



BAKER COLLEGE
STUDENT LEARNING OUTCOMES

**VET1011 Anatomy & Physiology Lab for Veterinary
Technology**
1 Semester Credit Hour

Student Learning Outcomes and Enabling Objectives

1. Identify common prefixes, word roots, and suffixes associated with all body systems.
 - a. Identify appropriate anatomical terminology.
 - b. Identify appropriate directional terminology on models.
 - c. Identify appropriate body position terminology.
 - d. Identify appropriate dental directional terminology.
2. Demonstrate how to use the microscope.
 - a. Identify correct parts of the microscope.
 - b. Demonstrate placement of a slide on the stage.
 - c. Demonstrate the use of coarse and fine focus adjustments.
 - d. Demonstrate appropriate handling and cleaning of microscope.
3. Characterize the anatomy and physiology of the cell.
 - a. Differentiate organelles based on their microscopic structure.
 - b. Differentiate the organelles based on their function.
 - c. Identify the stages of cellular division (mitosis) using microscopy.
4. Characterize the structure and function of epithelial, connective, nervous and muscle tissue.
 - a. Differentiate skeletal muscle, adipose tissue, mucosal epithelial tissue and cartilage microscopically.
 - b. Relate the structure of each tissue to location and function.
 - c. Use medical terminology, including pronunciation and spelling of terms, relevant to the tissues of the body.
5. Summarize the structure and function of the musculoskeletal system.
 - a. Identify skeletal structures on diagrams, photos, models or prepared specimens.
 - b. Explain the physiology of the musculoskeletal system.
 - c. Differentiate skeletal, smooth and cardiac muscle microscopically.
 - d. Identify the major muscle groups used for intramuscular injections in domestic species.
 - e. Use medical terminology, including pronunciation and spelling of terms, relevant to the musculoskeletal system.
6. Summarize the structure and function of the nervous system.

- a. Identify major structures of the central nervous system on diagrams, photos, models or prepared specimens.
 - b. Describe the functions of the major structures of the nervous system.
 - c. Perform dissection of a prepared brain specimen.
 - d. Identify the cranial nerves and their specific function.
 - e. Differentiate functions and structures of the central nervous system vs. peripheral nervous system.
 - f. Use medical terminology, including pronunciation and spelling of terms relevant to the nervous system.
7. Summarize the structure and function of the special senses.
 - a. Identify major structures of the ear on diagrams, photos, models or prepared specimens.
 - b. Describe the functions of the major structures of the special senses.
 - c. Identify major structures of the eye on diagrams, photos, models or prepared specimens.
 - d. Perform dissection of a prepared eye specimen.
 - e. Use medical terminology, including pronunciation and spelling of terms relevant to the special senses.
8. Summarize the structure and function of the endocrine system.
 - a. Identify clinically relevant endocrine organs on diagrams, photos, models or prepared specimens.
 - b. Identify hormones produced and/or secreted by major endocrine structures.
 - c. Identify the effector organs of hormones.
 - d. Use medical terminology, including pronunciation and spelling of terms relevant to the endocrine system.
9. Summarize the structure and function of the integumentary system.
 - a. Identify major structures of the integument and associated structures on diagrams, photos, models or prepared specimens.
 - b. Describe the functions of the major structures of the integumentary tract.
 - c. Identify the structures of the equine hoof.
 - d. Use medical terminology, including pronunciation and spelling of terms relevant to the integumentary system.
10. Summarize the structure and function of the cardiovascular system.
 - a. Identify major structures of the cardiovascular and associated structures on diagrams, photos, models or prepared specimens.
 - b. Describe functions of the major structures of the cardiovascular system.
 - c. Perform dissection of a prepared heart specimen.
 - d. Describe normal blood flow through the heart and peripheral vasculature.
 - e. Identify common venipuncture sites in domestic species.
 - f. Use medical terminology, including pronunciation and spelling of terms relevant to the cardiovascular system.
11. Summarize the structure and function of the hematopoietic system.
 - a. Identify blood components on diagrams, photos, models or prepared slides.
 - b. Describe the functions of blood cells and other components of blood.

- c. Identify the use of anticoagulants contained in blood collection tubes and those commonly used in veterinary practice.
 - d. Use medical terminology, including pronunciation and spelling of terms relevant to the hematopoietic system.
12. Summarize the structure and function of the immune system.
- a. Compare and contrast cell mediated immunity and humoral immunity.
 - b. Recognize the functions of the cells and mediators of the immune system.
 - c. Compare and contrast passive immunity and active immunity.
 - d. Explain the immunologic principals of vaccination of domestic species.
 - e. Use medical terminology, including pronunciation and spelling of terms relevant to the immune system.
13. Summarize the structure and function of the respiratory system.
- a. Identify major structures of the upper and lower respiratory tract on diagrams, photos, models, or prepared specimens.
 - b. Describe the functions of the major structures of the upper and lower respiratory tract.
 - c. Compare and contrast internal and external respiration.
 - d. Use medical terminology, including pronunciation and spelling of terms relevant to the respiratory system.
14. Summarize the structure and function of the digestive system.
- a. Identify major structures of the digestive tract on diagrams, photos, models or prepared specimens.
 - b. Describe functions of the major structures of the digestive system.
 - c. Compare and contrast the digestive function and anatomy of hindgut fermenters, ruminants and monogastrics.
 - d. Use medical terminology, including pronunciation and spelling of terms relevant to the digestive system.
15. Summarize the structure and function of the urinary system.
- a. Identify microscopic and gross structures of the urinary tract on diagrams, photos, models, or prepared specimens.
 - b. Detail the unique anatomical location of the kidneys and urinary bladder.
 - c. Describe the functions of the major structures of the urinary tract.
 - d. Perform dissection of a prepared kidney specimen.
 - e. Identify major structural differences of the urinary tract of males and females.
 - f. Use medical terminology, including pronunciation and spelling of terms relevant to the urinary system.
16. Summarize the structure and function of the reproductive system.
- a. Identify major structures of the reproductive tract on diagrams, photos, models or prepared specimens.
 - b. Describe the functions of the major structures of the reproductive tract.
 - c. Identify differences of the male reproductive tracts of domestic species.
 - d. Identify the species differences in placental attachments.
 - e. Use medical terminology, including pronunciation and spelling of terms relevant to the reproductive system.

17. Perform dissection of a whole specimen of a domestic species and identify major body systems and organs.

Big Ideas and Essential Questions

Big Ideas

- Scientific terminology
- Body structure
- Body functions
- Cellular Chemistry

Essential Questions

1. How do you incorporate scientific terminology into physical exam assessments, diagnostics, and treatments for animals?
2. How does chemistry apply to the physiology of an animal?
3. How is anatomy and physiology used by the technician in veterinary medicine?

These SLOs are not approved for experiential credit.

Effective: Fall 2021