

ANSC 4307 REPRODUCTIVE TECHNIQUES

Instructor: Scott Ericsson
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Fall 2016
Time: TR 9:30-10:45
Meeting Place: RAS 132

Class materials and grades will be accessible through Blackboard.

Course Description:

Evaluation and application of various techniques to control and determine reproductive functions in livestock. Techniques covered will include semen collection, evaluation and freezing; oocyte-embryo collection, in vitro fertilization, embryo freezing and transfer; and ultrasonography.

Program Learning Outcomes:

Student will demonstrate that he/she is able to:

1. Recognize and be able to utilize animal breeds from a variety of domestic species
2. Comprehend the role of nutrition in the production of food animals
3. Understand the processes involved in producing meat products from a variety of domestic food animals
4. Select breeding animals using genetic information

Course Objectives:

By the end of the course, you will be able to understand:

- How to collect a semen sample using electroejaculation and an artificial vagina.
- The different methods of evaluating semen for fertility potential.
- How to prepare sperm cryoprotectants.
- Cryopreservation of semen.
- Estrus detection in cattle, sheep, goats and swine
- Artificial insemination of cows, ewes, does and sows.
- Ultrasonography as a tool to determine reproductive status.

Text:

There is no required text.

Grading:

There will be daily assignments (10 points each) that should be completed and turned in by the end of the class period. Late assignments will not be accepted unless extenuating circumstances exist.

Grade assignment: A =100-90; B = 89-80; C= 79-70; D = 69-60 and F= < 60.

17 week calendar (subject to change)

<u>Week</u>	<u>Topic</u>
1	Course overview
2	Estrus detection (cows, ewes, does and sows), semen collection (bull), and semen evaluation (bull).
3	Estrus detection (cows, ewes, does and sows), cryoprotectant preparation (bull), and sperm cryopreservation (bull). Embryo transfer.
4	Estrus detection (cows, ewes, does and sows), artificial insemination (cows). Embryo transfer.
5	Estrus detection (cows, ewes, does and sows), artificial insemination (cows), and artificial vagina training (buck, ram). Embryo transfer.
6	Estrus detection (cows, ewes, does and sows), artificial insemination (cows), artificial vagina training (buck, ram). Embryo transfer.
7	Estrus detection (cows, ewes, does and sows), Semen collection (buck), semen evaluation (buck), and artificial insemination (cows). Embryo transfer.
8	Estrus detection (cows, ewes, does and sows), cryoprotectant preparation (buck), and sperm cryopreservation (buck). Embryo transfer.
9	Estrus detection (cows, ewes, does and sows), and dummy mount training (boar). Embryo transfer.
10	Estrus detection (cows, ewes, does and sows), artificial insemination (does), semen collection (boar), and semen evaluation (boar). Embryo transfer.
11	Estrus detection (cows, ewes, does and sows), cryoprotectant preparation (boar), sperm cryopreservation (boar), and artificial insemination (sows). Embryo transfer.
12	Estrus detection (cows, ewes, does and sows), semen collection (ram), and semen evaluation (ram).
13	Estrus detection (cows, ewes, does and sows), cryoprotectant preparation (ram), and sperm cryopreservation (ram). Embryo transfer.
14	Thanksgiving Break
15	Estrus detection (cows, ewes, does and sows), artificial insemination (ewes).

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Ultrasonography
Ultrasonography

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