

Veterinary Science

COURSE DESCRIPTION

Veterinary Science: The Care of Animals

As animals play an increasingly important role in our lives, scientists have sought to learn more about their health and well-being. Taking a look at the pets that live in our homes, on our farms, and in zoos and wildlife sanctuaries, this course will examine some of the common diseases and treatments for domestic animals. Toxins, parasites, and infectious diseases impact not only the animals around us, but at times...we humans as well! Through veterinary medicine and science, the prevention and treatment of diseases and health issues is studied and applied.

COURSE METHODOLOGY

- This is an inquiry-based course. Students will generate knowledge through online readings, synchronous chats, asynchronous discussions with students and their instructor, interactions with online tutorials, and online and hands-on simulations.
- A semester project developed by each student will be used to demonstrate knowledge and understanding of the material in the course.
- The instructor will act as a guide, a facilitator, an events planner, and a resource advisor. He/she will always be available through e-mail.
- The student must actively construct and acquire knowledge by being intrinsically motivated to succeed. To succeed, students must participate and complete all readings and activities. This course requires the student's active participation.
- Both formal and informal assessment methods will be used in the course. Informal assessment will include an evaluation of the quality and timeliness of participation in class activities. Formal assessment may include multiple-choice quizzes, tests, discussion board participation, and written assignments. A final exam will be given at the end of the course.

COURSE PARTICIPATION OBJECTIVES

This course for which you are registered is a college preparatory, academically rigorous course that covers an entire semester's worth of material. As such, it is important that you adhere to the following guidelines as you manage your time and commit to successfully completing all required coursework:

1. The requirements for this course are equivalent to completion of minimum of 90+ hours of class instruction at a traditional on-site high school

2. Assignments must be submitted for each unit as they are completed so that the teacher may review and assess your performance. Do not hold your work, you must submit each unit's homework as it is completed, demonstrating weekly assignment completions
3. You must log in regularly to your course to demonstrate continued participation, and completion of all course requirements, including assignments, assessments and discussion forums
4. You must complete your individual work and any incident of suspected cheating, plagiarism or collaboration on assignments violates the academic integrity expectations outlined at the time of your enrollment and can result in failure of the course or further action as deemed appropriate

Citizenship

Students are expected to conduct themselves in a responsible manner that reflects sound ethics, honor, and good citizenship. It is the student's responsibility to maintain academic honesty and integrity and to manifest their commitment to the goals of NUVHS through their conduct and behavior. Students are expected to abide by all NUVHS policies and regulations. Any form of academic dishonesty, or inappropriate conduct by students or applicants may result in penalties ranging from warning to dismissal, as deemed appropriate by NUVHS.

Communication

Throughout this course students will need to be in close contact with their instructor and fellow students. Students are expected to communicate via email and electronic discussion boards. Therefore, students should plan on checking email at least three times a week and participate in the discussion boards during the weeks they are live.

Instructors strongly encourage and welcome open communication. Clear, consistent, and proactive communication will ensure a successful experience in this course. It is the student's responsibility to notify the instructor immediately if and when a personal situation occurs that affects his/her performance in this class. Being proactive with communication will result in a quick solution to any problems that may occur.

COURSE OUTLINE

Unit 1: Introduction to Veterinary Science

In this unit, we will learn what veterinary science is and about some of the ongoing research in the field. We will examine how veterinary scientists try to better understand animals' health and diseases as well as how veterinarians apply this knowledge to particular animals that they care for. We will also discuss the history of veterinary science, some of the areas that veterinary scientists are focusing on in their research, and some of the ethical considerations in veterinary research and science.

Learning Objectives

- Discuss what the areas of veterinary science and medicine include and how these areas differ from each other.
- Learn about the history of veterinary science and medicine.
- Examine some of the research areas that veterinary scientists are working on today.
- Investigate the educational and other requirements for veterinarians and veterinary scientists.
- Discuss some of the ethics in the profession and some of the controversial issues.

Activities

Unit 1 Text Questions	Homework	10 points
Unit 1 Lab Questions	Homework	10 points
Unit 1 Discussion Part 1	Discussion	5 points
Unit 1 Discussion Part 2	Discussion	5 points
Unit 1 Quiz	Quiz	15 points

Unit 2: Small Animal Medicine

In this unit, we will discuss some common illnesses and diseases that dogs and cats experience. We will examine some of the diseases that affect the skeletal, nervous, endocrine, and gastrointestinal systems. We will also examine several viruses that can affect cats and dogs. In doing so, we will discuss some of the causes, symptoms, and treatments for these diseases.

Learning Objectives

- Learn what the nervous, endocrine, and gastrointestinal systems consist of and what they do for the body.
- Examine how skeletal and muscle disorders can affect animals.
- Discuss several infectious diseases that animals can catch from infected animals.
- Investigate the causes and symptoms of the diseases discussed in the unit.
- Learn about some of the treatments and preventative measures that veterinary scientists have discovered for these diseases.

Activities

Unit 2 Text Questions	Homework	10 points
Unit 2 Lab Questions	Homework	10 points
Unit 2 Discussion Part 1	Discussion	5 points
Unit 2 Discussion Part 2	Discussion	5 points
Unit 2 Quiz	Quiz	15 points

Unit 3: Large Animal Medicine

In this unit, we will examine some of the diseases and conditions that affect livestock, including horses, cattle, and swine. We will discuss equine diseases such as colic and equine influenza, including what causes the diseases and how they are treated. We will examine diseases that can affect cattle, such as mad cow disease and foot-and-mouth disease. Finally, we will discuss several diseases that swine can suffer from, including swine pox and pseudorabies.

Learning Objectives

- Discuss why the health of horses, cattle, and swine is important for public health.
- Learn about several diseases that can affect horses and how they are treated.
- Examine what mad cow disease is and why it is such a feared disease for cattle.
- Investigate several diseases that affect cattle and the impact that they have.
- Discuss some diseases that affect swine and how they are treated.

Activities

Unit 3 Text Questions	Homework	10 points
Unit 3 Lab Questions	Homework	10 points
Unit 3 Discussion Part 1	Discussion	5 points
Unit 3 Discussion Part 2	Discussion	5 points
Unit 3 Quiz	Quiz	15 points

Unit 4: Exotic Animal Medicine

In this unit, we will discuss veterinary medicine for exotic animals, including those animals that are kept in zoological parks and sanctuaries. We will examine a few of the diseases that can affect birds and reptiles. We will discuss how these diseases are treated and what effects the diseases may have. We will also examine some of the differences that veterinarians and veterinary scientists deal with in treating exotic animals in comparison to domestic animals like dogs and cats.

Learning Objectives

- Discuss what exotic animals are and why treating them may take additional education and training.
- Learn about some of the diseases that affect birds and what treatments are used for these diseases.
- Learn about some of the diseases that affect reptiles and what treatments are used for these diseases.
- Examine what roles veterinary scientists may fill in zoological parks and sanctuaries.
- Investigate what challenges veterinary scientists face when working with animals at zoological parks and sanctuaries.

Activities

Unit 4 Text Questions	Homework	10 points
Unit 4 Lab Questions	Homework	10 points
Unit 4 Discussion Part 1	Discussion	5 points
Unit 4 Discussion Part 2	Discussion	5 points
Unit 4 Quiz	Quiz	15 points

Midterm Exam Objectives

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from the first four units in this course (Note: You will be able to open this exam only one time.)

Midterm Exam Activities

Midterm Discussion	Discussion	5 points
Midterm Exam	Exam	50 points

Unit 5: Poisoning and Toxicology

In this unit, we will discuss the area of toxicology. Toxicology examines poisons, toxins, and other harmful substances, including how they affect various animal species and how veterinary medicine may treat these effects. We will examine some of the basic concepts in the study of toxins and then turn to investigate some of the common poisons and toxins that affect livestock and domestic animals. For each toxin, we will consider how the poisoning generally happens, what symptoms it can produce, and what veterinarians may do to treat the animal.

Learning Objectives

- Discuss what toxicology, toxicity, and toxicosis are and how these concepts relate to veterinary science and medicine.
- Learn how acute toxicosis differs from chronic toxicosis.
- Discuss how exposure to toxins can occur and what factors affect toxicity.
- Examine some of the natural forms of poisoning, such as poisoning from certain plants and fruits and bites from poisonous snakes.
- Investigate some artificial substances that can cause poisoning, such as rodenticides.

Activities

Unit 5 Text Questions	Homework	10 points
Unit 5 Lab Questions	Homework	10 points
Unit 5 Discussion Part 1	Discussion	5 points
Unit 5 Discussion Part 2	Discussion	5 points
Unit 5 Quiz	Quiz	15 points

Unit 6: Veterinary Parasitology

In this unit, we will examine the area of veterinary parasitology, which studies parasites and their animal hosts. In doing so, we will learn more about the different types of parasites and the various ways in which animals can become infected with parasites. We will also investigate several different examples of common parasites, including coccidian parasites, heartworms, mites, and fleas. For each, we will discuss how the particular parasite can affect the host animal, how animals become infected with the parasite, and how the parasite might be eliminated from the animal.

Learning Objectives

- Learn what parasites are and how they relate to hosts.
- Discuss several different types of parasites and how they differ.
- Examine how animals may become infected with parasites and how parasites may be transferred from animal to animal.
- Investigate some of the different symptoms that animals can experience due to parasites.
- Investigate some of the different life cycles for common parasites.

Activities

Unit 6 Text Questions	Homework	10 points
Unit 6 Lab Questions	Homework	10 points
Unit 6 Discussion Part 1	Discussion	5 points
Unit 6 Discussion Part 2	Discussion	5 points
Unit 6 Quiz	Quiz	15 points

Unit 7: Zoonotic Diseases

In this unit, we will learn more about zoonotic diseases or diseases that can be transferred from animals to humans. Some of these diseases can be deadly for humans so they are of great concern to veterinary scientists and public health officials. In this unit, we will examine four zoonotic diseases, including Hantavirus, plague, anthrax, and ringworm. In doing so, we will learn more about how these diseases are transferred to humans, the symptoms of the diseases, and how these diseases are treated or prevented.

Learning Objectives

- Learn about zoonoses and why they are a concern to veterinary scientists and public health officials.
- Discuss Hantavirus and how it is transmitted to humans.
- Examine the plague and how this zoonotic disease has impacted human societies throughout history.
- Investigate anthrax and how it can be transmitted to humans.
- Discuss ringworm and the symptoms of this zoonotic infection.

Activities

Unit 7 Text Questions	Homework	10 points
Unit 7 Lab Questions	Homework	10 points
Unit 7 Discussion Part 1	Discussion	5 points
Unit 7 Discussion Part 2	Discussion	5 points
Unit 7 Quiz	Quiz	15 points

Unit 8: Holistic Veterinary Science and Medicine

In this unit, we will learn more about some of the holistic treatments that are currently being used in veterinary medicine. Although few studies have been done on the effectiveness and safety of these treatments, more attention is being paid to this area of research as their use increases. We will discuss holistic treatments like acupuncture, herbal medicine, and hydrotherapy. In doing so, we'll talk about some of the benefits of these types of treatments, what they are used for, and what research has been done on the effectiveness of the treatments.

Learning Objectives

- Learn about holistic and allopathic veterinary treatments and how they differ.
- Discuss the use of acupuncture for the treatment of animal diseases.
- Examine how hydrotherapy can benefit horses and dogs.
- Investigate how herbs and botanicals are used to treat animal diseases.
- Learn about the use of essential oils with animals.

Activities

Unit 8 Text Questions	Homework	10 points
Unit 8 Lab Questions	Homework	10 points
Unit 8 Discussion Part 1	Discussion	5 points
Unit 8 Discussion Part 2	Discussion	5 points
Unit 8 Quiz	Quiz	15 points

Final Exam Objectives

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from units five to eight in this course – the last four units.
(Note: You will be able to open this exam only one time.)

Final Exam Activities

Class Reflection Discussion	Discussion	10 points
Final Exam	Exam	50 points

HOW YOU WILL BE GRADED

For critical thinking questions, there are no right or wrong answers. For example, a question on your thoughts on why you think people are shy is a pretty open-ended type of question. Grades will be based on the depth of personal insight you present. **Do not simply agree or disagree** with an insight question. We are looking for critical thinking and possibly a related personal experience with the question.

It is important to provide detailed answers for insight/opinion questions.

For review questions, you should produce a more academic answer. For example, "What two categories are norms divided into?" This type of direct question requires a specific answer. Please use full sentences and proper grammar.

When submitting paragraphs, use these guidelines.

1. The first, second or last sentence contains the main idea and key words from the question or assigned topic.
2. Paragraph contains one to three explanatory sentences.
3. Paragraph contains two to four sentences about specific details related to question.
4. Details are colorful, interesting and appropriate.
5. Paragraph ends with a good closing sentence that refers to the main idea without repeating it.
6. Free of spelling and grammatical errors.

GRADE SCALE

The following grading scale will be used to determine your final letter grade.

Letter Grade	Percentage Earned
A	95%+
A-	90% - 94.9%
B+	87% - 89.9%
B	84% - 86.9%
B-	80% - 83.9%
C+	77% - 79.9%
C	74% - 76.9%
C-	70% - 73.9%
D+	67% - 69.9%
D	64% - 66.9%
D -	60% - 63.9%
F	59% and lower

SUPPORT

At NUVHS you will have access to multiple support teams. Who you contact will depend on the questions you have. Always start by contacting your teacher through the Message Center in the course. Your teacher should be able to answer your question, but if they can't, then they will direct you to another support team. If you have questions about any of the course content, your grades, or course policies, you should contact your instructor.

For questions about your enrollment, transcripts, or general school-wide policies, you can contact **NUVHS Student Services** at info@nuvhs.org or by phone at 866.366.8847. For example, if you would like to withdraw from your course, you should contact Student Services. Please note that a refund for your course can only be obtained if you drop within the first seven days of enrolling in the course.

For help with login/password issues, or other technical issues specific to the Blackboard website, you can contact the team at [National University Blackboard Learn](#). They can also be reached by phone at (888) 892-9095.

EXPECTED SCHOOL-WIDE LEARNING RESULTS (ESLRs)

Engaged Learners

- Demonstrate self-directed learning skills such as time management, and personal responsibility through the completion of course requirements
- Develop an understanding of their own preferred learning styles to enhance their overall academic potential
- Incorporate effective and relevant internet and multimedia resources in their learning process to broaden their knowledge base

Critical Thinkers

- Effectively analyze and articulate sound opinions on a variety of complex concepts
- Illustrate a variety of problem-solving strategies that strengthen college preparation and workforce readiness
- Formulate a framework for applying a variety of technology and internet-based research to enhance information literacy and collaborative thinking

Effective Communicators

- Demonstrate awareness and sensitivity to tone and voice in multiple forms of communication
- Express concepts and ideas in a variety of forms
- Enhance communication skills through the use of media rich or other technology resources

Global Citizens

- Appreciate the value of diversity
- Understand the range of local and international issues facing today's global community
- Demonstrate awareness of the importance of cultural sensitivity and social responsibility in the 21st century