ANSC 134 Course Outline as of Summer 2025

CATALOG INFORMATION

Dept and Nbr: ANSC 134 Title: LIVESTOCK REPRODUCTION
Full Title: Livestock Reproduction
Last Reviewed: 2/7/2022

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

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	ANSCI 134

Catalog Description:
In this introductory course, students will explore basic genetic principles combined with the study of the anatomical and physiological aspects of reproduction as it relates to equine and livestock management. Students will also learn reproductive aspects including endocrinology, estrous cycles, mating behaviors, gametogenesis, conception, gestation, parturition, and maternal behaviors. Artificial insemination, embryo manipulation, and current innovations in productive biotechnology will also be examined.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: In this introductory course, students will explore basic genetic principles combined with the study of the anatomical and physiological aspects of reproduction as it relates to equine and livestock management. Students will also learn reproductive aspects including

endocrinology, estrous cycles, mating behaviors, gametogenesis, conception, gestation, parturition, and maternal behaviors. Artificial insemination, embryo manipulation, and current innovations in productive biotechnology will also be examined. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

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 reproductive anatomy differences across multiple species and explain their importance in reproductive management.
2. Discuss the physiology of fertilization, parturition, and lactation.
3. Explain effects of nutrition, hormones, and health the estrous cycle.

Objectives:
At the conclusion of this course, the student should be able to:
1. Understand reproductive anatomy and physiology.
2. Utilize reproductive behaviors to explain breeding management strategies.
3. Describe the function of hormones in reproductive processes including gestation, parturition, and lactation.
4. Explain the effects of environmental factors on fertility, pregnancy, and lactation.
5. Outline record keeping in the breeding herd or flock.
6. Evaluate the economics of reproduction strategies.
7. Apply genetic principles to the management of a commercial herd.
8. Understand the estrous cycle and its importance in breeding management.
9. Evaluate the use of assisted reproductive techniques across the livestock industry.
10. Explain the importance of biotechnology to the livestock industry.

Topics and Scope:

I. The Anatomy and Physiology of the Reproductive System

II. Reproductive Behavior
III. Gestation
  A. Conception and implantation
  B. Fetal and embryo development
  C. Hormones
  D. Physiology
IV. Parturition
  A. Management
  B. Physiology
  C. Hormones
  D. Dystocia
V. Lactation
  A. Hormones
  B. Physiology
VI. Management of Reproduction
  A. Semen Analysis
  B. Pregnancy evaluation
  C. Estrus detection
  D. Breeding Systems
  E. Reproductive technologies
  F. Manipulating reproduction
  G. Selection
VII. Management Considerations for Breeding, Pregnancy and Lactation
  A. Health
  B. Nutrition
VIII. Record Keeping and Analysis
IX. Economics
X. Genetics
  A. Genes
  B. Genotype and phenotype
  C. Heritability
  D. Heterosis
  E. Pedigree analysis
XI. Biotechnology
  A. Embryo manipulation
  B. Cloning
  C. New innovations

Assignment:

1. Weekly reading (15-20 pages)
2. Case studies (5-8)
3. Quizzes (3-6)
4. One midterm
5. Final exam
6. One term paper (3-5 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.

Term paper	Writing 20 - 25%

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

Case study	Problem solving 30 - 35%

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

None	Skill Demonstrations 0 - 0%

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

Midterm, final, and quizzes	Exams 40 - 50%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Pathways to Pregnancy and Parturition. 3rd ed. Sanger, P.L. Current Conceptions Inc. 2015