

Lassen Community College Course Outline

AGR 61 Introduction to Bovine Reproduction

1.5 Units

I. Catalog Description

This course is designed to give students an understanding of bovine reproduction. This course will focus on the application of artificial insemination and estrous synchronization. During this course both male and female reproduction will be discussed. The course is designed to give students the ability to understand and master the skills of artificial insemination. 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.

Does not transfer to UC/CSU

17 Hours Lecture, 25.5 Hours Lab, 34 Out of Class Hours, 76.5 Total Hours of Instruction

Scheduled: Spring

II. Coding Information

Repeatability: Not Repeatable, Take one Time

Grading Option: Graded or Pass/No Pass

TOP Code: 010200

Credit - Degree Applicable

III. Course Objectives

A. Course Student Learning Outcomes

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

1. Demonstrate the procedures to collect semen and perform semen straw preparation for maximum conception rate.
2. Properly run an Estrus synchronization protocol and explain how the protocol works.

B. Course Objectives

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

1. Discuss and understand the use of hormones in estrous synchronization.
2. Demonstrate proper Artificial Insemination (AI) techniques.
3. Demonstrate proper palpation techniques.
4. Identify normal semen cells.

5. Properly perform a breeding soundness examination

IV. Course Content

1. Reproductive tracts
 - a. Male
 - b. Female
2. BSE
 - a. Semen Evaluation
 - b. Scrotal Measurement
 - c. Structural evaluation
3. Estrous Cycle
 - a. Hormonal Control
 1. Estrogen (E2)
 2. Progesterone (P4)
 3. Luteinizing Hormone
 4. GnRH
 5. Prostaglandin
 - b. Ovarian Structures
 1. Follicle
 2. Corpus Luteum
4. Estrous Synchronization
 - a. GnRH
 - b. Lutalyse
 - c. Estromate
 - d. EBA
 - e. Synchromate-B
 - f. Uterine Ciders
5. Equipment for AI
6. Techniques of AI
 - a. Palpations
 - b. Pregnancy Checking
 - c. Passing pipette through the cervix.

V. Assignments

A. Appropriate Readings

The student will read from provided materials and the Journal of Animal Science.

B. Writing Assignments

The student will be required to prepare a term paper on new innovation in reproduction.

C. Expected Outside Assignments

Homework assignments from class as well as magazine reports.

D. Assignments that Demonstrate Critical Thinking

Students will be required to plan a breeding program as well as planning estrous.

VI. Methods of Evaluation

Traditional Classroom Evaluation

The student will be evaluated on quizzes, participation, and skill development and writing assignments.

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, laboratory and audiovisual.

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

Materials provided by Instructor

Recommended text:

Richard M. Hopper, "Bovine Reproduction", 2nd edition, 2021, ISBN 9781119602361

IX. Discipline/s Assignment

Agricultural Production, Agriculture

X. Course Status

Current Status: Active

Original Approval Date: 3/4/2002

Revised By: Brian Wolf

Curriculum/Academic Standards Committee Revision Date: 11/17/2020

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

