

Agriculture, Food & Natural Resources Career Cluster
Veterinary Science
Course Number: 02.42400

Course Description:

The agricultural education course in veterinary science covers the basics of animal care. Topics covered include disease, parasites, feeding, shelter, grooming, and general animal care. The target population is career preparatory students desiring to continue education after high school or to enter the workforce after graduation from high school. College preparatory students benefit from the course as an elective if they plan to enter college and pursue a degree to enter the veterinary profession. This course allows students entering the workforce after graduation from high school to develop entry-level skills to become employed and to continue education on the job.

Course Standard 1**AFNR-VS-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

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Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé
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

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Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
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-VS-2

Learn to work safely in the agriculture lab and work sites, demonstrate selected competencies in leadership through the FFA and agricultural industry organizations, and develop 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 Supervised Agricultural Experience Program (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-VS-3

Define types of hazards common in the veterinary hospital and the organization that regulates safety standards in the workplace.

- 3.1 Read a material safety data sheet (MSDS) and locate important safety information.
- 3.2 Demonstrate the solving of mathematical equations to determine chemical concentrations.
- 3.3 Determine the appropriate safety precautions for a given scenario.
- 3.4 Formulate percentages and averages, as well as liquid and linear measurement, including converting English and metric units.
- 3.5 Demonstrate the proper and safe handling and restraint of animals.
- 3.6 Define and explain the purpose of the Occupational Safety and Health Administration (OSHA) organization.
- 3.7 Recognize how to protect themselves from potential hazards in the workplace.
- 3.8 Describe the correct methods of protection given scenarios describing hazardous situations.
- 3.9 Research zoonotic diseases using the Internet.

Course Standard 4

AFNR-VS-4

Distinguish the differences between sanitation, disinfection, and sterilization, and be able to identify which cleaning method should be used in any given situation.

- 4.1 Describe the different methods of sanitation and know when to use them.
- 4.2 Provide examples of the four types of safety hazards.

Course Standard 5

AFNR-VS-5

Recognize and explain Greek and Latin prefixes, suffixes, and roots that compose the language of veterinary medicine, as well as dissect the meaning of veterinary terms.

- 5.1 Analyze veterinary terms to define the meanings.
- 5.2 Recognize common Greek and Latin prefixes, suffixes, and roots.
- 5.3 List and provide examples of abbreviations commonly used in veterinary medicine.

Course Standard 6

AFNR-VS-6

Investigate body systems and construct a working knowledge of the function, and purpose, including the effect on diseases.

- 6.1 Recognize and implement common anatomical terminology.
- 6.2 Apply knowledge of veterinary anatomy through the dissection of animal specimens.
- 6.3 Identify common intramuscular injection sites.
- 6.4 Recall common sites for measuring pulses and collecting blood samples.
- 6.5 Describe the functions of the skeletal, muscular, circulatory, respiratory, renal, digestive, reproductive, endocrine, and nervous systems.
- 6.6 Apply knowledge by reading and analyzing several professional journal articles.

Course Standard 7

AFNR-VS-7

Define vocabulary of directional anatomical terms and identify anatomical structures of animals.

- 7.1 Identify and relate the bones of the skeleton to a live animal.
- 7.2 Identify and relate the ten muscles to a live animal.
- 7.3 Identify and describe the parts of the upper and lower respiratory tract.
- 7.4 Identify and describe the parts of nerve cells and the brain.
- 7.5 Interpret how the body seeks to maintain a state of homeostasis.
- 7.6 Apply knowledge by dissection and assembling anatomical models.

Course Standard 8

AFNR-VS-8

Critique the various regions of an animal's body and the signs of illness that may be present.

- 8.1 Correctly operate the stethoscope, otoscope, and ophthalmoscope.
- 8.2 Properly communicate with others to obtain a history of an animal as part of a routine physical exam.
- 8.3 Site evidence of certain signs and symptoms that may indicate a variety of diseases and/or other health problems.

Course Standard 9

AFNR-VS-9

Perform several common veterinary hospital procedures.

- 9.1 Calculate medication amounts.
- 9.2 Properly label medications.
- 9.3 Demonstrate completing vaccinations schedules, reading and filling syringes, and bandaging and brushing teeth.

Course Standard 10

AFNR-VS-10

Differentiate common internal and external parasites of small and large animals and recall both the common and the scientific names.

- 10.1 Describe the general clinical signs of an animal with a parasite infestation.
- 10.2 Diagram the life cycles of internal and external parasites.
- 10.3 Properly use a microscope to scan for parasite eggs.
- 10.4 Perform common laboratory procedures for diagnosing parasites.

- 10.5 Summarize the modes of transmission, life cycle, including the procedures commonly used to diagnose and determine the effect on the host.

Course Standard 11

AFNR-VS-11

Analyze animal nutrition required to maintain a healthy animal.

- 11.1 Define the terms digestion, absorption, and metabolism and describe the processes.
- 11.2 Discuss the differences between ruminant and non-ruminant digestive systems.
- 11.3 Identify and calculate an animal's energy requirements, based on use and stage of life.
- 11.4 Relate the importance of the importance of guaranteed analysis in selecting animal feed.
- 11.5 Illustrate animal digestive systems, as well as classify feeds into nutrient groups and list the steps of the digestion process.
- 11.6 Formulate rations and identify the nutrients found in various animal feeds, and conduct a palatability study to gain an understanding of feed selection.

Course Standard 12

AFNR-VS-12

Identify and describe the various components of an animal feed label and make an educated decision on which feed to purchase for an animal in each of the production periods.

- 12.1 Conduct a feed nutrients lab to identify the level of nutrients in various animal feeds.
- 12.2 Evaluate various feed labels to determine the nutrient components and the quality.
- 12.3 Determine market strategies for various feed labels.
- 12.4 Conduct a palatability study to identify animal feed preferences.
- 12.5 Apply concepts in the marketing of pet food and assess cost comparisons of various feeds.

Course Standard 13

AFNR-VS-13

Identify the path a disease takes and access the effects on various body systems.

- 13.1 Describe the signs of disease.
- 13.2 Explain how different diseases affect the body and the methods used to treat the diseases.

Course Standard 14

AFNR-VS-14

Apply concepts of the importance of animals and the contributions that animals make in society.

- 14.1 Explain the human and animal bond.
- 14.2 List and describe the ways in which animals are a part of human lives.

Course Standard 15

AFNR-VS-15

Identify and explain the purpose of the most common breeds of animal species and discuss specific temperament/behavior characteristics of the breed.

- 15.1 Identify by sight and describe the common breeds of animals.
- 15.2 Demonstrate various methods of behavior modification.

Course Standard 16

AFNR-VS-16

Critique animal behavior through observation and draw conclusions on the interaction with other animals, humans and environment.

- 16.1 Discuss the most common types of behaviors displayed by various animal species/breeds.
- 16.2 Explain common animal behaviors based on age, sex, and production period.