

Agriculture, Food and Natural Resources

Pathway: Animal Systems

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
AGPC01.01	Animal Systems	#2: Introduction to Animal Science #7: Orientation to Animal Science #9: Animal Anatomy and Physiology Course content of this K & S also reflected in courses of specialization: #4: Small Animal Specialization #5: Equine Science #6: Biotechnology and Agricultural Science Research	Apply knowledge of anatomy and physiology to produce and/or manage animals in a domesticated or natural environment.	Use classification systems to explain basic functions of animal anatomy and physiology.	Describe functional differences in animal structures and body systems.
					Classify animals according to anatomy and physiology.
				Recognize the anatomy of animal species to understand how the body structures interact and affect animal health.	Identify selected animal parts from a diagram or on a real animal.
					Identify ways that an animal's health can be affected by anatomy/physiology problems.
				Analyze a subject animal to determine the nature of its health status.	Perform simple procedures in evaluating an animal's health status.
					Identify symptoms of diseases, illnesses, parasites, and other health-related problems.
	Diagnose animal ailments.				
	Implement disease prevention and health improvement program.				
	Identify and implement (i.e., treat) treatment options.				

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AGPC01.02	Animal Systems	#2: Introduction to Animal Science #3: Advanced Animal Science #10: Working with Animals	Recognize animal behaviors to facilitate working with animals safely.	Develop a safety plan for working with a specific animal.	Explain factors which serve to stimulate or discourage given types of animal behavior.
					Recognize the normality curve of animal behavior.
					Perform safe handling procedures when working with animals.
					Identify strengths and weaknesses of an animal safety handling plan.
					Operate animal facilities to insure safety of animals.
AGPC01.03	Animal Systems	#2: Introduction to Animal Science #3: Advanced Animal Science #5: Equine Science	Provide proper nutrition to maintain animal performance.	Examine animal developmental stages to comprehend why nutrient requirements are different throughout an animal's life cycle.	Recognize the different phases of an animal's life cycle.
					Select diets which provide the appropriate quantity of nutrients for each animal developmental stage.
					Analyze a feed ration to determine whether or not it fulfills a given animal's nutrient requirements.
					Identify the differences between good and poor quality feedstuffs.
					Create a balanced ration for a given animal.
Record and compare feed variations to assess whether the nutritional requirements of a given animal are being met.	Use different types of feedstuffs (e.g., roughage, concentrates) to create a feed ration containing the appropriate amounts of required nutrients.				
	Use different forms of feedstuffs (e.g., pellets, cracked, rolled, ground) to create a diet that meets the needs of a specific animal.				

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AGPC01.04	Animal Systems	#3: Advanced Animal Science #9: Animal Anatomy and Physiology	Know the factors that influence an animal's reproductive cycle to explain species response.	Analyze elements in the reproductive cycle to explain differences between male and female reproductive systems.	Identify the parts of male and female reproductive tracts on example animals.
					Analyze the reproductive cycle of a given animal.
					Evaluate animal readiness for breeding.
				Discuss reproductive cycles to show how they differ from species to species.	Discuss the pros and cons of breeding through natural cover and artificial insemination.
					Discuss the implications of genetic variation.
					Describe techniques of artificial insemination.
					Identify reproduction management practices (e.g., male to female ratios, age and weight for breeding, fertility and soundness for breeding, heat synchronization, flushing).
				Evaluate an animal to determine its breeding soundness.	Describe the procedure for determining an animal's breeding readiness.
					Identify and prevent problems associated with reproduction.
					Select animals based on breeding soundness.

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AGPC01.05	Animal Systems	#3: Advanced Animal Science #8: Survey of the Animal Industry #10: Working with Animals #11: Livestock Management	Identify environmental factors that affect an animal's performance.	Recognize optimum performance for a given animal species.	Identify good performance for a given animal species.
					Identify reasons why some animals perform better than others.
				Create a program to develop an animal to its highest potential performance.	Identify factors that can be manipulated to control a given animal's performance.
					Generate ways to increase an animal's performance.
				Assess an animal to determine if it has reached its optimum performance level.	Make appropriate changes in an animal's environment in order to achieve optimum performance.
					Use appropriate tools in manipulating animal performance.
				Develop efficient procedures to produce consistently high-quality animals, well-suited for their intended purpose.	Identify a given species' desirable production numbers (e.g., birth weight, rate of gain, age of maturity, age of sexual maturity).
					Evaluate desired traits (e.g., production) of animals.
					Evaluate the role that economics plays in
					Design facilities appropriate for the production of a given species of animal.
	Make decisions on using new techniques and methods in the production facility so that both profit and animal safety are maximized.				