

SCHOOL OF APPLIED SCIENCE & TECHNOLOGY  
ANIMAL HEALTH TECHNOLOGY

COURSE OUTLINE – Winter 2024

**AH 249 Hematology – 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.

<b>INSTRUCTOR:</b>	Karlee Worobetz	<b>PHONE:</b>	780-835-6686
<b>OFFICE:</b>	AS 140	<b>E-MAIL:</b>	kworobetz@nwpolytech.ca
<b>OFFICE HOURS:</b>	See Posted Schedule		

**CALENDAR DESCRIPTION:**

Students are introduced to hematological procedures and will learn to identify normal blood parameters and cells. A review of the CBC in the lab and lecture will improve the student's ability to perform hematological tests. The student will learn to evaluate the erythron, leukon, and hemostasis by recognizing and interpreting abnormal results and identifying possible causes of those results. Hemopoietic neoplasia is discussed. Case studies will be used extensively in presentation of course material.

**PREREQUISITE(S)/COREQUISITE:**

Must be registered in the NWP Animal Health Technology Program

**REQUIRED TEXT/RESOURCE MATERIALS:**

- *McCurnin's Clinical Textbook for Veterinary Technicians*, Eight Edition
- *Laboratory Urinalysis and Hematology*, Teton New Media

## DELIVERY MODE(S):

This course is delivered in-person and may be lectured remotely via Zoom. Final exams will occur 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).

## COURSE OBJECTIVES:

### Introduction

Upon successful completion of this unit, you will be able to explain and discuss the composition and functions of blood.

### The Erythrocyte (Red Blood Cell)

Upon successful completion of this unit, you will be able to describe and discuss the erythrocyte (Red Blood Cell). You will be able to describe and discuss normal and abnormal erythrocyte morphology, diseases and conditions involving red blood cells.

### The Leukocyte (White Blood Cell)

Upon successful completion of this unit, you will be able to define and discuss the leukocyte (White Blood Cell). You will be able to describe and discuss normal and abnormal leukocytes and evaluate leukograms to identify common disorders and diseases involving white blood cells.

### The Thrombocyte (Platelet)

Upon successful completion of this unit, you will be able to explain and discuss the knowledge obtained regarding the platelet (thrombocyte). You will be able to describe and discuss the mechanisms and defects of hemostasis (coagulation).

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### Hematological Samples

Upon successful completion of this unit, you will be able to discuss and apply the knowledge acquired regarding obtaining, processing and storing hematological samples.

Upon successful completion of this laboratory, you will be able to demonstrate and explain the procedure for and the outcome of a complete blood count and other laboratory tests used on blood from normal and abnormal animals, and identify and explain the abnormal results of these tests.

## LEARNING OUTCOMES:

Review Course objectives

## 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:

To pass this course, student must achieve a minimum overall grade of 60% in the entire course. Final exam will be in-person, at an assigned space and under direct supervision of NWP staff or approved proctor. The student must contact the instructor prior to missing a lab and/or exam as it is a mandatory part of the learning process. If the student does not get prior approval for the absence it will result in a zero mark for the lab and/or exam. It is up to the discretion of the course instructor to excuse the student without penalty. Official/appropriate documentation is required as an excused absence. For examination policies, please see the NWP Examination Policy document.

Absence from a scheduled lab class will result in a mark of zero for any assignments or reports for that lab, and also in a deduction of 5% from the final course mark for each lab missed unless the student contacts the instructor prior to the lab and the instructor deems the absence valid. Labs cannot be made up at a later date. Students must attend labs as scheduled unless prior arrangements with the instructor have been made. Without proper arrangements, students changing labs will be marked as absent. Marks will be deducted for inadequate clean-up in labs and/or inadequate preparation or dress.

Mark Distribution	
A. Theory Quizzes & Assignments	30%
B. Practical/lab Quizzes and Assignments	30%
C. Final Exam (written)	25%
D. Final Exam (lab/practical)	<u>15%</u>
	<b>100%</b>

## GRADING CRITERIA:

(The following criteria may be changed to suite the particular course/instructor)

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

## COURSE SCHEDULE/TENTATIVE TIMELINE:

See course objectives for tentative outline

## 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.

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.