

Colorado CTE Course – Scope and Sequence

Course Name	Advanced Veterinary Science A		Course Details	Level 4 course in the Animal Science course sequence. Third of four semesters in Vet Science strand.		
			Course = 0.50 Carnegie Unit Credit			
Course Description	Students will focus on advanced animal behavior and handling, positioning and restraint for surgical procedures, pharmacology, Asepsis, hospital and surgical procedures, antibiotics and antibiotic resistance, laboratory testing and procedures as well as veterinary technologies. Current animal agricultural issues will be researched and addressed. The scientific processes of observation, hypothesizing, data gathering, interpretation, analysis and application will be included. Career opportunities and educational preparation will be examined. Learning activities are varied with classroom, laboratory and field experiences will be included.					
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered.					
SCED Identification #	18105	Schedule calculation based on 60 % of instructional time in semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.				
All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at https://www.cde.state.co.us/standardsandinstruction/essentialskills						
Instructional Unit Topic	Suggested % of Instructional Time	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration	
Health and Disease <ul style="list-style-type: none"> • Animal Health • Animal Behavior • Diseases • Disorders • Parasites 	35%	AS.02. Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare. AS.06. Classify, evaluate and select animals based on anatomical and physiological characteristics.	AS.02.01. Demonstrate management techniques that ensure animal welfare. AS.06.01. Classify animals according to taxonomic classification systems and use (e.g. agricultural, companion, etc.). AS.06.02. Apply principles of comparative anatomy and physiology to uses within various animal systems.	AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.06.01.01.c Assess taxonomic characteristics and classify animals according to the taxonomic classification system. AS.06.02.03.a Identify and summarize the properties, locations, functions and types of animal cells, tissues, organs and body systems.	Veterinary Science CDE	

		<p>AS.07. Apply principles of effective animal health care.</p>	<p>AS.07.01. Design programs to prevent animal diseases, parasites and other disorders and ensure animal welfare.</p>	<p>AS.06.02.03.b Compare and contrast animal cells, tissues, organs, body systems types and functions among animal species.</p> <p>AS.07.01.03.a List and summarize the characteristics of wounds, common diseases, parasites and physiological disorders that affect animals.</p> <p>AS.07.01.01.a. Identify and summarize specific tools and technology used in animal health management.</p> <p>AS.07.01.01.b. Describe and demonstrate the proper use and function of specific tools and technology related to animal health management.</p> <p>AS.07.01.01.c. Select and use tools and technology to meet specific animal health management goals.</p> <p>AS. 07.01.05.a. Explain the clinical significance of common veterinary methods and treatment (e.g., aseptic techniques, antibiotic use, wound management, etc.).</p> <p>CS.03.04.01.a. Identify and differentiate the appropriate protective equipment for the safe use and operation of specific tools and equipment (e.g. PPE, etc.).</p>	
		<p>CS.03. Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.</p>	<p>CS.03.04 Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment</p>		

				<p>CS.03.04.02.b. Complete the set up and adjustment for tools and equipment related to AFNR tasks.</p> <p>CS.03.04.03.b. Assess and demonstrate appropriate operation, storage and maintenance techniques for AFNR tools and equipment.CRP.04.02.01.a</p>	
<p>Pharmacology</p> <ul style="list-style-type: none"> ● Mathematical Applications in Veterinary Science ● Dosage Administration 	25%	<p>AS.07. Apply principles of effective animal health care.</p>	<p>AS.07.01. Design programs to prevent animal diseases, parasites and other disorders and ensure animal welfare.</p>	<p>AS.07.01.01.a Identify and summarize specific tools and technology used in animal health management.</p> <p>AS.07.01.01.b Describe and demonstrate the proper use and function of specific tools and technology related to animal health management.</p> <p>AS.07.01.01.c Select and use tools and technology to meet specific animal health management goals.</p> <p>AS.07.01.03.c Treat common diseases, parasites and physiological disorders of animals according to directions prescribed by an animal health professional.</p> <p>AS.07.01.05.a Explain the clinical significance of common veterinary methods and treatment (e.g., aseptic techniques, antibiotic use, wound management, etc.).</p>	

Colorado CTE Course – Scope and Sequence

Course Name	Advanced Veterinary Science B		Course Details	Level IV course in the Animal Science course sequence. Fourth of four semesters in Vet Science strand.		
			Course = 0.50 Carnegie Unit Credit			
Course Description	Students will focus on advanced animal behavior and handling, positioning and restraint for surgical procedures, pharmacology, Asepsis, hospital and surgical procedures, antibiotics and antibiotic resistance, laboratory testing and procedures as well as veterinary technologies. Current animal agricultural issues will be researched and addressed. The scientific processes of observation, hypothesizing, data gathering, interpretation, analysis and application will be included. Career opportunities and educational preparation will be examined. Learning activities are varied with classroom, laboratory and field experiences will be included.					
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered.					
SCED Identification #	18105	Schedule calculation based on 60 % of instructional time in semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.				
All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at https://www.cde.state.co.us/standardsandinstruction/essentialskills						
Instructional Unit Topic	Suggested % of Instructional Time	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration	

Veterinary Medical Practices <ul style="list-style-type: none"> • Animal Handling & Identification • Vital Signs • Blood Samples • Injections • Clinical Examinations • Laboratory Procedures • Hospital Procedures • Surgical Procedures 	60%	AS.02. Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare.	AS.02.01. Demonstrate management techniques that ensure animal welfare.	AS.02.01.02.a .Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.).	Veterinary Science CDE
		AS.06. Classify, evaluate and select animals based on anatomical and physiological characteristics.	AS.06.02. Apply principles of comparative anatomy and physiology to uses within various animal systems.	AS.06.02.03.c. Apply knowledge of anatomical and physiological characteristics of animals to make production and management decisions.	
		AS.07. Apply principles of effective animal health care.	AS.07.01. Design programs to prevent animal diseases, parasites and other	AS.07.01.01.a Identify and summarize specific tools and	

		<p>CS.03. Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.</p>	<p>disorders and ensure animal welfare.</p> <p>CS.03.04. Performance Indicator: Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.</p>	<p>technology used in animal health management.</p> <p>AS.07.01.01.b Describe and demonstrate the proper use and function of specific tools and technology related to animal health management.</p> <p>AS.07.01.01.c Select and use tools and technology to meet specific animal health management goals.</p> <p>AS.07.01.02.a Explain methods of determining animal health and disorders.</p> <p>AS.07.01.02.b Perform simple health-check evaluations on animals and practice basic emergency response procedures related to animals.</p> <p>AS.07.01.03.a List and summarize the characteristics of wounds, common diseases, parasites and physiological disorders that affect animals.</p> <p>AS. 07.01.05.a Explain the clinical significance of common veterinary methods and treatment (e.g., aseptic techniques, antibiotic use, wound management, etc.).</p> <p>CS.03.04.02.b. Complete the set up and adjustment for tools and equipment related to AFNR tasks.</p>	
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