DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – SPRING 2020

MA0091 (A4) - Basic Mathematics III - 5 (0-0-7.5) HS 112.5 Hours for 7.5 Weeks

INSTRUCTOR: Reddy Ganta **PHONE:** (780) 539-2810 or 2850

OFFICE: Virtual **E-MAIL:** rganta@gprc.ab.ca

OFFICE HOURS: Monday and Tuesday 11:00 – 12:30

CALENDAR DESCRIPTION:

This course is a modularized program of study which includes a review of basic computational skills, ratio and proportion, percent; an introduction to exponents, basic operations on polynomials, equations, basic algebraic word problems; fundamentals of geometry, introduction to graphing and statistics.

PREREQUISITE(S)/COREQUISITE:

MA0081 or equivalent math placement test score

REQUIRED TEXT/RESOURCE MATERIALS:

Textbook: Package of MA0091 modules, updated 2017;
Scientific calculator, Computer with internet access, Printer and Scanner.

DELIVERY MODE: Students will join the class on Zoom as this course will be delivered online due to the COVID-19 Pandemic. 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 the instructions, the examples, or the exercises. **Do not hesitate to ask for help.**

- **Module tests must be written as listed on page 5.** Follow these dates as closely as you can. You must revise and review the material thoroughly before taking a Modules 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 Modules 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.**

- Upon completion of the first five modules, a midterm test will be written on **June 2, Tuesday.** Upon completion of all ten modules, you will write a final exam on Friday, **June 26**. 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.**

COURSE OBJECTIVES:

This course introduces students to:

- the review of basic operations with integers and fractions
- the concepts of ratio and rate, and how they are used in real life situations
- the concept of percent and use of the percent proportion to solve percent problems
- exponential expressions with basic operations using the rules of order of operations
- basic operations with monomials, binomials, and trinomials
- equations with parentheses and fractions and steps to solve for an unknown
- the concept of inequality and its solution process
- rearranging formulas
- properties of parallel and transversal lines
- properties of chords in a circle and tangents to a circle
- the concept of co-ordinate system, and the slope of a line using the co-ordinate system
- various graphs to display a set of data and draw an inference using graphs or central tendency

COURSE OUTCOME:

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

- Simplify expressions with whole numbers, decimals, integers, and fractions using the rules for order of operations

- Write a ratio to compare two quantities with same units from real life situations
- Compare unit rates using number relation symbols
- Solve real life problems using proportions
- Solve general applied percent problems such as interest, sales tax, commission, etc.
- Evaluate exponential expressions containing negative and positive exponents using the rules for order of operations
- Convert between scientific notations and standard from, and multiply and divide using scientific notation
- Identify the terminology of polynomials
- Solve more than one basic operations with polynomials using the rules for order of operations
- Solve linear equations with fractions and/or parenthesis
- Solve a formula for a specified variable and then evaluate
- Solve an inequality using addition and/or multiplication principles and graph the solution on a number line
- Solve a word problem by writing an equation
- Identify pairs of corresponding angles, interior angles, and alternate interior angles, and apply properties of transversals and parallel lines to find measures of angles
- Calculate the measures of angles, chords, and/or radii using the circle properties
- Plot and construct graphs in a rectangular co-ordinate system and state the slope of a line containing points with co-ordinates
- Construct a line graph, pictograph, component graph, circle graph, histogram, and frequency polygon using the given data
- Construct a frequency table from raw data, and display the information
- Draw an inference using the central tendency of a set of raw data

TRANSFERABILITY: N/A

GRADING CRITERIA:

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		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

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.

EVALUATION CRITERIA:

Your final mark is determined by:

4 section tests	40 %
Midterm	25 %
Final Exam	35 %

Test Schedule for Spring 2020

Topics / Tests / Exams

Test #1	% towards the Final Exam	Topics	Recommended Test Date	Date Written	Mark Obtained
1	10%	1. Review & 2. Ratio and Percent	May 12 Tuesday		
2	10%	3. Rate and Proportion & 4. Intro to exponents	May 21 Thursday		
3	10%	5. Intro to Polynomials & 6. Statistics	May 29 Friday		
Midterm	**25 %**	**All the Above**	**June 2 Tuesday**		
4	10%	7. Equations & 8. Language of Algebra	June 12 Friday		
5	10%	9. Fund. Of Geometry & 10. Intro to Graphing	June 22 Monday		
Final Exam	**35%**		**June 26 Friday**		

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. Please mute your mike when you are not talking during the class.

2. 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.

3. Students must actively communicate with their instructor. If you have questions or concerns throughout the course, please send an email or call.

ELECTRONIC DEVICES:

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.