DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Winter 2024

MA0133 (A3): Mathematics Grade 30-3 Equivalent – 5 (7.5-0-0) 112.5 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: Doris LaChance **PHONE:** (780)539-2234
OFFICE: C417 **E-MAIL:** DLaChance@nwpolytech.ca
OFFICE HOURS: TBD or by appointment

CALENDAR DESCRIPTION:

This is a modularized course which covers linear relations, limits to measurements; statistics, probability and odds, properties of geometric figures, transformations, trigonometry of oblique triangles and planning for and owning a small business. Emphasis is placed on applications related to trades and personal use.

PREREQUISITE(S)/COREQUISITE:

Complete 1 of the following:

- MA0123 - Mathematics Grade 20-3 Equivalent (5)
- Minimum 60% in Math 20-3 in the last 2 years

REQUIRED TEXT/RESOURCE MATERIALS:

Borgen, Katharine. MathWorks 12 Workbook. Vancouver: Pacific Educational Press, 2012.
Non-graphing scientific calculator (TI-30XIIS recommended)

DELIVERY MODE(S):

MA0133 is a modularized math course.

LEARNING OUTCOMES:

As a result of taking this course, students will gain the ability to:

- Identify linear and non-linear graphs, and write equations representing the linear relations
- Identify trends in data displayed in scatterplots, and write equations to express linear trends
- Extrapolate and interpolate data based on trends
- Calculate uncertainty, acceptable tolerance when conditions are given
- State the similarities and differences between averages and percentiles
- Calculate a percentile rank and other variables related to the rank
- Analyze and interpret problems relating with probability
- Calculate the probability of an event occurring based on a data set or based on the odds for or against
- Describe and show properties of triangles, using side lengths and angle measures
- Describe and show properties of quadrilaterals , using side lengths, angle measures, diagonal lengths, and angles of intersection
- Identify uses of different geometric shapes
- Identify and draw transformations performed on two-dimensional shapes
- Draw and analyze two-dimensional shapes that result from a combination of successive transformations
- Solve problems involving transformations
- Solve an unknown angle and/or side of oblique triangles using Sine Law or Cosine Law
- State ways to improve the financial performance of a business
- Identify whether a business is likely to succeed or not

TRANSFERABILITY:

This course is listed in the Alberta Transfer Guide. It is accepted at colleges and universities in Alberta as equivalent to Math 10C. 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:

3 section tests (best 3 out of 4)	30 %
Midterm	25 %
Final Exam	45 %

**Note: Even though 50% is a passing mark, a mark of at least 65% is recommended for success in future courses.

GRADING CRITERIA:

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 table on last page.

STUDENT RESPONSIBILITIES:

In addition to the Student Rights and Responsibilities as set out in the Northwestern Polytechnic website, the following guidelines will maintain an effective learning environment for everyone:

- Regular attendance is expected of all students in all mathematics courses. Your success in math is directly linked to your attendance. Attendance will be taken daily.
- Students are expected to be punctual. Arrive on time for classes and remain for the duration of scheduled classes.
- Refrain from disruptive talking or socializing during class time.
- Be respectful of others regarding food or beverages in the classroom. Clean up your eating area and dispose of garbage.
- Recycle paper, bottles, and cans in the appropriate containers.
- Children are not permitted in the classrooms.
- Students are expected to notify the instructor of any extenuating circumstances.
- Students are expected to silence cell phones during class time. No unspecified electronic devices will be allowed in exams.

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.

MA0133 Tentative Test Schedule for Winter 2024

NORTHWESTERN POLYTECHNIC

Test #	% towards final grade	Topics	Recommended Test Date	Date written	Mark
1	10%	Chap. 1: Linear Relations & Chap. 2: Limits to Measurements	January 29		
2	10%	Chap. 3: Statistics & Chap. 4: Probability and Odds	February 14		
Midterm Exam	25%	All of the Above	February 26		
3	10%	Chap. 5: Properties of Geometric Figures & Chap. 6: Transformations	March 19		
4	10%	Chap. 7: Trigonometry & Chap. 8: Owning a Small Business	April 12		
FINAL Exam	45%	All of the Above	TBA (April 17-24) 3 hour exam		

*****All tests must be completed by April 12th.**

*****Midterm must be completed by March 4th.**