DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – WINTER 2016

MA0093 (B3): MATHEMATICS ESSENTIALS – 5 (5-0-0) 75 Hours

INSTRUCTOR: Thomas Kaip **PHONE:** (780) 539-2810 or 2963

OFFICE: J218 **E-MAIL:** TKaip@GPRC.ab.ca

OFFICE HOURS: TBA

CALENDAR DESCRIPTION:

This course is a modularized program of study which covers basic computational skills, ratio and proportion, percent; an introduction to exponents; equations and formulas; fundamentals 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 MA0093 modules, 2013;
Scientific calculator, loose leaf paper or note book; a pencil, an eraser, a ruler.

DELIVERY MODE:

- MA0093 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 four modules, a midterm test will be written on or before **Wednesday, March 9**. 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 Monday, April 11.**

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
- simple equations to solve an unknown
- 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

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
- Solve simple linear equations with additive inverse and/or multiplication by a reciprocal
- 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

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**

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Topics / Tests / Exams

Test #1	% towards the Final Exam	Topics	Recommended Test Date	Date Written	Mark Obtained
1	10%	Review & Ratio and Proportion	January 27 Wednesday		
2	10%	Percent & Intro to Exponents	February 23 Tuesday		
Midterm	**20%**	**All the Above**	**February 25 Thursday**		
3	10%	Equations & Fund. Of Geometry	March 21 Monday		
4	10%	Intro to Graphing & Statistics	April 11 Monday		
Final Exam	**40%**		**TBA (April 15-26)**		

EVALUATION CRITERIA:

Your final mark is determined by:

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

MA0093 WINTER 2016
Homework Schedule

1. **Review**							
1-3	4-6	7-9	10-11	12	13-14	Review	
Jan. 7	**8**	**9**	**11**	**12**	**13**	**14**	
2. **Ratio and Proportions**							
1-2	3-4	5-6	7	8	9-10	Review	**Test 1 (Mod. 1 & Mod. 2)**
Jan. 15	**18**	**19**	**20**	**21**	**22**	**25, 26**	**Jan. 27 (Wednesday)**
3. **Percent**							
1-3	4-6	7	8	9	Review		
Jan. 28	**29**	**Feb. 1**	**2**	**3**	**4**		
4. **Introduction to Exponents**							
1	2	3	4	5	Review		**Test2 (Mod. 3 & Mod. 4)**
Feb. 5	**8**	**9**	**10**	**11**	**12, 22**		**Feb. 23 (Tuesday)**
Midterm Exam on Thursday, February 23							
5. **Equations**							
1-2	3	4	5	6	7	8	9 Review
Feb. 26	**2 9**	**Mar. 1**	**2**	**3**	**4**	**7**	**8** **9**
6. **Fundamentals of geometry**							
1-2	3	4	5	6	Review		**Test 3 (Mod. 5 & Mod. 6)**
Mar. 10	**11**	**14**	**15**	**16**	**17, 18**		**Mar. 21 (Monday)**
7. **Introduction to Graphing**							
1	2-3	4	5	Review			
Mar. 22	**23**	**24**	**28**	**29**			
8. **Statistics**							
1-2	3-4	5	6	7	8-9	Review	**Test 4 (Mod. 7 & Mod. 8)**
Mar. 30	**31**	**Apr. 1**	**4**	**5**	**6**	**7, 8**	**April 11 (Monday)**
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.