

Animal Science Department

COURSE OUTLINE – Winter 2026

AG2500 – Agriculture Technologies – 6 (10-0-15) 125 hours for 9 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:	Glyn Moffatt	PHONE:	780-835-6611
OFFICE:	FM6 106	E-MAIL:	GMoffatt@nwpolytech.ca
OFFICE HOURS:	By Appointment only		

CALENDAR DESCRIPTION: The world of agriculture is rapidly evolving, and technology plays a pivotal role in shaping its future. This introductory course on Agriculture Technology focuses on two revolutionary advancements in the field: Global Positioning System (GPS) and Unmanned Aerial Vehicles (UAVs), commonly known as drones. By combining theoretical knowledge with hands-on practical experience, students will gain a comprehensive understanding of how these technologies are transforming modern farming practices.

PREREQUISITE(S)/COREQUISITE: N/A

REQUIRED TEXT/RESOURCE MATERIALS: TBA

DELIVERY MODE(S): On-campus (face-to-face) – This type of course will be delivered on campus in a specific location which will be indicated on the student timetable. Students are expected to fully attend in person.

LEARNING OUTCOMES:

1. Explore the fundamental principles of GPS technology and its applications in precision agriculture.
2. Understand the key components of drone technology, its operational principles, and its significance in agriculture.
3. Learn how GPS and drones can enhance various aspects of agricultural processes, including crop management, resource allocation, and data-driven decision-making.
4. Develop proficiency in operating drones and utilizing GPS tools for mapping, monitoring, and data collection.
5. Investigate case studies and real-world examples showcasing the successful integration of GPS and drone technologies in agriculture.
6. Evaluate the ethical, environmental, and regulatory considerations associated with the use of drones and GPS in farming.
7. Collaborate on projects to design innovative solutions that leverage GPS and drone technologies to address agricultural challenges.

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:

GRADING CRITERIA

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

Grading Chart for courses with Alpha Grading:

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

A student who is not present for a lecture period in which a quiz or exam occurs, scheduled or not, will not be given a chance to make up that quiz and will be awarded a mark of zero for that quiz/exam. Assignments **MUST** be submitted by the scheduled due date and time: a mark of zero will be given for any late assignment.

Situations which may also result in mark deductions (at the instructor's discretion):

- Unexplained or unexcused absence (at the instructor's discretion)
- Coming late to class, especially if this is a regular occurrence
- Use of cell phone in class
- Use of computer or other electronics in class, unless approved beforehand by instructor. If use is approved, students using laptops or tablets must sit at the back of the class, without headphones or earbuds, so as not to distract other students. If students are using these devices for reasons other than what is required for class, deductions may occur
- Any handwritten material submitted to an instructor must be in blue or black pen
- Use of any unapproved electronics during quizzes or exams will be considered cheating and will result in an academic misconduct



- This course may involve field tours to businesses off-campus. If students have unexplained or unexcused absence along with disruptive behavior during tours, will result in grade deductions.

A personal laptop computer will be required for some exams and quizzes, but plug-in availability is limited so charge your computer ahead of time.

	Mark Distribution %
A. Lab exam, Assignments & Projects	60%
B. Final Written Exam	20%
C. Final Project	20%
Total	100%

A minimum of 60% must be obtained in order to successfully pass AG2500

COURSE SCHEDULE/TENTATIVE TIMELINE: This course will run over nine weeks. Each day will include 3 hours of lab/ lecture time, for a total of 125 hours.

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.

Students will be required to wear proper PPE in lab settings.

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.