



DEPARTMENT OF ANIMAL SCIENCE

COURSE OUTLINE – WINTER 2021

AH 443 THERIOGENOLOGY – 3 (5-0-0) 60 HOURS

12Weeks

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| INSTRUCTOR: | Dr. Klassen Dr. Barlund | PHONE: | 780 835 6633 (office) 780 835 6701 (office) |
| OFFICE: | FAS 141 FAS136 | E-MAIL: | sklassen@gprc.ab.ca cbarlund@gprc.ab.ca |
| OFFICE HOURS: | As Posted, as Faculty working from Offices or at Home during Winter 2021 Semester. | | |

WINTER 2021 DELIVERY:

Mixed Delivery – Remote and Onsite. This course is delivered remotely with some face-to-face/onsite components at the GPRC *Fairview* campus.

- For the remote delivery components: students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca.
- For the onsite components: students must supply their own mask [and/or face shield] and follow [GPRC Campus Access Guidelines and Expectations](#).

Note: GPRC reserves the right to change the course delivery.

CALENDAR DESCRIPTION:

Principles of cell division and inheritance are discussed. A review of anatomical and hormonal components of male and female reproduction systems prepares students to learn about breeding behaviors and common diseases or conditions of the reproductive system in various animals. Techniques used to assess or manipulate reproduction in veterinary medicine will be discussed and/or demonstrated. Instruction on gestation and parturition will be the main focus.

PREREQUISITE(S)/COREQUISITE:

- Must be registered in the GPRC Animal Health Technology Program
- AH172, AH241 and AH247

REQUIRED TEXT/RESOURCE MATERIALS:

Student Handouts will be accessed in myClass using D2L global software

DELIVERY MODE(S):

Lecture

MIXED USING D2L global software for Lecture purposes, the Brightspace learning management system, which is a cloud-based software used by GPRC for online and blended classroom learning.

COURSE OBJECTIVES/LEARNING OUTCOMES:**Principles of Cytogenetics**

Upon successful completion of this Learning Outcome Guide, you will be able to describe knowledge of cell division (meiosis, mitosis) and describe asexual reproduction.

Basic Genetic Principles

Upon successful completion of this Learning Outcome Guide, you will be able to describe and explain:

Mendellian Genetics

Principles of dominance/recessive

Punnet's square and predict patterns of inheritance

Briefly discuss genetic engineering

Briefly discuss principles of recombinant DNA

Briefly discuss cloning and embryo splitting

Reproduction in Domestic Animals

Upon successful completion of this Learning Outcome Guide, you will be able to:

Review the components and functions of the male reproductive system

Review the components of the female reproductive system

Discuss comparative reproductive anatomy of the major domestic species

Describe the influences of hormones on reproduction

Discuss breeding behaviours and estrous cycles

Discuss common diseases/conditions of the reproductive system

Common techniques used to assess or manipulate reproduction

Upon successful completion of this Learning Outcome Guide, you will be able to discuss:

Breeding soundness evaluations

Semen collection

Artificial insemination

Methods of estrus control

Principles of embryo transfer

Pregnancy and Parturition

Upon successful completion of this Learning Outcome Guide, you will be able to describe and explain:

Fertilization, implantation and types of placentation

Normal periods of gestation in domestic animals

Methods of pregnancy diagnosis and their applications
 Normal signs and stages of parturition
 Common diseases of pregnancy
 Dystocia and its management
 Explain methods of fetal extraction
 Care of obstetrical instruments

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferralberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

GRADING CONVERSION CHART for ANIMAL HEALTH TECHNOLOGY
OVERALL GRADE POINT AVERAGE HAS TO BE 2.0 OR HIGHER TO BE SUCCESSFUL IN THE AHT PROGRAM.

| Alpha Grade | 4-point Equivalent | Percentage Guidelines | Alpha Grade | 4-point Equivalent | Percentage Guidelines |
|-------------|--------------------|-----------------------|-------------|--------------------|-----------------------|
| A+ | 4.0 | 90-100 | C+ | 2.3 | 67-69 |
| A | 4.0 | 85-89 | C | 2.0 | 63-66 |
| A- | 3.7 | 80-84 | C- | 1.7 | 60-62 |
| B+ | 3.3 | 77-79 | FAIL | 1.3 | 55-59 |
| B | 3.0 | 73-76 | FAIL | 1.0 | 50-54 |
| B- | 2.7 | 70-72 | WF | 0.0 | 00-49 |

| EXAMINATIONS | Mark Distribution |
|--------------------------|-------------------|
| A. Quizzes & Assignments | 35% |
| B. Midterm Exam | 30% |
| C. Final Exam | 35% |
| | 100% |

*A minimum of 60% must be obtained in order to successfully pass AH443.

STUDENT RESPONSIBILITIES:

Enrolment at GPRC assumes that the student will become a responsible citizen of the College. As such, each student will display a positive work ethic, take pride in and assist in the maintenance and preservation of Institute property, and assume responsibility for his/her education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting instructor expectations concerning attendance, assignments, deadlines, and appointments.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <http://www.gprc.ab.ca/about/administration/policies/>

**Note: all Academic and Administrative policies are available on the same page.