DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – WINTER 2018

MA0091 (D3) - Basic Mathematics III - 5 (0-0-7.5) HS 112.5 Hours for 15 Weeks

INSTRUCTOR: Sukhvir Sandhu **PHONE:** (780) 539-2810 or 2234

OFFICE: A205 or B301B **E-MAIL:** ssandhu@gprc.ab.ca

OFFICE HOURS: TBA

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; fundamental of geometry, introduction to graphing and statistics.

PREREQUISITE(S)/COREQUISITE:

MA0081 or equivalent math placement test score

REQUIRED TEXT/RESOURCE MATERIALS:

Text Book: Package of MA0091 modules, updated 2011;
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.**

- **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.

COURSE OBJECTIVES:

This course introduces students to:

- the review of basic operations with integers and fractions
- the concept of ratio, rate, and how it is used in real life situations
- the concept of percent and use the percent proportion to solve percent problems
- exponential expressions with basic operations using the rules for order of operations
- basic operations with monomials, binomials, and trinomials
- equations with parentheses and fractions and steps to solve an unknown
- the concept of inequality and its solution process
- rearranging formulas
- properties of parallel and transversal
- properties of a chord in a circle and tangent 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

LEARNING OUTCOMES:

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 line 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 polygon suing 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

EVALUATION CRITERIA:

- **Section tests must be written as listed on page 7.**
- Follow these dates as closely as you can. You must revise and review the material thoroughly before taking section(s) test/exam.
- Each test must be **written no later than 3 class days** after the recommended date on page 6.
- You are encouraged to write a test early or on time 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.**
- Upon completion of the first six modules, a midterm test will be written on or before **Monday, March 12.** If you miss this date, you will receive a mark of 0% on your midterm.
- Upon completion of all ten modules, you will write a three hour final exam, and is scheduled by the Students' Services Office during GPRC Exam weeks. Do not book vacation in this time-period.
- Be sure to leave time to prepare for this important exam! It is worth a large percentage of your final grade.
- **All tests must be written by Wednesday, 11th of April.**

Your final mark is determined by:

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

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.

Test Schedule for winter 2018

Topics / Tests / Exams

Test #1	% towards the Final Exam	Topics	Recommended Test Date	Date Written	Mark Obtained
1	10%	Review & Ratios and Percent	January 24 Wednesday		
2	10%	Rates and Proportions & Intro to exponents	February 14 Wednesday		
3	10%	Intro to Polynomials & Statistics	March 7 Wednesday		
Midterm	**25 %**	**All the Above**	**March 12 Monday**		
4	10%	Equations & Language of Algebra	March 28 Wednesday		
5	10%	Fund. Of Geometry & Intro to Graphing	April 11 Wednesday		
Final Exam	**35%**		**TBA (April 16 – 26)**		

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. Refrain from disruptive talking or socializing during class time.

4. Be respectful of others regarding food or beverages in the classroom. Clean up your eating area and dispose of garbage.

5. Recycle paper, bottles, and cans in the appropriate containers.

6. Children are not permitted in the classrooms.

7. 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.

STUDENT PRINTING POLICY:

Please refer to the College website (Home > Tuition and Fees) for the printing policy which limits the free use of paper; extra charges will applied if the limit is exceeded.