DEPARTMENT OF ANIMAL SCIENCE

VETERINARY TECHNOLOGY

COURSE OUTLINE – Winter 2025

Theriogenology – 3 (5-0-0) 60 Hours for 12 Weeks

Northwestern Polytechnic (NWP) acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Christy Barlund	**PHONE:**	780 835 6701 (office)
OFFICE:	FAS 136	**E-MAIL:**	cbarlund@nwpolytech.ca

OFFICE HOURS: by appointment Monday – Friday; noon – 1pm or as posted

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 NWP Veterinary Technology Program
- AH172, AH241 and AH247

REQUIRED TEXT/RESOURCE MATERIALS:

Student Handouts will be provided online via myClass

DELIVERY MODE(S):

Lecture

LEARNING OUTCOMES:

Principles of Cytogenetics

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

Basic Genetic Principles

Upon successful completion of this unit, you will be able to describe and explain:

- Mendelian inheritance
- Principles of dominance/recessive
- Punnett's square to predict patterns of inheritance
- Briefly discuss genetic engineering
- Briefly discuss principles of recombinant DNA
- Briefly discuss cloning and embryo splitting

Comparative reproductive anatomy and physiology in Domestic Animals

Upon successful completion of this unit, 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 unit, 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 unit, 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.transferalberta.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:

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

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

NORTHWESTERN POLYTECHNIC

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

OVERALL GRADE POINT AVERAGE HAS TO BE 2.0 OR HIGHER TO BE SUCCESSFUL IN THE VT PROGRAM.

COURSE SCHEDULE/TENTATIVE TIMELINE:

See course objectives posted on myClass for tentative timeline.

STUDENT RESPONSIBILITIES:

Enrolment at NWP assumes that the student will become a responsible citizen of the Institute. 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.

INFORMATION TECHNOLOGY

NWP servers may be monitored. Student accounts are visible via ABTutor and student activity on NWP networks may be monitored during supervised exams and/or anytime students are on NWP networks. The collection of and access to the personal information listed above as permitted by the *Freedom of Information and Protection of Privacy Act*.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at https://www.nwpolytech.ca/about/administration/policies/index.html.

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