GPRC

DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Winter 2021

MA 0123 (A3 & B3) - Mathematics Grade 20-3 Equivalent - 5 (0-0-7.5) HS 112.5 Hours for 15 Weeks

INSTRUCTOR: Sukhvir Sandhu   **PHONE:** (780) 539-9787

OFFICE: Not Applicable   **E-MAIL:** ssandhu@gprc.ab.ca

OFFICE HOURS: 2:30 pm to 3:30 pm on Mon., Tues., & Thur.; or Appointment

WINTER 2021 DELIVERY: Remote Delivery.
This course is delivered remotely. There are no face-to-face requirements. Students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca

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:
MA0113 or equivalent math placement test score

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

REQUIRED TEXT/RESOURCE MATERIALS:
Math Works 11 Workbook, scientific calculator, graph paper
Loose leaf paper or note book; a pencil, an eraser, a geometry set.

DELIVERY MODE:

- MA 0123 is a modularized math course divided into 7 separate topics called chapters. Each chapter is further divided into sections. Each section introduces one new skill at a time followed by a new term written in **bold letters,** with its explanation on the left margin. Each new skill is demonstrated with an example with clearly stated instructions, followed by **Build Your Skills** exercise questions. Study the term and its explanation and work through the example before starting the exercise. The answers to all the exercises are available on-line under the link http://pacificedpress-educ.sites.olt.ubc.ca/files/2015/02/MW11-WB-AK.pdf .

- The mastery of all the skills covered under each section is further tested in an exercise called **Practice Your New Skills.**   Check your work often to make sure you understand the newly introduced concepts. The key to success in working with a one-to-one delivery method is to ask questions whenever you have difficulty understanding the instructions, the examples, or the exercises. **Do not hesitate to ask for help.**

- **Tests and oral exams must be done as listed on page 6.** Follow these dates as closely as you can. You must revise and review the material thoroughly before taking section(s) test/exam. You are encouraged to write a test early if you are prepared. When writing a test, be sure to show all your work on the test paper. Marks are given for the method as well as the final answer. Even though 50% is a passing mark, a mark **of at least 60% in any section(s) test** is recommended.

- Upon completion of the first three chapters, a midterm test will be written on or before **Monday, February 22.** If you miss this date, you will receive a mark of 0% on your midterm. Upon completion of all seven chapters, you will write a three-hour final exam. Be sure to leave time to prepare for this important exam! It is worth a large percentage of your final grade.

- **Consult your instructor immediately if you find yourself falling behind schedule.**   Your instructor may ask you to spend more time in the Math Lab and get help often. **All tests must be written by Monday, April 12.**

COURSE OBJECTIVES:

The Course introduces students to:

- slopes and rates of change
- interconnection among grade, angle of elevation, and tangent ratio
- different types of graphs such as bar graph, histograms, line graphs, circle graph etc.
- problems that involve SI and imperial units in surface area and volume of three-dimensional objects
- relationship between volumes of cones and cylinders, and pyramids and prisms with the same base and height
- complex problems in three dimensions by decomposing them down into two or three right-angled triangles
- drawing of two-dimensions representation of a given three-dimensions object
- the point of perspectives of a given one-point perspective drawing of a three-dimensions object
- advantages and disadvantages of debit or credit card purchases and decision making skills
- the planning of a personal budget based on given income and expense data

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 and 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: N/A

EVALUATION CRITERIA:

Your final mark is determined by:

4 section tests	**32 %**
2 oral exams	**10 %**
Midterm	**18 %**
Final Exam	**40 %**

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	**4-point Equivalent**	**Percentage Guidelines**	**Designation**
A⁺	4.0	90 – 100	**EXCELLENT**
A	4.0	85 – 89	
A⁻	3.7	80 – 84	**FIRST CLASS STANDING**
B⁺	3.3	77 – 79	
B	3.0	73 – 76	**GOOD**
B⁻	2.7	70 – 72	
C⁺	2.3	67 – 69	**SATISFACTORY**
C	2.0	63 – 66	
C⁻	1.7	60 – 62	
D⁺	1.3	55 – 59	**MINIMAL PASS**
D	1.0	50 – 54	
F	0.0	0 – 49	**FAIL**
WF	0.0	0	**FAIL, withdrawal after the deadline**

How to use the book:

1. Read the title of each chapter, table of contents page, and title of each section. You will observe a progressive growth of operations/concepts.

2. Read and thoroughly understand the concepts and terminology of a section.

3. Understand and do each example very carefully using the terminology. ***If difficulties arise, meet with your instructor.***

4. Match each question in an exercise with the corresponding examples before the exercise. *If difficulties arise, return in your module and rework the examples.*

5. Attempt the exercise questions and check the answers before moving on to the next section. ***If difficulties arise, meet with your instructor.***

6. Review the terminology of the module(s) before taking any test/exam.

MA0123 Test Schedule for Winter 2021
Topics / Tests / Exams

Test	% towards course mark	Topic	Recommended Test Date	Date written	Your mark
1	8%	Chap. 1: Slope and Rate of Change & Chap. 2: Graphical Representations	January 26 Tuesday		
2	8%	Chap. 3: Surface Area, Volume, and Capacity	February 22 Monday		
	18%	**Midterm – must be written on or before**	**February 26 Friday**		
3	**10%** 8%	**Oral Exam (Chapter 1 -5)** Chap.4: Trigonometry of Right Triangles & Chap. 5: Scale Representations	**Student will Decide** March 18 Thursday		
4	8%	Chap. 6: Financial Services & Chap. 7: Personal Budgets	April 8 Thursday		
	40%	**Final Exam – 3 Hours**	**TBA Apr. 14 - 22**		

STUDENT RESPONSIBILITIES:

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

1. 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.

2. Students are expected to be punctual. Arrive on time for classes and remain for the duration of scheduled classes.

3. Get help as soon as you are stuck!

4. Children are not permitted in the classrooms.

5. Students are expected to notify the instructor of any extenuating circumstances.

ELECTRONIC DEVICES:

Students are expected to turn off cell phones during class time or in labs. No unspecified electronic devices will be allowed in exams.

STATEMENT ON PLAGIARISM AND CHEATING

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

**Note: All Academic and Administrative policies are available on the same page.