

Discipline: Agriculture	Sub-discipline: Animal Science
General Course Title: Introduction to Animal Science (with laboratory)	Min. Units: 3 Semester
Proposed Suffix: L	
<p>Course Description: Survey of the livestock industry, supply of animal products and their uses; special emphasis on the origin, characteristics, adaptation and contributions of farm animals to the global Ag industry; analysis of the economic trends and career opportunities in animal agriculture. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Identify animal contributions to human needs. • List economically significant beef cattle, sheep, and swine breeds and areas of production. • Identify livestock body conformation and how it relates to function. • Identify life cycles and biotechnological principles of animal production. • List basic nutritional needs and feeding practices of scientific livestock production. • Name marketing strategies and market classification of livestock. • Demonstrate and understand animal behavior as it relates to health and performance. • Discuss issues affecting consumer and producer awareness of animal welfare, food safety and the environment. • Collect and evaluate data used to ensure scientifically-based management decisions. • Identify cultural contributions to and ethnic influences on the animal industry. • Identify career opportunities and requirements for successful employment. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Introduction to Animal Agriculture <ol style="list-style-type: none"> a. Importance of livestock to the World and United States b. Economic importance to agriculture c. Animal contribution to human needs d. Industry issues and challenges e. Ethnic contributions 2. Careers and Career Preparation in the Animal Sciences <ol style="list-style-type: none"> a. Career preparation b. Employment opportunities in animal production and management c. Employment opportunities in international agriculture d. Future opportunities 3. Overview of the Livestock Industry <ol style="list-style-type: none"> a. The beef cattle and dairy industry b. The swine industry c. The sheep and wool industry d. The poultry industry e. The horse industry <p>Introduction to Animal Science with Lab (Content Continued)</p>	

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.

4. Evaluation and Performance Livestock
 - a. Identifying external anatomy
 - b. Evaluating type and conformation
 - c. Perspective of carcass composition to the live animal
 - d. Understanding carcass and performance data
5. The Animal Food Industry
 - a. Food products and processing
 - b. Consumption and marketing strategies
 - c. Trends and future outlook
 - d. Health and nutritional considerations
6. Reproduction
 - a. Reproductive organs and their functions
 - b. Animal breeding
 - c. Mating systems
 - d. Fertility
7. Genetics
 - a. Fertilization
 - b. Gene modification and interactions
 - c. Genetic improvement and variation
 - d. DNA and RNA
8. Nutrition
 - a. Nutrients
 - b. Feeds and feed composition
 - c. Digestive systems
 - d. Growth and development
9. Animal Health
 - a. Prevention and the environment
 - b. Major diseases of farm animals
 - c. Detecting unhealthy animals
 - d. Treatment and care
10. Issues Affecting the Animal Industry
 - a. Animal behavior
 - b. Animal welfare
 - c. Advances in biotechnology
 - d. Government and environmental concerns
 - e. Food safety and consumer awareness

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

Methods of Evaluation: Lecture
 Comprehensive Quizzes and Exams
 Written Critical Thinking Scenarios
 Problem Analysis and Solution
 Research and Term Papers

Methods of Evaluation: Laboratory
 Laboratory Skill Validation by Observation
 Laboratory Reports
 Laboratory Research Projects and Reports
 Laboratory Skill Practicum Exams

Typical Textbooks, Manuals, or Other Support Materials

Scientific Farm Animal Production, 5th ed., Taylor, Robert E. ,
 Prentice Hall, ISBN 0-02-41919291-0
Livestock and Poultry Production, Gillespie, James R.
Animal Science and Industry, Acker, Cunningham

CSU GE Area B.2 Life Science	
Statewide Articulation: Formally CAN AG 6, CPSLO-ASCI 101, CPP-AVS 112/AVS 114L, CSUF-A SCI 1, CSUC-ANSC 101, UCD-ANS 2, other universities as lower division elective	
FDRG Lead Signature:	Date:
Mark E. Bender, PhD CSU Stanislaus	
[For Office Use Only]	Internal Tracking Number