

# 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.

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

Does not transfer to UC/CSU  
17 Hours Lecture, 25.5 Hours Lab  
Scheduled: Spring

### II. Coding Information

Repeatability: Not Repeatable, Take 1 Time  
Grading Option: Graded or Pass/No Pass  
TOP Code: 010200

### 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 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. Synchronate-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 "Reproduction in Cattle" 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

All quizzes and exams will be administered during the in-person class time. 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**

A combination of traditional classroom and online instruction will be utilized. Every semester, a minimum of 17 hours of class will be taught face-to-face by the instructor and the remaining hours will be instructed online through the technology platform adopted by the District. Traditional classroom instruction will consist of lectures, visual aids, discussions and group activities. Online delivery consists of instructor-generated information, readings, news communications, web links and activities as well as facilitation of forum based discussions and communications.

**VIII. Representative Texts and Supplies**

Materials provided by Instructor

**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