

## DEPARTMENT OF ANIMAL SCIENCE

### COURSE OUTLINE – Spring/Fall 2026

#### AH 342: LABORATORY PROCEDURES II – 3.5 (3-0-3) 96 Hours for 16 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:      | Karlee Worobetz,<br>RVT<br>Christy Barlund, DVM<br>FALL TBA | PHONE:  | (780) 835-1704<br>(780) 835-6701                  |
| OFFICE:          | AS 140<br>AS 136                                            | E-MAIL: | kworobetz@nwpolytech.ca<br>cbarlund@nwpolytech.ca |
| OFFICE<br>HOURS: | See posted schedule for each instructor                     |         |                                                   |

#### CALENDAR DESCRIPTION:

Students will develop knowledge and skills covered in previous lab courses, as well as learning to collect, prepare and evaluate samples for clinical chemistry and cytology. Students will use tactile and practical skills with equipment and supplies provided, as utilized in modern veterinary medicine settings.

#### PREREQUISITE(S)/COREQUISITE:

- Must be registered in the NWP Veterinary Technology Program
- Have active status as an ABVMA Student Member in good standing
- AH141, AH174, AH240, AH242, AH249

#### REQUIRED TEXT/RESOURCE MATERIALS:



- Sink & Feldman, *Laboratory Urinalysis and Hematology*, Teton NewMedia
- Kristin J. Holtgrew-Bohling, *Mosby's Veterinary PDQ*, Elsevier, 4<sup>th</sup> Edition.

**DELIVERY MODE(S):** Hyflex. This course is delivered face-to-face/onsite or remotely. Final exams will be in person. Students must have a computer with a webcam and reliable internet connection. Technological support is available through [helpdesk@nwpolytech.ca](mailto:helpdesk@nwpolytech.ca).

## **LEARNING OUTCOMES:**

### **Hematology Review**

Upon successful completion of this unit, you will have reviewed and be able to apply clinical hematology principles and tests.

### **Sample Collection**

Upon successful completion of this unit, you will be able to discuss and demonstrate safe and effective biological sample collection and storage methods.

### **Urinary Tract & Urinalysis**

Upon successful completion of this unit, you will be able to discuss the function of the urinary tract and evaluate the function using urinalysis and other diagnostic tests.

### **Enzymology & Enzyme Assays**

Upon successful completion of this unit, you will be able to define and apply enzymology and enzyme assays.

### **Liver & Kidney Function Tests**

Upon successful completion of this unit, you will be able to discuss the functions of the liver and kidneys and describe and apply the tests used to evaluate these functions.

### **Blood Glucose & Pancreas Function**

Upon successful completion of this unit, you will be able to evaluate and discuss the functions of the pancreas and importance of blood glucose levels.

### **Skeletal Muscle & Brain Function**

Upon successful completion of this unit, you will be able to evaluate and discuss damage to the skeletal muscle and brain.



## Adrenal, Thyroid, & Parathyroid Gland Function

Upon successful completion of this unit, you will be able to evaluate and discuss the functions of the adrenal, thyroid, and parathyroid glands.

## Vaginal Cytology

Upon successful completion of this unit, you will be able to evaluate and discuss vaginal cytology in the dog.

## Semen Evaluation

Upon successful completion of this unit, you will be able to evaluate and discuss the quality of animal semen.

## Basic Cytology

Upon successful completion of this unit, you will be able to identify the basic characteristics of normal and abnormal cytology of various samples.

### 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.alberta.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:

Absence from a scheduled lab class will result in a mark of zero for any assignments or reports assigned in that lab. A deduction of 5% off the final mark for the course occurs for each lab missed, unless the student contacts the instructor prior to the lab and the instructor deems the absence as valid (see the attendance policy). Labs will not be made up later. Students must attend the labs as scheduled unless prior arrangements have been made with the instructor. Students changing labs without approval by the instructor will be marked as absent.

Marks are deducted for inadequate clean up and inappropriate dress (including no lab coat) in labs. Students **MUST** wear a clean lab coat to all labs; scrubs alone are not adequate. Open-toed shoes and dangling jewelry are safety hazards and are not allowed in labs. Supplemental final exam is **NOT** available for the lab exam.

|                          | Mark Distribution |
|--------------------------|-------------------|
| A. Quizzes & Assignments | 50%               |
| B. Final Theory Exam     | 30%               |
| C. Final Lab Exam        | 20%               |
|                          | 100%              |

\*A minimum of 60% must be obtained in order to successfully pass AH 342.

Missed quizzes, exams and assignments will not be rescheduled in the event that the student does not have a valid absence. The student will be assigned a mark of zero for those assignments/exams/ etc. missed. If the student contacts the instructor prior to missing a class/lab/exam/etc., and the student has an acceptable excuse (the validity of the excuse is at the discretion of the instructor and will require documentation such as a note from a doctor), the student may be excused without penalty and may be given access to the missed material. Overall excessive absence, coming to class late, or leaving during class, may result in mark deductions at the instructor's discretion. For further clarification on the attendance policy, see the AHT Program guidelines in the Student Competency Checklist Manual and the NWP Policies and Procedures [NWP Policies | Northwestern Polytechnic \(nwpolytech.ca\)](https://nwpolytech.ca). Please review NWP's Examination and Grading policies.

## GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**. **Grades for this course will be assigned as a percentage.**

## COURSE SCHEDULE/TENTATIVE TIMELINE:

See posted schedule for timetable.

## STUDENT RESPONSIBILITIES:

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

## Veterinary Technology Program Attendance & Conduct Summary



- **Zero Tolerance for Impairment:** Attending labs, exams/quizzes, lectures, animal care duties, 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.
- **Lab Preparation:** Students must arrive at labs properly dressed, equipped, and prepared (including assigned readings). Unprepared students may be dismissed, and a 5% deduction will occur off the final grade.
- **Mandatory Attendance:** Attendance is required for all labs, exams, guest speakers, and animal care duties. 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, animal care duties)
  - **3 or more unexcused absences** in animal care will lead to automatic failure of the course.
- **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, guest speakers, and animal care duties 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.
- **Exam Conduct:** No electronic devices (phones, smartwatches, headphones, tablets) are permitted during exams or evaluations. Having one present will result in immediate dismissal and a grade of 0%.
- **Animal Care Duties:** Animal care related duties refer to the provision of essential care for program housed animals including but not limited to: cats, dogs, horses, cattle, rabbits, mice (walking, behaviour modification / observation and documentation). Students are required to participate based on a rotation schedule which will include weekends and holidays. Not doing so according to set guidelines will result in deductions. Schedule changes are limited and must be approved by the instructor prior to the scheduled time. See K9 Socialization / Walking Rotation Contract and information sheet for specific guidelines and deductions.
- **Further Guidelines:**
  - Spelling errors in exams/quizzes, assignments and medical records will result in a 0.5% deduction for each occurrence.

- All handwritten materials that are submitted to the instructor must be using blue or black pen, no white out and using appropriate medical corrections.
- Refer to the **NWP Veterinary Technology Student Competency Checklist**

## 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/polytechnic-leadership/policies-directory>

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

## Additional Information:

- Disruptive behaviour in the class will result in the student being excused from the class or lab – this includes use of cell phones or any handheld equipment that has not been approved by the instructor.
- Any student wishing to see a marked quiz or exam must make an appointment with the instructor to view or go over.
- Attendance is mandatory at all laboratory sessions; valid reason for absence is required. For your safety, the safety of others and the safety of the animals there will be zero tolerance of anyone showing up for the laboratory sessions under the influence of alcohol or other medications which may cause physical impairment or disruptive behaviour. If you are on a standard or prescribed medication, please consult with your instructor prior to the lab. Labs or animal care sessions missed for the above reasons will also be considered as missed without a valid excuse and result in up to 5% deduction of final mark for every instance.

- If a student wishes to reschedule attendance to a lab (i.e. join another group), they must seek permission from the instructor prior to the event. Having a valid reason does not change the student's responsibility to acquire the information dispensed during the lab or lecture, nor their obligation to finish required assignments or achieve competencies practiced.
- Students are expected to show up prepared for lab. This includes, but is not limited to appropriate clothing, equipment and knowledge (assigned readings). Failure to do so will result in student dismissal from lab to acquire what is necessary and a deduction in the lab prep portion.