Discipline: Agriculture	Sub-discipline: Veterinary Technician
General Course Title: **Introduction to Veterinary Technology**	Min. Units: **3 Semester**
	Proposed Suffix:

Course Description:
Preparation for veterinary technology courses. Topics include: anatomy and physiology, nutrition, pharmacology, common diseases and disorders, genetics and heredity, and career opportunities.

Required Prerequisites or Co-Requisites[1]

Advisories/Recommended Preparation[2]

Course Objectives: *At the conclusion of this course, the student should be able to:*

- Use appropriate veterinary terminology to describe common anatomical sites.
- Demonstrate basic laboratory skills.
- Discuss cell structure and function.
- Compare and contrast animal cells and plant cells.
- Describe tissue types and functions.
- Explain the major body systems and describe the function of each.
- Discuss basic nutritional components and describe differences between species.
- Recognize various disease causing agents and discuss common preventative methods.
- Identify and recognize symptoms of zoonotic diseases.
- Conduct microscopic examination of endo and ecto parasites.
- Define and explain the use of basic surgical and veterinary laboratory equipment.
- Perform basic pharmaceutical calculations.
- Recognize the dangers of radiation exposure.
- Discuss basic principles of heredity and genetic traits.
- Master resume writing and interview techniques.

Course Content:

1. Veterinary terminology
    a. Word structure
    b. Anatomical planes
    c. Directional terms
    d. Acronyms and abbreviations

2. Laboratory Skills
    a. Microscope
    b. Stereoscope
    c. Lab techniques – white and red blood cell counts, fecal floatation, blood smears, skin scraping, parasitic egg identification.

3. Cell structure and function
    a. Parts of the cell
    b. Function of cellular structures
    c. Basic cellular respiration
    d. Comparison of animal and plant cells

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4. Tissue types and functions

[1] Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

[2] Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

a. Epithelial
b. Connective
c. Muscle
d. Nerve

5. Major Body Systems
    a. Musculoskeletal system
        1.) Bone structure
        2.) Axial and appendicular skeletons
        3.) Joint types and articulation
    b. Circulatory system
        1.) Blood flow
        2.) Blood pressure
        3.) Electrocardiograms
        4.) Mammalian heart function
    c. Respiratory System
        1.) Mechanisms of breathing
        2.) Respiration rate
    d. Renal system
        1.) Urinalysis
    e. Digestive system
        1.) Mono gastric digestion
        2.) Ruminant digestion
    f. Reproductive system
        1.) Hormonal functions
        2.) Gestation and parturition
        3.) Spaying and neutering
    g. Central Nervous System
        1.) Neuron function
        2.) Animal behavior

6. Basic Nutrition
    a. Nutrients
    b. Species comparison
    c. Pet food labels

7. Disease Causing Agents
    a. Principles of disease transmission
    b. Primary disease causing agents
        1.) Bacteria
        2.) Virus
        3.) Protozoan
        4.) Fungal
        5.) Other
    c. Zoonotic diseases

Introduction to Veterinary Technology
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8. Endo and ecto parasites
    a. Symptoms and signs
    b. Fecal analysis
    c. Microscopic observation

9. Identify and care for surgical instruments

a. Commonly used surgical instruments
b. Clean, rinse and dry instruments
c. Appropriately package and label instruments

10. Identify veterinary laboratory equipment
    a. Sterilization equipment
    b. Surgical Instruments
    c. Blood collection tubes and equipment
    d. Microscope parts identification

11. Pharmacological calculations
    a. Dosage calculation
    b. Language and labeling

12. Radiology
    a. Dangers of radiation exposure
    b. California Radiation Control Regulations and Radiation Safety in Veterinary Practices
    c. Radiation monitoring devices

13. Heredity and genetics
    a. Cellular biology (review)
    b. Genetic traits
    c. Basic inheritance
    d. Current issues and ethics

14. Career preparation
    a. Resume writing
    b. Interview skills
    c. Employability skills

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture	Methods of Evaluation: Laboratory
Comprehensive Quizzes and Exams	Laboratory Skill Validation by Observation
Written Critical Thinking Scenarios	Laboratory Reports
Problem Analysis and Solution	Diagnoses and Problem Solving
Research and Term Papers	Laboratory Skill Practicum
	Certification Exams

Typical Textbooks, Manuals, or Other Support Materials

Laboratory manual for Comparative Veterinary Anatomy and Physiology, Phillip E. Cochran, Delmar Learning, 2004
Mosby's Comprehensive Review for Veterinary Technicians, Monica M. Tighe and Marge Brown, Mosby Inc., 2nd edition
Clinical Textbook for Veterinary Technicians, Dennis M. McCurnis and Joanna M. Bassert, Saunders, 5th edition.

Statewide Articulation: Under review

FDRG Lead Signature: Date:

Mark E. Bender, PhD CSU Stanislaus

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