



DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – WINTER 2015

Basic Mathematics I

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

OFFICE: Math Lab A210 **E-MAIL:** ssandhu@gprc.ab.ca

OFFICE HOURS: Daily, 8:00-8:30 am and 11:00 - 11:45 am in the Math Lab

PREREQUISITE(S)/COREQUISITE:

Appropriate math placement test score and **EN 0080** placement

REQUIRED TEXT/RESOURCE MATERIALS:

Text Book: STEPPING IT UP Preparing for College Math Basic Mathematics I
MA0060;

Loose leaf paper or note book; a pencil, an eraser, a ruler.

CALENDAR DESCRIPTION:

This course is a modularized program of study which covers a review of reading, writing, and rounding of whole numbers as well as addition, subtraction, multiplication, and division of whole numbers. Problem solving is emphasized throughout. Squares, square roots, and the order of operations are introduced.

CREDIT/CONTACT HOURS:

MA 0060 Basic Mathematics I 5 (5-0-0), Time: 75 Hours

DELIVERY MODE:

- MA0060 is a modularized math course. The topic, Whole Numbers, is divided in the text book into 8 separate parts called sections. Each new section is emphasized with a blue strip. At the end of each section, there is an exercise or set of practice problems. The answers to the practice problems are at the end of the book. Each section is further divided into sub-sections which are numbered in green circles. The name of the each sub-section is written in black.
- The instructions for each sub-section are clearly presented followed by several examples along with coloured-notes for emphasis. Study the instructions and work through the examples before starting the assigned questions from the exercise. Check your work often to make sure you understand each new topic. The key to success in working with these sections is to ask questions whenever you have difficulty understanding the instructions, the examples, or the exercise questions. **Do not hesitate to ask for help.**
- You must submit an **assignment** for marks for certain sections and write a **test** after each section. Failing to hand in the assignment on the required date will result in a mark reduction for that particular assignment. Feedback on the assignment will be given before you take the test, provided the assignment is submitted on the required date. When doing your assignment or 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.
- A passing mark of 70% is required on the test before continuing on to the next section. If you are unable to attain this mark, you must review the material and rewrite the test. The first and second test marks will be averaged. Upon completion of the first five sections, a midterm test will be written on or before **Wednesday, March 11**. 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.

- The recommended test date for each section is on the course outline. Follow these dates as closely as you can. You are encouraged to write a test early if you are prepared. **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/assignments must be written by Tuesday, April 14.**

Bonus

When you write your module tests on or before the given date, you will be awarded an additional 2% on your score for each test.

OBJECTIVES:**SECTION 1:**

1. Write numbers in expanded form.
2. Write whole numbers in standard notation.
3. Write word names for numbers and write numbers for word forms.
4. Read numbers in tables.

SECTION 2:

1. Master basic addition facts.
2. Add several single-digit numbers.
3. Add several-digit numbers when carrying is not needed.
4. Add several-digit numbers when carrying is needed.
5. Review the associative & commutative property and zero identity of addition.
6. Apply addition to real-life situations.

SECTION 3:

1. Master basic subtraction facts.
2. Subtract whole numbers when borrowing is not necessary.
3. Subtract whole numbers when borrowing is necessary.
4. Check the answer to a subtraction problem.
5. Apply subtraction to real-life situations.

SECTION 4:

1. Master basic multiplication facts.
2. Multiply a several-digit number by a single-digit number.
3. Multiply a whole number by a power of 10.
4. Multiply a several-digit number by a several-digit number.
5. Use the properties of multiplication to perform calculations.
6. Apply multiplication to real-life situations.

SECTION 5:

1. Master basic division facts.
2. Perform division by a one-digit number.
3. Perform division by a two or three-digit number.
4. Divide a whole number by a power of 10.
5. Use multiplication to check a division answer.
6. Apply division to real-life situations.

SECTION 6:

1. Evaluate expressions with whole-number exponents.
2. Perform several arithmetic operations in the proper order.

SECTION 7:

1. Round whole numbers.
2. Estimate the answer to a problem involving whole numbers.

SECTION 8:

1. Use the Mathematics Blueprint to solve problems involving one operation.
2. Use the Mathematics Blueprint to solve problems involving more than one operation.

GRADING CRITERIA:

Your final mark is determined by:

Introductory quiz/6 section assignments	13%
8 section tests	40 %
Midterm	15 %
Final Exam	32 %

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

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 OF PLAGIARISM:

Please refer to the College Website for policies regarding plagiarism and cheating as well as the resultant penalties. These are serious issues and will be dealt with severely.

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 be applied if the limit is exceeded.

**Winter 2015
MA0060 Topics/Tests**

Section #	Topics	Recommended Time & Test Date	Date written	Mark
1	Understanding Whole Numbers	8 days January 15 Thursday		
2	Adding Whole Numbers	7 days January 26 Monday		
3	Subtracting Whole Numbers	7 days February 4 Wednesday		
4	Multiplying Whole Numbers	9 days February 24 Tuesday		
5	Dividing Whole Numbers	8 days March 6 Friday		
	Midterm (Sections 1 – 5)	March 11 Wednesday		
6	Exponents and Order of Operations	7 days March 20 Friday		
7	Rounding and Estimating	6 days March 30 Monday		
8	Solving Applied Problems Involving Whole Numbers	9 days April 13 Monday		
	Final Exam (Sections 1 – 8)	To be announced (April 16 - 27)		

**Winter 2015
MA0060 Homework Schedule**

Get yourself familiarized with the book and the Course Outline Jan. 6

Quiz Jan. 7

Quiz is due on Jan. 8

Note: Under each section, you must read and understand each example, do each Practice Problem and all the problems in the exercise at the end of each section. Check your answers before you do the next question.

Section 1: Understanding Whole Numbers

Sub-sections 1 & 2: Practice Problems 1, 2, & 3, and #1 - 20 Jan. 8
Sub-section 3: Practice Problems 4, 5, 6 & 7, and #21 - 40 Jan. 9
Sub-section 4: Practice Problem 8 and #41 – 58; Jan. 12
Quiz 1 #1-4 Assignment to be handed in for marks, Jan. 13
Review the whole unit Jan. 14
Section 1 Test (Thursday) Jan. 15

Section 2: Adding Whole Numbers

Sub-sections 1 & 2: Practice Problems 1-3 and #1 - 10 Jan. 16
Sub-sections 3 & 4: Practice Problems 4-6 and #11 - 20 Jan. 19
Sub-section 5: Practice Problem 7 and #21 - 36 Jan. 20
Sub-section 6: Practice Problems 8 & 9 and #37 - 52 Jan. 21
Quick Quiz 2: 1 – 4 & Assignment to be handed in for marks Jan. 22
Review the whole unit Jan. 23
Section 2 Test (Monday) Jan. 26

Section 3: Subtracting Whole Numbers

Sub-sections 1 & 2: Practice Problems 1 & 2 and #5 - 25 Jan. 27
Sub-section 3: Practice Problems 3-6 and #26 - 46 Jan. 28
Sub-section 4: Practice Problems 7-9 and #47 - 64 Jan. 29
Sub-section 5: Practice Problems 10 & 11 and #65 - 78 Jan. 30
#79-86 & Quick Quiz 3: 1-4; Feb. 2
Assignment to be handed in for marks & **Review the whole unit** Feb. 3
Section 3 Test (Wednesday) Feb. 4

Section 4: Multiplying Whole Numbers

Sub-section 1: Practice Problem 1 and #1-4; learn the times-table (0-9)	Feb. 5
Sub-section 2: Practice Problems 2 – 4 and #5 - 24	Feb. 6
Sub-section 3: Practice Problems 5 & 6 and #25- 38	Feb. 9
Sub-section 4: Practice Problems 7 – 11 and #39 - 58	Feb. 10
Sub-section 5: Practice Problems 12 & 13 and #59 - 76	Feb. 11
Sub-section 6: Practice Problems 14 & 15 and #77 - 92	Feb. 12
Quick Quiz 4: 1-4 & <u>Assignment to be handed in for marks</u>	Feb. 13
Review for the test	Feb. 23
Section 4 Test (Tuesday)	Feb. 24

Section 5: Dividing Whole Numbers

Sub-section 1: Practice Problems 1 & 2 and #1 - 30	Feb. 25
Sub-section 2: Practice Problems 3 - 5 and #31 - 56	Feb. 26
Sub-section 3: Practice Problems 6 - 8 and #57 - 74	Feb. 27
Sub-section 4: Practice Problems 9 & 10 and #75 - 86	Mar. 2
#87 & 88, Quick Quiz 5: 1 – 4	Mar. 3
Assignment to be handed in for marks	Mar. 4
Review for the test	Mar. 5
Section 5 Test (Friday)	Mar. 6

Midterm Review: How am I doing? Sections 1-5: #1 - 20	Mar. 9
Study for Midterm	Mar. 10

Midterm Exam (Wednesday)	Mar. 11
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Section 6: Exponents and the Order of Operations

Sub-section 1: Practice Problems 1 & 2 and #1 - 34	Mar. 12
Practice Problem 3 and #35 – 52	Mar. 13
Sub-section 2: Practice Problems 4 - 8	Mar. 16
#53 - 80	Mar. 17
#81 – 100 and Quick Quiz 6: 1 - 4 (No assignment)	Mar. 18
Review for the test	Mar. 19
Section 6 Test (Friday)	Mar. 20

Section 7: Rounding and Estimating

Sub-section 1: Practice Problem 1-3 and #3-24	Mar. 23
Sub-section 1: Practice Problem 3-5 and #24-32	Mar. 24
Sub-section 2: Practice Problems 6 - 9 and #33 - 44	Mar. 25
Practice Problems 10 - 12 and #45 - 72	Mar. 26
Quick Quiz 7: 1-4; Review the section	Mar. 27
Section 7 Test (Monday)	Mar. 30

Section 8: Solving Applied Problems Involving Whole Numbers

Sub-section 1: Practice Problem 1 – 4	Mar. 31
#1 - 8	Apr. 1
#9 - 16	Apr. 2
Sub-section 2: Practice Problem 5 - 7	Apr. 6
#17 - 25	Apr. 7
#26 – 34, Quick Quiz 8	Apr. 8
<u>Assignment to be handed in for marks</u>	Apr. 9
Review the section	Apr. 10
Section 8 Test (Monday)	Apr. 13

Review for Final **Apr. 14**

Final Exam **TBA (April 16 - 27)**

**MA0060 Assignments
Winter 2015**

When doing your assignments, be sure to **show all of your work**. Marks are given for the method as well as for the final answer.

Assignment	Due Date
Quiz: Get familiarized with the book (20 marks)	January 8
Section 1 Assignment (15 marks) Page 9: Do questions 6, 14, 20, 24, 29, 38, 40, 44, 48, and 54	January 13
Section 2 Assignment (20 marks) Page 19: Do questions 4, 24, 36, 38, 42 and 48	January 22
Section 3 Assignment (20 marks) Page 31: Do questions 34, 39, 52, 58, 64, 66, 74 and 84	February 3
Section 4 Assignment (25 marks) Page 45: Do questions 4, 24, 30, 48, 56, 62, 72, 78, 82, 90 and 100	February 13
Section 5 Assignment (20 marks) Page 56: Do questions 26, 28, 38, 48, 54, 68, 74, 76, 82, 84	March 4
Section 8 Assignment (24 marks) Page 91: Do questions 18, 20, 22, 24 and 26. Page 93: Do Question 2 from Quick Quiz 8	April 9

Quiz: Get yourself familiarized with the book.

1. The topic of this book, as well as the course, is **Whole Numbers**. List the title of each section and its page number.
3 MARKS
2. List the title of each sub-section and its page number for section 5.
3 MARKS
3. Find **SECTION 4 EXERCISES** on page 45.
List the titles (written in red) and state the number of questions appearing under each title.
For the questions that follow the title “Verbal and Written Skills”, list the different directions used (written in black).
4 MARKS
4. State page number near the end of the book which contains the answers to the problems in question #3.
1 MARK
5. Does this page contain answers to all the problems? Is there any kind of pattern involved in the answer section?
2 MARKS
6. Find the Practice Problem 6 on page 71. Which page number contains the answer to this question? What is the answer?
2 MARKS
7. State the answer to the Example 15 of sub-section 6, “Applying Multiplication to Real-Life Situations” from Section 4, “Multiplying Numbers”.
1 MARK

Due Date: January 8

