

Lassen Community College Course Outline

AGR 11 Beef Cattle Production

3.0 Units

I. Catalog Description

Principles and practices of purebred and commercial beef production on farm and range. Feeding, breeding management, housing, health, equipment, marketing, record keeping and other basic factors underlying successful beef production. This course has been approved for hybrid delivery.

Diversity Statement: Our commitment to diversity requires that we strive to eliminate barriers to equity and that we act deliberately to create a safe and inclusive environment where individual and group differences are valued and leveraged for the growth and understanding as an educational community.

Recommended Preparation: Successful completion of ENGL105 or equivalent multiple measures placement.

Transfers to both UC/CSU

C-ID AG-AS 108L

34 Hours Lecture, 51 Hours Lab, 68 Out of Class Hours, 153 Total Hours of Instruction

Scheduled: Spring (even)

II. Coding Information

Repeatability: Not Repeatable, Take one Time

Grading Option: Graded or Pass/No Pass

Credit Type: Credit - Degree Applicable

TOP Code: 010200

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Plan a breeding program for a commercial cow-calf operation and maximize the maternal heterosis.
2. Analyze and give economical recommendations for a production cow-calf operation.
3. Recognize and diagnose herd health problems and make recommendation to correct the health issues.

B. Course Objectives

Upon completion of this course the student will be able to:

1. Describe major historical developments in beef cattle production.
2. Describe the segments of the beef industry
3. Develop a herd management calendar for a typical commercial cow-calf operation
4. Identify major breeds of American, European, and exotic beef cattle and describe their importance in the rotational cross-breeding system.
5. Utilize performance record systems for selection of beef.
6. Identify and describe bovine digestive system components.
7. Define basic principles of breeding and reproduction of beef cattle.

8. Identify the major segments of beef production.
9. Describe problems common to beef cattle diseases, parasites, and nutrition.
10. Demonstrate an understanding of current market structure and marketing practices.

IV. Course Content

- A. History of beef cattle
- B. Organization of the beef industry
- C. Major breeds of beef cattle
- D. Segments of the beef industry
 1. Purebred or seedstock
 2. Cow-calf operations
 3. Stocker operations
 4. Feedlot operations
 5. Packer
 6. Retailer or purveyor
- E. Beef cattle nutrition
 1. Nutrients
 2. Ration balancing
 3. Range and pasture management
- E. Records and principles of selection of beef cattle
 1. Marketing
 2. USDA grading and pricing
- F. Reproduction and mating
 1. Artificial Insemination (AI)
 2. Estrus synchronizing
- G. Genetics
 1. Animal breeding
 2. Percentage of heritability of beef traits
 3. Medals postulates
 4. Performance data and Pedigrees
- H. Pregnancy and parturition
- I. Beef Cattle handling Facilities
 1. Buildings and equipment
 2. Safety practices
- J. Issues and Regulations in the Beef Cattle Industry.
 1. Environmental issues
 2. Quality Assurance programs (BQA)
- K. Diseases of beef cattle
 1. Vaccination program
 2. Common diseases
- L. Parasites of beef cattle
- M. The processing of feeds and methods of feeding, nutrition, marketing and grazing

V. Lab Activities

Individual Laboratory Activities may include but are not limited to:

1. Beef cattle facilities including cow- calf, feedlots, processing facilities may be toured
2. Beef Cattle management skills

3. Breeding herd management
4. Parturition and calving management
5. Nutrition
6. Health (vaccination disease treatment)
7. Evaluation and selection
8. Beef performance record evaluation
9. Harvesting procedures and carcass grading

VI. Assignments

A. Appropriate Readings

Materials from other sources (i.e. journals, breed magazines, and articles) will be used to enhance the learning process.

B. Writing Assignments

In order to successfully complete this course, students must demonstrate understanding of course content on several written measures, including mixed-format essays and examinations, and final term paper written on a topic of interest germane to the course content.

C. Expected Outside Assignments

Outside assignments shall include weekly essays related to each learning unit, research studies, and field trips to beef cattle program in Northern California.

D. Specific Assignments that Demonstrate Critical Thinking

This course provides substantial scientific information relating to the beef cattle industry and the intricacies of management, methods, nutrition differences, reproduction, and marketing options to stimulate critical thinking. Term paper assignment will measure student's critical thinking abilities.

VI. Methods of Evaluation

Traditional Classroom Evaluation

- A. Midterm exams.
- B. Quizzes.
- C. Special assignments.
- D. Lab reports and field trips.
- E. Term paper.
- F. Final exam.

Hybrid Evaluation

Quizzes and exams could be administered in person and/ or online. Students will be expected to complete online assignments and activities equivalent to in class assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous (chat/forum) will be evaluated for participation and to maintain effective communication between instructor and students.

VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

- Traditional Classroom Delivery Correspondence Delivery
- Hybrid Delivery Online Delivery

Traditional Classroom Delivery

Lecture, discussion, audio-visual media, field trips, and other appropriate methods to be determined by instructor.

Hybrid Delivery

Hybrid modality may involve face to face instruction mixed with online instruction. A minimum of 1/3 of instruction, including 100% labs, will be provided face to face. The remaining hours will be taught online through a technology platform as adopted by the district.

VIII. Representative Texts and Supplies

Fields, Thomas; *Beef Production and Management Decisions*", 6th Edition, 2017, Pearson, ISBN 978-0134602691

IX. Discipline/s Assignment

Agricultural Production

X. Course Status

Current Status: Active

Original Approval Date: 2/27/1990

Revised By: Brian Wolf

Curriculum/Academic Standards Committee Revision Date: 12/5/2023

Revised for IPR, no change: 03/15/2022