NORTHWESTERN POLYTECHNIC

DEPARTMENT of Science

COURSE OUTLINE – Winter 2026

MA2600 (A3): Higher Arithmetic – 3 (3-1-0) 60 Hours for 15 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:	James Iverson	**PHONE:**	780-539-2850
OFFICE:	C407	**E-MAIL:**	jiverson@nwpolytech.ca
OFFICE HOURS:	10:00-10:50 Monday and Wednesday, 12:00-12:50 Tuesday and Thursday or by appointment.		

CALENDAR DESCRIPTION: Reasoning and problem solving in the context of logic, algebra, geometry, and combinatorics.

PREREQUISITE(S): MA1600 or any 1000-level Math course

REQUIRED MATERIALS:

• Gary L. Musser, Blake E. Peterson, William F. Burger, Mathematics for Elementary Teachers: A Contemporary Approach, 10th edition, Wiley

• Use of calculators is not permitted on the tests or exams.

DELIVERY MODE(S):

Lecture: A3 11:30 –12:50 M (Room B201)
10:00 –11:20 F (Room B201)
Seminar: AS1 11:30 – 12:20 F (Room A213)

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LEARNING OUTCOMES:

A successful student will be able to adequately demonstrate an understanding of the concepts stated below (among others):

- the fundamental counting principle,
- tree diagrams,
- factorials,
- permutations and combinations,
- Pascal's triangle to solve counting problems,
- probabilities for simple and complex experiments,
- the expected value of a random variable,
- finding the perimeter, area, and volume of some two and three dimensional figures,
- classifying and measuring angles,
- finding the circumference and area of a circle,
- solving mathematical problems using geometrical ideas such as congruence, similarity, and the Pythagorean theorem.
- circle geometry,
- solving geometric problems using a coordinate system,
- creating, analyzing, and criticizing deductive arguments using symbolic logic, truth tables, and Venn/Euler diagrams.

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:

2 Tests: Each equally weighted for a total of 40%.

11 Seminars: Best 10 marks out of 11, each worth 2% for a total of 20%. This mark will be based on the work submitted during scheduled seminar time.

Quizzes: Worth 10%

Final Exam: Worth 30% and will be scheduled by the registrar sometime during the finals. It is the student's responsibility to be available to write the final exam at the scheduled time. Writing early is not permitted.

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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:

Week	Notes	Topic
Jan 5-9	Classes begin Jan 9	Topic 1
Jan 12-16		Topic 1
Jan 19-23		Chapter 11
Jan 26-30		Chapter 11
Feb 2-6		Chapter 11
Feb 9-13	Midterm 1	Chapter 12
Feb 16-20	Fall Break – No Class	
Feb 23-27		Chapter 13
Mar 2-6		Chapter 13
Mar 9-13		Chapter 14
Mar 16-20		Chapter 14
Mar 23-27	Midterm 2	Chapter 14
Mar 30-Apr 3	No Class Apr 3	Chapter 15
Apr 6-10		Chapter 15
Apr 13-17	Last Class Apr 13	

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STUDENT RESPONSIBILITIES:

The following guidelines will maintain an effective learning environment for everyone. We ask the cooperation of all students in the following areas of the classroom environment.

1. Take responsibility for your learning.
2. Attendance: Regular attendance and class participation is expected of all students and is crucial to good performance in the course.
3. Exams must be written on the days announced in class.
4. If an emergency prevents attendance on an exam day, students must contact me before the end of the exam (as soon as possible) via phone or email, students may be asked to provide documentation to justify their absence.
5. No unspecified electronic devices will be permitted during exams. This includes phones, smartwatches etc.
6. Complete daily homework. Students are expected to practice the material by doing problems from the textbook
7. Behaviors that interfere with learning are not acceptable.
8. Communicate all requests regarding appointments, etc. via email.

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.