**ANSCI 20 Course Outline as of Fall 2024**

# CATALOG INFORMATION

Dept and Nbr: ANSCI 20 Title: BASIC ANIMAL SCIENCE
Full Title: Basic Animal Science
Last Reviewed: 2/13/2023

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---|---|---|---|---|---|---|
| Maximum | 3.00 | Lecture Scheduled | 3.00 | 17.5 | Lecture Scheduled | 52.50 |
| Minimum | 3.00 | Lab Scheduled | 0 | 6 | Lab Scheduled | 0 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 3.00 | | Contact Total | 52.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

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|---|---|
| Title 5 Category: | AA Degree Applicable |
| Grading: | Grade Only |
| Repeatability: | 00 - Two Repeats if Grade was D, F, NC, or NP |
| Also Listed As: | |
| Formerly: | AG 20 |

**Catalog Description:**
In this course, students will examine different aspects of the livestock industry including animal anatomy, physiology, nutrition, genetics and epidemiology. Students will also evaluate scientific and economic trends, and career opportunities in animal agriculture.

**Prerequisites/Corequisites:**

**Recommended Preparation:**
Eligibility for ENGL 1A or equivalent

**Limits on Enrollment:**

**Schedule of Classes Information:**
Description: In this course, students will examine different aspects of the livestock industry including animal anatomy, physiology, nutrition, genetics and epidemiology. Students will also evaluate scientific and economic trends, and career opportunities in animal agriculture. (Grade Only)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 1A or equivalent

Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

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|---|---|---|---|---|---|
| **AS Degree:** | **Area** | | | Effective: | Inactive: |
| | C | Natural Sciences | | Fall 2018 | |
| **CSU GE:** | **Transfer Area** | | | Effective: | Inactive: |
| **IGETC:** | **Transfer Area** | | | Effective: | Inactive: |
| **CSU Transfer:** | Transferable | Effective: | Fall 1981 | Inactive: | |
| **UC Transfer:** | Transferable | Effective: | Fall 1981 | Inactive: | |

**CID:**
CID Descriptor: AG - AS 104 Introduction to Animal Science
SRJC Equivalent Course(s): ANSC20

**Certificate/Major Applicable:**
Both Certificate and Major Applicable

## COURSE CONTENT

**Student Learning Outcomes:**
At the conclusion of this course, the student should be able to:
1. Identify and discuss current issues affecting animal agriculture.
2. Discuss principles of livestock management including reproduction, nutrition, genetics, behavior, economics, and uses of technology.
3. Utilize the scientific method to collect and analyze data to make scientific decisions relevant to animal science.

**Objectives:**
At the conclusion of this course, the student should be able to:
1. Identify animal contributions to human needs and development of human civilizations.
2. List economically significant beef cattle, sheep, and swine breeds and areas of production.
3. Describe the function of the major body systems and how it relates to production.
4. Identify life cycles and biotechnological principles of animal production.
5. Analyze genetic change through artificial or natural selection.
6. Summarize basic nutritional needs and feeding practices for scientific livestock production.
7. Outline marketing strategies and determine market classification of livestock.
8. Analyze animal behavior as it relates to health and performance.
9. Discuss issues affecting consumer awareness of animal welfare, food safety and the environment.
10. Collect and calculate data used to ensure scientifically based management decisions.
11. Identify career opportunities and requirements for successful employment.

**Topics and Scope:**

I. Introduction to Animal Agriculture
   A. Importance of livestock to the World and United States

- B. Economic importance to agriculture
- C. Animal contribution to human civilization
- D. Industry issues and challenges
- E. Ethnic and cultural considerations to animal domestication

II. Careers and Career Preparation in the Animal Sciences
- A. Career preparation
- B. Employment opportunities in animal production and management in the United States
- C. Employment opportunities in international agriculture
- D. Future career opportunities in the United States

III. Overview of the Livestock Industry
- 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

IV. Animal Production
- A. Evaluate carcass composition in comparison to the live animal
- B. Understanding carcass and performance data
- C. Data used for management decisions
- D. Food products and processing
- E. Marketing classification
- F. Trends and future outlook

V. Reproduction
- A. Reproductive organs and their functions
- B. Animal breeding
- C. Reproductive management and technology
- D. Fertility assessment

VI. Anatomy and Physiology
- A. Identification of external anatomy for livestock and poultry species
- B. Analysis of body systems: reproductive and digestive

VII. Genetics
- A. Introduction and review of genetic principles
- B. Inheritance and population genetics
- C. Fertilization
- D. Gene modification and interactions
- E. Genetic improvement and variation in the livestock industry

VIII. Nutrition
- A. Classes of nutrients
- B. Feeds and feed composition
- C. Livestock feeding management practices
- D. Growth and development for production livestock

IX. Animal Health
- A. Biosecurity
- B. Major diseases of farm animals
- C. Detecting unhealthy animals
- D. Treatment and care

X. Animal Behavior
- A. Introduction to ethology
- B. Behavioral characteristics
- C. Animal handling and safety

XI. The Scientific Method
- A. Research in animal agriculture

B. Developing a research model
XII. Issues Affecting the Animal Industry
A. Animal welfare
B. Economics
C. Advances in biotechnology
D. Government and environmental concerns
E. Food safety and consumer awareness

**Assignment:**

1. Weekly reading (30-45 pages)
2. Seven to ten writing assignments such as case studies responses
3. Weekly discussions.
4. Quizzes (10 - 15),
5. One midterm and final exam
6. One term paper (5-7 pages)

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

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| Term paper; weekly discussions | Writing<br>30 - 40% |

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

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| Writting assignments such as case studies responses | Problem solving<br>10 - 20% |

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

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| None | Skill Demonstrations<br>0 - 0% |

**Exams:** All forms of formal testing, other than skill performance exams.

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| Quizzes, midterm, and final | Exams<br>40 - 60% |

**Other:** Includes any assessment tools that do not logically fit into the above categories.

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|---|---|
| None | Other Category<br>0 - 0% |

**Representative Textbooks and Materials:**
Introduction to Animal Science: Global, Biological, Social and Industry Perspectives. 6th ed. Damron, Stephen. Pearson. 2017 (classic).
Animal Science and Industry. 8th ed. Cunningham, Merle and Acker, Duane and LaTour,

Mickey. Pearson. 2017 (classic).
Modern Livestock and Poultry Production. 9th ed. Flanders, Frank and Gillespie, James. Cengage. 2016 (classic).
Scientific Farm Animal Production. 11th ed. Taylor, Robert and Field, Thomas. Pearson. 2015 (classic).