DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Fall 2016
MA 0133 (B3) 5 (5-0-0) HS 75 Hours 15 Weeks
Mathematics 30-3 Equivalent

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 is a modularized course which covers linear relations, limits to measurements; statistics, probability and odds, properties of geometric figures, transformations, trigonometry of oblique triangles, planning for the owning a small business. Emphasis is placed on applications related to trades and personal use.

PREREQUISITE(S)/COREQUISITE:

MA0123 or greater than or equal to 60% in Math 20-3 in the last two years

REQUIRED TEXT/RESOURCE MATERIALS:

Math Works 12 Workbook, scientific calculator, graph paper
Loose leaf paper or note book; a pencil, an eraser, a geometry set.

DELIVERY MODE:

- MA 0133 is a modularized math course divided into 8 separate topics called chapters. Each chapter is further divided into sections. Each section introduces one new skill at a time followed by a new term written in **bold letters,** with its explanation on the left margin. Each new skill is demonstrated with an example with clearly stated instructions, followed by **Build Your Skills** exercise questions. Study the term and its explanation and work through the example before starting the exercise. The answers to all the exercises are available on-line under the link http://pacificedpress-educ.sites.olt.ubc.ca/files/2015/02/MW12-WB-AK.pdf .

- The mastery of all the skills covered under each section is further tested in an exercise called **Practice Your New Skills.** Check your work often to make sure you understand the newly introduced concepts. The key to success in working with a one-to-one delivery method is to ask questions whenever you have difficulty understanding the instructions, the examples, or the exercises. **Do not hesitate to ask for help.**

- **Section assignments/tests 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 section(s) test/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 chapter(s) test** is recommended.

- **One lowest test mark out of 4 test marks will be ignored. Best 3 test marks out of 4 test mark will be used for the final grade.**

- Upon completion of the first four chapters, a midterm test will be written on or before **Monday, October 17**. If you miss this date, you will receive a mark of 0% on your midterm. Upon completion of all eight sections, 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 must be written by Wednesday, November 30.**

COURSE OBJECTIVES:

The Course introduces students to:

- linear and non-linear relations in graphs, table of values, and equations
- trends in data displayed in scatterplots
- the concept of accuracy, precision, uncertainty, and acceptable tolerance
- the similarities and differences between averages and percentiles
- probability to analyze and interpret problems
- the properties of regular polygons, including pentagons, hexagons, and octagons
- drawing and analyzing two-dimensional shapes that result from a combination of successive transformation
- problems involving transformation
- oblique triangle and how to solve them using sine and cosine law
- ways to improve the financial performance of a business and to check if a business is likely to succeed.

COURSE OUTCOME:

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

- Identify linear and non-linear graphs, and write equations representing the linear relations
- Identify trends in data displayed in scatterplots, and write equations to express linear trends
- Extrapolate and interpolate data based on trends
- Calculate uncertainty, acceptable tolerance when conditions are given
- State the similarities and differences between averages and percentiles
- Calculate a percentile rank and other variable related to the rank
- Analyze and interpret problems relating with probability
- Calculate the probability of an event occurring based on a data set or based on the odds for or against
- Describe and show properties of triangles, using side lengths and angle measures
- Describe and show properties of quadrilaterals , using side lengths, angle measures, diagonal lengths, and angle of intersection
- Identify uses of different geometric shapes
- Identify and draw transformations performed on two-dimensional shapes
- Draw and analyze two-dimensional shapes that result from a combination of successive transformation
- Solve problems involving transformations
- Solve an unknown angle and/or side of oblique triangles using Sine Law or Cosine Law
- State ways to improve the financial performance of a business
- Identify whether a business is likely to succeed or not

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**

How to use the book:

1. Read the title of each chapter, 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:

3 section tests	30 %
Midterm	30 %
Final Exam	40 %

Test Schedule for fall 2016

Topics / Tests / Exams

Test	% towards the course mark	Topic	Recommended Test Date	Date written	Your mark
1	10%	**Chap. 1**:Linear Relations **Chap. 2**: Limits to Measurements	September 20 Tuesday		
2	10%	**Chap. 3**: Statistics **Chap.4**: Probability and Odds	October 11 Tuesday		
	30%	**Midterm – must be written on or before**	**October 17 Monday**		
3	10%	**Chap.5**: Properties of Geometric Figures **Chap. 6**: Transformations	November 7 Monday		
4	10%	**Chap. 7**:Trigonometry **Chap. 8**: Owning a Small Business	November 30 Wednesday		
	40%	**Final Exam – 3 Hours**	**T.B.A Dec. 7 - 16**		

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.