

DEPARTMENT OF ANIMAL SCIENCE

COURSE OUTLINE – Fall 2026

AH443: Theriogenology – 3 (5-0-0) 60 Hours for 12 Weeks

Northwestern Polytechnic 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: Chris Mizzi DVM

PHONE: 780-835-6617

OFFICE: Remote

E-MAIL:

cmizzi@nwpolytech.ca

OFFICE HOURS: by appointment
(Cell 780-228-3018)

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(S):

- Must be registered in the NWP Veterinary Technology Program
- AH172, AH241 and AH247

REQUIRED MATERIALS:

No textbook required. Student must have a computer with a camera and reliable internet connection.

DELIVERY MODE(S):

Lecture will be delivered remotely via zoom. Technological support is available through helpdesk@nwpolytech.ab.ca.

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 behaviour 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 the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.alberta.ca>.

** For courses with alpha (letter) grading, a 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	40%
B. Midterm Exam	25%
C. Final Exam	35%
	100%

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

GRADING CRITERIA

Please note that most institutions 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

COURSE SCHEDULE/TENTATIVE TIMELINE:

See course objectives 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 their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting instructor expectations concerning attendance, assignments, deadlines, and appointments.

Veterinary Technology Program Attendance & Conduct Summary

- **Zero Tolerance for Impairment:** Attending labs, exams/quizzes, lectures, or guest speaker events under the influence of alcohol or impairing substances (including certain medications) is strictly prohibited. Violations result in unexcused absences and a mark of zero.
- **Mandatory Attendance:** Attendance is required for all exams, guest speakers and labs. Arriving late to labs, lectures, quizzes/exams will be considered an unexcused absence. Unexcused absences (at the instructor's discretion) result in:
 - **5% deduction** from the final course grade (labs/guest speakers)
- **Absence Approval:** Absences must be approved in advance or as soon as possible afterward with valid written documentation (e.g., doctor's note). Employment conflicts are not considered valid excuses.
- **Make-Up Policy:** Labs, lectures, and guest speakers cannot be made up. Missed assessments due to unexcused absences receive a grade of zero. Excused absences do not exempt students from required work or deadlines.

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 <https://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory>.

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