DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – FALL 2020

MA0110 (A2,B2&C2) - Mathematics Grade 10-C 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

FALL 2020 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 measurement including surface area and volume, introduction to trigonometry, numbers, roots, and exponents, polynomial multiplication and factoring, relations and functions, linear functions, and system of equations.

PREREQUISITE(S)/COREQUISITE:

MA0091 or equivalent math placement test score

REQUIRED TEXT/RESOURCE MATERIALS:

Text Book: Package of MA0110 modules, 2017;
Scientific calculator, loose leaf paper or note book; a pencil, an eraser, a geometry set.

DELIVERY MODE:

- MA0091 is a modularized math course divided into 10 separate units called modules. The instructions for each topic are given in the modules, followed by several examples and exercises. Study the instructions and work through the examples before starting each exercise. The answers for each exercise are given at the end of each module. Check your work often to make sure you understand each topic. The key to success in working with modules is to ask questions whenever you have difficulty understanding instructions, the examples, or the exercises. **Do not hesitate to ask for help.**

- **Module tests and oral exams must be written as listed on page 6.** Follow these dates as closely as you can. You must revise and review the material thoroughly before taking Module test(s) / exam. You are encouraged to write a test early if you are prepared. When writing a test, be sure to show all of 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.

- **One lowest test mark out of 5 test marks will be ignored. Best 4 test marks out of 5 test mark will be used for the final grade.**

- **An oral exam will be scheduled between the 3rd test and the midterm. 2nd oral exam will be scheduled between the 5th test and the final exam.**

- Upon completion of the first five units, a midterm test will be written on or before **Friday, October 30**. If you miss this date, you will receive a mark of 0% on your midterm. Upon completion of all eight units, 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.

- **Do not hesitate to ask for help. Consult your instructor immediately if you find yourself falling behind the lecture delivery. All tests must be written by Monday, December 7.**

COURSE OBJECTIVES:

This course introduces students to:

- SI units and imperial units and their conversion
- real life problems, using SI and imperial units, that involve surface area and volume of complex figures
- primary trigonometric ratios and their use in real life situations
- general root of a number and its use in real life situation
- powers with integral and rational exponents and basic operations using the rules for order of operations
- the concept of factoring a polynomial expressions with two, three, and four terms
- the concept of relation and how to convey it, and explain if the relation is a function
- equation of a linear function and its graphing
- the concept of system of equation and how to solve it

LEARNING OUTCOMES:

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

- Convert measurement between SI units and imperial units
- Solve problems, using SI and imperial units, that involve the surface area and volume of general and complex 3-D object
- Solve similar right triangles using proportions, trigonometric ratios, and/or Pythagorean theorem
- Calculate prime factors, greatest common factor, and /or nth root by applying in real life situations
- Simplify expressions with integral and rational exponents using the rules for order of operations
- Factor a polynomial expression using greatest common factor, product and sum, and/or difference of two squares
- Determine the domain and range of a relation, and prove if a relation is a function
- Determine the equation of a line if a graph, a point and the slope, two points, or slope and y-intercept is given
- Graph a linear functions by constructing a table of values, determining and plotting x and y-intercepts, or using slope and y-intercepts
- Solve systems of linear equations with two unknown using graphing, substitution, or elimination

TRANSFERABILITY: N/A

EVALUATION CRITERIA:

Your final mark is determined by:

4 section tests	**32 %**
2 oral exams	**18%**
Midterm	**20 %**
Final Exam	**30 %**

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 a module:

1. Read the title of each module, 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.

MA 0110 Test Schedule for Fall 2020
Topics / Tests / Exams

Test #1	% towards the Final Exam	Topics	Recommended Test Date	Date Written	Mark Obtained
1	**8%**	Numbers and Roots & Exponents	September 25 Friday		
2	**8%**	Polynomials & Relations and Functions	October 9 Friday		
3	**8%**	Trigonometry	October 23 Friday		
1st Oral exam **Midterm**	**9%** **20%**	**All the Above**	**Student will decide** **October 30 Friday**		
4	**8%**	Measurement	November 16 Monday		
5	**8%**	Linear Functions & Systems of Equations	December 7 Friday		
2nd Oral exam **Final Exam**	**9%** **30%**		**Student will done** **TBA (Dec. 11 - 19)**		

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.