SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
TRAN-WELDING-AG
Livestock Management & Production Program
Revision Date: August 2025

I. CATALOG DESCRIPTION

Course Number: **AGRI 2231**
Course Title Applied Animal Reproduction
Prerequisite(s): AGRI 1141 or permission

Catalog Description: Anatomy and physiology of breeding animals. Breeding management, pre- and post-natal development of farm animals. Includes principles of artificial insemination and embryo transfer biotechnology.

Credit Hours: 4.0
Class Hours: 45
Lab Hours: 45
Total Contact Hours: Total of Class + Lab Hours 90

II. COURSE OBJECTIVES: *Course will:*

1. Increase students' awareness of how and why animals reproduce.
2. Provide for identification of gross anatomy of male and female farm animal repro tracts
3. Increase awareness of causes of reproductive failure
4. Itemize economic ramifications of reproductive failure
5. Demonstrate food production issues surrounding repro management of meat animal species
6. Outline genetic betterment of all animal species through repro management
7. Describe perpetuation of species through repro management
8. Describe the process of gametogenesis
9. Outline conception, pregnancy and parturition
10. Explore impacts of biotechnology on reproduction management
11. Understand basic application of genomics a genetic evaluation to selection of sire and dam
12. Describe the estrus cycle and the endocrine systems impact on the cycle
13. Provide opportunity for hands on manipulation of semen samples
14. Provide opportunity for hands-on artificial insemination of farm animals
15. Create benchmarks and parameters for farm animals' development for successful reproduction

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Gain knowledge of the pre-and post-natal development of the animal.
2. Be expected to successfully demonstrate artificial insemination techniques.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO #3: Critical Thinking & Problem Solving

Critical thinkers have the ability to evaluate a problem or assumption and determine an appropriate course of action. They use reason and evidence to make judgments and decisions. Critical thinking and problem-solving skills rank highly among employer expectations.

Outcomes:

1) Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information)*

a. Female and male reproductive anatomy
b. Reproductive endocrinology
c. Estrus Cycle
d. Spermatogenesis, Ovigenesis, and Fertilization
e. Gestation
f. Parturition
g. Lactation
h. Artificial Insemination
i. Semen: Collection, Processing, Storage, Thawing, and Handling
j. Pregnancy
k. Reproductive failure
l. Embryo transfer
m. Reproductive records and EPD's
n. Breeding Application

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): The Science of Animal Agriculture, 5th Edition, Herren – ISBN: 978133739086

B. Other Resources:

calculator, coveralls, gloves, and rubber boots

VI. METHODS OF PRESENTATION/INSTRUCTION

Methods of presentation typically include a combination of the following:

a. Methods will include, but are not limited to: slide and video presentations, research and writing assignments, field trips, quest lecturers and speakers.
b. Laboratory assignments

VII. METHODS OF EVALUATION

Methods of evaluation typically include a combination of the following:

A. Quizzes, tests, and exams
B. Skills project and exam
C. Research project
D. Capstone experience
E. Daily evaluation

SCC STANDARD GRADING SCALE POLICY:

A+	**95-100**	**C+**	**75-79**
A	**90-94**	**C**	**70-74**
B+	**85-89**	**D+**	**65-69**
B	**80-84**	**D**	**60-64**
		F	**Below 60**

VIII. SPECIFIC COURSE REQUIREMENTS:

a. Successful completion of all exams, projects, and assignments

b. Properly and safely handle College livestock

c. Utilizing proper safety at all times in lab