ANSCI 134 Course Outline as of Fall 2019

CATALOG INFORMATION

Dept and Nbr: ANSCI 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	2.50	17.5	Lecture Scheduled	43.75
Minimum	3.00	Lab Scheduled	1.50	8	Lab Scheduled	26.25
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 87.50 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:	

Catalog Description:
This course combines the study of basic genetic principles with the study of the anatomical and physiological aspects of reproduction as they relate to equine and livestock reproduction. Genetic principles to be emphasized include basic inheritance, selection techniques, mating systems, heterosis, and performance evaluation. Reproductive aspects to include 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: This course combines the study of basic genetic principles with the study of the anatomical and physiological aspects of reproduction as they relate to equine and livestock

reproduction. Genetic principles to be emphasized include basic inheritance, selection techniques, mating systems, heterosis, and performance evaluation. Reproductive aspects to include 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. Demonstrate knowledge of the physiological aspects of livestock as they relate to reproductive
management, reproductive systems, hormones, semen evaluation and the estrous cycle.

Objectives:
Upon completion of the course, students will be able to:
1. Identify the male and female parts of reproductive tracts.
2. Discuss the physiology of fertilization, parturition and lactation.
3. Explain effects of nutrition, hormones, and health on estrous cycle.

Topics and Scope:

I. The Anatomy of the Male Reproductive System
II. The Anatomy of the Female Reproductive System
III. Physiology of Reproduction
IV. Reproductive Behavior
V. Gestation
- A. Conception and implantation
- B. Fetal and embryo development
- C. Hormones
- D. Physiology

VI. Parturition
- A. Management
- B. Physiology
- C. Hormones
- D. Dystocia

VII. Lactation
- A. Hormones
- B. Physiology

VIII. Management of Reproduction
- A. Semen Analysis
- B. Pregnancy evaluation
- C. Estrus detection
- D. Breeding Systems
- E. Reproductive technologies
- F. Manipulating reproduction
- G. Selection

IX. Management Considerations for Breeding, Pregnancy and Lactation
- A. Health
- B. Nutrition

X. Record Keeping and Analysis
XI. Economics
XII. Genetics
- A. Genes
- B. Genotype and phenotype
- C. Heritability
- D. Heterosis
- E. Pedigree analysis

XIII. Biotechnology
- A. Embryo manipulation
- B. Cloning
- C. New innovations

Lab Topics will include:
I. Anatomy identification
II. Semen collection, processing, analysis
III. Oocyte collection, maturation
IV. Artificial insemination
V. Pregnancy evaluation
VI. Genetic evaluation
VII. Record Keeping

Assignment:

Lecture-Related Assignments:
1. Read periodicals, handouts, and texts
2. Problem Solving Assignments such as case study and genetic analyses
3. Midterm, final and quizzes (3-6 quizzes, 1 midterm, 1 final)
4. Term Paper (3-5 pages)

Lab-Related Assignments:
1. Lab practicals
2. Lab reports

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, lab reports	Writing 20 - 35%

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

Case study evaluation, genetic analyses	Problem solving 30 - 40%

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

Lab practical	Skill Demonstrations 5 - 10%

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

Midterm, final, and quizzes	Exams 30 - 35%

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