DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Fall 2023

MA0123 (A2): Mathematics Grade 20-3 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)529-2234
OFFICE:	C417	**E-MAIL:**	dlachance@nwpolytech.ca
OFFICE HOURS:	TBD or by appointment		

CALENDAR DESCRIPTION:
This is a modularized course which covers slope and rate of change; graphical representation of a given data and a statistical reasoning to support the data; surface area, volume, and capacity of various shapes; trigonometry of right triangles and scale representations; financial services and personal budgets. Emphasis is placed on applications related to trades and domestic use.

PREREQUISITE(S)/COREQUISITE:
Complete 1 of the following:
- MA0113 – Mathematics Grade 10-3 Equivalent (5)
- Equivalent math placement test score

Note: You may register in MA0123 if you achieved a mark of 60 percent or better in Alberta Learning Math 10-3 or equivalent, within the previous two years.

REQUIRED TEXT/RESOURCE MATERIALS:
Borgen, Katharine. MathWorks 11 Workbook. Vancouver: Pacific Educational Press, 2011.
Non-graphing scientific calculator (TI-30XIIS recommended)

DELIVERY MODE(S):
MA0123 is a modularized math course.

LEARNING OUTCOMES:

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

- solve problems involving slope, grades, angle of elevation, and rate of change
- construct bar graphs, histograms, line graphs, and circle graphs and identify the better display of data
- solve problems that involve SI and imperial units in surface area of 3-D objects
- estimate and calculate the volume and capacity of three dimensional objects
- calculate distances and angles using trigonometry of triangles
- solve complex problems in three-dimensions by decomposing them down into two or more right-angled triangles
- make scale models
- create drawings that represent two and three dimensions
- calculate the full-size measurements of objects from drawings
- identify the point of perspective of a given one-point perspective drawing of a 3-D object
- calculate simple and compound interest, and explain their relationship
- describe the advantages and disadvantages of debit and credit card purchases and state informed decisions about the use of credit cards
- describe ways that ensure the security of personal and financial information
- create a personal budget based on given income and expense data
- modify a budget to achieve a set of personal goals
- analyze the budget and prioritize expenses to balance a budget

TRANSFERABILITY:

This course is listed in the Alberta Transfer Guide. It is accepted at colleges and universities in Alberta as equivalent to Math 20-3. 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.

MA0123 Tentative Test Schedule for Fall 2023

Test #	% towards final grade	Topics	Recommended Test Date	Date written	Mark
1	10%	Chap. 1: Slope and Rate of Change & Chap. 2: Graphical Representations	September 26		
2	10%	Chap. 3: Surface Area, Volume, and Capacity	October 13		
Midterm Exam	25%	All of the Above	October 18		
3	10%	Chap.4: Trigonometry of Right Triangles & Chap. 5: Scale Representations	November 9		
4	10%	Chap. 6: Financial Services & Chap. 7: Personal Budgets	December 8		
FINAL Exam	45%	All of the Above	TBA (Dec. 14-22) 3 hour exam		

***All tests must be completed by December 8th.**

***Midterm must be completed by October 25th.**