

Veterinary Science

Course Description: Veterinary Science challenges students to use advanced technologies and medical treatments to maintain the health of animals. The animal health industry continues to grow in importance and prominence as more people purchase animals for pleasure and sustenance.

Recommend Prerequisites: Agriscience (HQ) or Principles of Agricultural Sciences

Recommended Credit: 1

Recommended Grade Level: 11th or 12th

Course Codes: (2009-2010) A10 – 5126 or A12 – 5176
(2010-2015) A12 – 5176

Veterinary Science

Standard 1.0

Evaluate careers and educational requirements related to the veterinary industry.

Standard 2.0

Demonstrate personal and occupational safety with veterinary science.

Standard 3.0

Analyze the anatomy and physiology of common small and large animals.

Standard 4.0

Explain nutritional importance in maintaining animal health.

Standard 5.0

Evaluate techniques in performing a physical examination.

Standard 6.0

Demonstrate common clinical procedures used in a veterinary business.

Standard 7.0

Analyze common diseases and parasites in small and large animals.

Standard 8.0

Evaluate office management skills needed in a veterinary business.

Standard 9.0

Demonstrate premier leadership and personal growth needed for a career in veterinary science.

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Standard 1.0

Evaluate careers and educational requirements related to the veterinary industry.

Learning Expectations and Performance Indicators:

- 1.1 Summarize terminology associated with veterinary science.
- 1.2 Explore the variety of career fields related to veterinary science.
- 1.3 Research and prepare a report on a specific veterinary career including the job description, working conditions, skills needed, and educational requirements.
- 1.4 Prepare a resume focused toward a career in veterinary science.

Standard 2.0

Demonstrate personal and occupational safety with veterinary science.

Learning Expectations and Performance Indicators:

- 2.1 Compare types of safety hazards in clinical and field settings.
- 2.2 Determine appropriate safety precautions for a given scenario.
- 2.3 Read and interpret information contained in material safety data sheets (MSDS).
- 2.4 Propose proper methods of animal restraint for clinical and field settings.
- 2.5 Describe procedures for proper sanitation, disinfection, and sterilization.
- 2.6 Compare zoonotic diseases and prevention measures associated with handling and care of animals.
- 2.7 Complete safety test with 100 percent accuracy.

Standard 3.0

Analyze the anatomy and physiology of common small and large animals.

Learning Expectations and Performance Indicators:

- 3.1 Describe the functions of the skeletal, muscular, circulatory, respiratory, urinary, GI, reproduction and nervous systems.
- 3.2 Diagram skeletal systems of common small and large animals.
- 3.3 Label the parts of a circulatory system.
- 3.4 Specify the muscles and relate them to a live animal.
- 3.5 Compare the parts of the respiratory system and explain functions.
- 3.6 Compare the parts of nervous system and explain their function.

Standard 4.0

Explain nutritional importance in maintaining animal health.

Learning Expectations and Performance Indicators:

- 4.1 Compare the six basic nutrients and their functions.
- 4.2 Identify and explain the abnormalities in meeting nutritional requirements and methods for correcting.
- 4.3 Compare and explain the process of digestion, absorption, and metabolism.
- 4.4 Evaluate various food labels to determine the nutrient components and their quality.
- 4.5 Describe an animal's energy requirements based on its use and stages of life.
- 4.6 Calculate the dry matter content of various feeds.

Standard 5.0

Evaluate techniques in performing a physical examination.

Learning Expectations and Performance Indicators:

- 5.1 Complete health history on a new client.
- 5.2 Identify the components of a routine physical exam in a clinic and in the field.
- 5.3 Demonstrate proper procedures for checking vital signs of common small and large animals.
- 5.4 Evaluate and recommend procedures for collecting blood, urine, and/or fecal samples.
- 5.5 Analyze a blood, urine, or fecal sample.
- 5.6 Evaluate procedures to conduct canine CPR.

Standard 6.0

Demonstrate common clinical procedures used in a veterinary business.

Learning Expectations and Performance Indicators:

- 6.1 Identify and explain the function of common equipment used in the clinical area of an office.
- 6.2 Interpret label information on common medications used in a veterinary practice.
- 6.3 Calculate proper dosages of medications based upon label directions.
- 6.4 Demonstrate proper techniques in filling a syringe for a prescribed dosage.
- 6.5 Discuss proper bandaging methods.
- 6.6 Interpret patient records kept by the veterinarian on individual animals.
- 6.7 Assess common physical injuries such as cuts, abrasions, and contusions and recommend possible treatments.

Standard 7.0

Analyze common diseases and parasites in small and large animals.

Learning Expectations and Performance Indicators:

- 7.1 Evaluate the classifications of diseases.
- 7.2 Discuss factors that may cause diseases.
- 7.3 Describe symptoms of diseases.
- 7.4 Determine how diseases affect the body and recommend treatment or preventative options.
- 7.5 Identify common internal parasites and symptoms in small and large animals.
- 7.6 Identify common external parasites and symptoms in small and large animals.
- 7.7 Evaluate current methods and products used in parasite control.
- 7.8 Analyze the U. S. Department of Agriculture's role in disease prevention and control.
- 7.9 Evaluate the role of state veterinarians, state animal disease laws, and diagnostic labs in animal disease control.

Standard 8.0

Evaluate office management skills needed in a veterinary business.

Learning Expectations and Performance Indicators:

- 8.1 Analyze systems used in keeping animal and client records.
- 8.2 Demonstrate proper procedures in answering phones and scheduling appointments.
- 8.3 Analyze inventory records and their importance to the business.
- 8.4 Role-play to demonstrate proper steps in handling grieving clients.

Standard 9.0

Demonstrate premier leadership and personal growth needed for a career in veterinary science.

Learning Expectations and Performance Indicators:

- 9.1 Demonstrate public speaking skills.
- 9.2 Demonstrate methods and techniques of parliamentary procedure.
- 9.3 Conduct and facilitate group discussions and planning committees.
- 9.4 Implement a program of activities for an organization.
- 9.5 Propose an SAEP, supervised agricultural experience program, related to animal science.