GPRC

DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – WINTER 2016

MA0110 (E3): MATHEMATICS GRADE 10-C EQUIVALENT – 5 (5-0-0) 75 Hours

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

OFFICE: J220   **E-MAIL:**   rganta@gprc.ab.ca

OFFICE HOURS: TBA

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, 2012;
Scientific calculator, loose leaf paper or note book; a pencil, an eraser, a ruler.

DELIVERY MODE:

- MA0110 is a modularized math course divided into 8 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 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 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.

- **Only one test re-write of your choice is allowed. It will replace the corresponding mark, and must be taken during the last week of classes.**

- Upon completion of the first five modules, a midterm test will be written on or before **Thursday, March 3**. If you miss this date, you will receive a mark of 0% on your midterm. Upon completion of all eight modules, 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 / rewrite must be written by Thursday, April 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

COURSE OUTCOME:

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

GRADING CRITERIA:

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

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Topics / Tests / Exams

Test #1	% towards the Final Exam	Topics	Recommended Test Date	Date Written	Mark Obtained
1	10%	Numbers and Roots & Exponents	January 26 Tuesday		
2	10%	Polynomials & Relations and Functions	February 11 Thursday		
3	20%	Trigonometry	March 1 Tuesday		
Midterm	**15%**	**All of the Above**	**March 3 Thursday**		
4	5%	Measurement	March 15 Tuesday		
5	10%	Linear Functions & Systems of Equations	April 5 Tuesday		
Final Exam	**40%**		**TBA (April 15-26)**		

EVALUATION CRITERIA:

Your final mark is determined by:

5 Module tests	40 %
Midterm	20 %
Final Exam	40 %

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Homework Schedule

1. Numbers and Roots			
1-3	4-5	Review	
Jan. 7	**12**	**14**	
2. Exponents			
1-2	3-4	Review	**Test 1 (Mod. 1 & Mod. 2)**
Jan. 14	**19**	**21**	**Jan. 26 (Tuesday)**
3. Polynomials: Multiplication & Factoring			
1-2	3-7	8 & Review	
Jan. 26	**28**	**Feb. 2**	
4. Relations and Functions			
1-4	Review		**Test 2 (Mod. 3 & Mod. 4)**
Feb. 4	**9**		**Feb. 11 (Thursday)**
5. Trigonometry			
1-5	6-7	Review	**Test 3 (Mod. 5)**
Feb. 11	**23**	**25**	**March 1 (Tuesday)**
Midterm Exam on Thursday, March 3			
6. Measurement			
1-3	4-5	6 & Review	**Test 4 (Mod. 6)**
Mar. 3	**8**	**10**	**March 15 (Tuesday)**
7. Linear Functions			
1-3	4-6	Review	
Mar. 15	**17**	**22**	
8. Systems of Equations			
1-2	3-5	6 & Review	**Test 5 (Mod. 7 & Mod. 8)**
Mar. 24	**29**	**31**	**April 5 (Tuesday)**
Final Review (April 7-12)			
Final exam to be announced			**(April. 15 - 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.