9-10WHST 1-10:

Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses.

## Course Standard 2

### AFNR-ES-2

**Learns to work safely in the agriculture lab and work sites, demonstrates selected competencies in leadership through the FFA and agricultural industry organizations, and develops plans for a Supervised Agricultural Experience Program (SAEP).**

- 2.1 Explain the role of the Agricultural Education program and the FFA in personal development.
- 2.2 Demonstrate knowledge learned through a SAEP.
- 2.3 Develop leadership and personal development skills through participation in the FFA.
- 2.4 Explore career opportunities in agribusiness through the FFA and Agricultural Education Program.
- 2.5 Explore the professional agricultural organizations associated with the course content.

## Course Standard 3

### AFNR-ES-3

**Identify the different breeds, types, and classes of horses and describe the evolution of the horse, including the history of domestication and historical value.**

- 3.1 Recognize the characteristics of horses that allowed domestication.
- 3.2 Name and describe the various breeds of horses.
- 3.3 Illustrate how breeds of horses were developed.
- 3.4 Analyze the historical role of horses in the development of various societies.

## Course Standard 4

### AFNR-ES-4

**Demonstrate a working knowledge of the anatomy of the horse and describe the mechanisms that allow a horse to move.**

- 4.1 Define and explain the importance of cells and the function to the horse.
- 4.2 Illustrate the parts of animal cells and explain the functions of these various parts.
- 4.3 List the major organs that make up each system of the horse and analyze the functions.
- 4.4 Evaluate the function of each of the three major leg muscles that control movement and evaluate the mechanisms of motion.
- 4.5 Identify and explain the leg muscles that control movement.

## Course Standard 5

### AFNR-ES-5

**Classify common problems in the structure of a horse and how these problems can be solved.**

- 5.1 Distinguish the problems that are caused by unsoundness and how to methodically examine a horse for these problems.
- 5.2 Name and describe unsound conditions of the legs or skeletal system.
- 5.3 Make observations about the problems that should be treated by a veterinarian and explain solutions for these problems.

## Course Standard 6

### AFNR-ES-6

**Categorize horses based on use.**

- 6.1 Investigate why conformation is more important than breed when selecting a horse.
- 6.2 Distinguish the characteristics that make horses desirable for different uses and identify these traits and typical markings for the face and legs of horses.

## Course Standard 7

### AFNR-ES-7

**Analyze the process of gene transfer in horses, determine how the science of genetics is used and discuss the reproductive process.**

- 7.1 Explain the differences between DNA and RNA, as well as between gene, allele, and chromosome.
- 7.2 Distinguish between phenotypic and genotypic traits.
- 7.3 Compare the relationship between dominant and recessive traits.
- 7.4 Categorize genetic abnormalities in horses.
- 7.5 Compare hormones that control the reproductive process.
- 7.6 Draw conclusions about different types of breeding programs.
- 7.7 Summarize the advantages of artificial insemination to breeding operations.
- 7.8 Investigate the process of embryo transfer to mares.

## Course Standard 8

### AFNR-ES-8

**Examine the digestive system of the horse and explain nutritional needs.**

- 8.1 Compare between simple stomach, ruminant, and the cecum digestive systems.
- 8.2 Investigate the function of the small and large intestine and the roles of these parts in the digestive process.
- 8.3 Classify the symptoms of nutrient deficiencies.
- 8.4 Distinguish between the function of nutrients within the body.
- 8.5 Develop a feeding program for horses.

## Course Standard 9

### AFNR-ES-9

**Differentiate the common diseases of the horse and prescribe preventive measures and management practices.**

- 9.1 Compare the signs of disease in horses.
- 9.2 Identify and explain how diseases are transmitted.
- 9.3 Make observations about how disease can be prevented.
- 9.4 Plan a vaccination program for horses.

## Course Standard 10

### AFNR-ES-10

**Illustrate an understanding of the parts of a horse's hoof and how to care for the foot.**

- 10.1 Summarize the importance of healthy feet as it relates to the overall health of the horse.
- 10.2 Distinguish between the three main functions of the hoof wall.
- 10.3 Explain the importance of daily foot inspection.
- 10.4 List and explain common problems of the feet.
- 10.5 List and illustrate the tools and equipment necessary to shoe a horse.

## Course Standard 11

### AFNR-ES-11

**Critique the housing, shelters, and facilities needed to care for horses.**

- 11.1 Identify and describe the space and housing requirements for a horse.
- 11.2 Describe the safety requirements for a horse facility.
- 11.3 Analyze the requirements for feeding and watering horses.
- 11.4 Assess the reasons for building fences.
- 11.5 Compare the proper procedures for building a horse fence.

**Course Standard 12**

**AFNR-ES-12**

**Discuss the various types of behavior associated with horses.**

- 12.1 Name and describe 10 different behavioral categories associated with horses.
- 12.2 Investigate the sense of the vision, touch, smell, and hearing of the horse.
- 12.3 Predict how natural behavior is used to train a horse.
- 12.4 Cite evidence about the role of the sense of touch in training.
- 12.5 Outline a proper exercise program for horses.