



School of Arts, Science, Business & Education

COLLEGE AND CAREER PREPARATION  
ACADEMIC FOUNDATIONS MATH 007(AFM007)  
Section M  
COURSE OUTLINE  
FALL 2014

**Course Description**

**ACADEMIC FOUNDATIONS MATH 007**

**AFM007 – Intermediate Math**

*6 credits, 16 weeks, 8 hours / week*

AFM 007 will apply a review of whole numbers, fractions and decimals to all operations (addition, subtraction, multiplication, division) on integers, signed fractions and signed decimals including order of operations. Students will apply their number sense to the solving of ratio, proportion and percent applications as well as the interpretation of data presented in various charts or graphs. Algebra will be explored through the solving of one step linear equations. Perimeter and area of two dimensional shapes will be explored and applied to the volume of three dimensional figures, with a focus on circles and triangles.

**Instructor Contact Information, Office Hours**

Course Hours: Monday - Thursday 1.00 – 3.00pm

Instructor: Linda Mason

E-mail: [linda.mason@keyano.ca](mailto:linda.mason@keyano.ca)

Phone Number: 780-828-4433

Blackberry: 780-838-1652

Office: Dorothy McDonald Learning Centre, Fort McKay.

Office Hours: Monday – Thursday (8.30 – 9.00am; 12.00 – 12.30)

Monday & Tuesday (3.00 – 3.30pm) Thursday (3.00 – 4.00pm)

**Required and Recommended Resources**

- “Basic College Maths” – Marvin Bittinger – 2<sup>nd</sup> edition.
- Teacher Prepared materials

## **STUDENT LEARNING OUTCOMES:**

By the end of this course students will have developed an improved level of competency with:-

### **Unit 1: Whole Numbers**

- ❖ Standard Notation
- ❖ Addition
- ❖ Subtraction
- ❖ Multiplication
- ❖ Division
- ❖ Rounding and Estimating
- ❖ Exponents and order of Operations

### **Unit 2: Integers**

- ❖ Addition & Subtraction
- ❖ Multiplication & Division
- ❖ Order of Operations

### **Unit 3: Fractions- Multiplication and Division**

- ❖ Factorizations
- ❖ Divisibility
- ❖ Fraction Notation
- ❖ Multiplications and Divisions

### **Unit 4: Fraction Notation and Mixed Numerals**

- ❖ Least Common Multiples
- ❖ Addition, Subtraction, Order
- ❖ Mixed Numerals
- ❖ Order of operations: Estimation

### **Unit 5: Decimals**

- ❖ Order and rounding
- ❖ Adding, Subtracting
- ❖ Multiplication, Division
- ❖ Converting from fraction to Decimal
- ❖ Estimating

### **Unit 6: ratio and Proportion**

- ❖ Ratios, Rates and Unit Prices
- ❖ Proportions
- ❖ Geometric Applications

### **Unit 7: Percent**

- ❖ Percent,
- ❖ Percent and Fraction Notation
- ❖ Solving Problems
- ❖ Sales Tax, Commission and Discount
- ❖ Simple and Compound Interest; Credit cards

### **Unit 8: Data, Graphs and Statistics**

- ❖ Averages, means and Modes
- ❖ Tables and Pictographs
- ❖ Bar, Line and Circle graphs

### **Unit 9: Measurement**

- ❖ Linear – American and Metric S
- ❖ Converting between systems
- ❖ Weight and Mass
- ❖ Capacity, Time and Temperature
- ❖ Converting units of Area

### **Unit 10: Geometry**

- ❖ Perimeter, Area
- ❖ Circles, Angles and Triangles
- ❖ Volume
- ❖ Square roots and Pythagoras' theorem

### **Unit 11: Algebra**

- ❖ Introduction to Algebra
- ❖ Solving Equations – addition principle, multiplication principle

### **EVALUATION:**

Assignments	<b>60%</b>
Unit Tests	<b>10%</b>
Midterm	<b>10%</b>
Final Exam	<b><u>20%</u></b>
Total	<b>100%</b>

### **KEYANO COLLEGE GRADING SCALE**

<b>Descriptor</b>	<b>Alpha Grade</b>	<b>4.0 Scale</b>	<b>Percentage</b>
Excellent	A+	4.0	91-100
	A	4.0	86-90
	A-	3.7	80-85
	B+	3.3	76-79
Good	B	3.0	73-75
	B-	2.7	70-72
	C+	2.3	67-69
Satisfactory	C	2.0	64-66
	<b>C-</b>	<b>1.7</b>	<b>60 -63</b>
Poor	D+	1.3	57- 59
Minimal Pass	D	1.0	50-56
Failure	F	0.0	0-49

- A minimum grade of C-, or 60%, is required for progression from one level to another

- A grade of D will allow you to pass a course, but it is not sufficient to allow you to move to the next level.
- A grade of C or better, 65% or more, is required in the 13, or 23 level courses to be acceptable as a prerequisite to a 30 level.
- A grade of C or better, 65% or more, is required in the 33 level courses to meet the requirements to obtain a Keyano High School Equivalency.

## **FINAL EXAMINATION**

All final exams must be written on the specified examination date unless the conditions listed in the Keyano College Calendar under "Deferred Exams" apply.

## **STUDENT RIGHTS AND RESPONSIBILITIES**

Students should be aware of their rights and responsibilities as laid out in the *Keyano College Credit Calendar 2014-2015*, on pages 31-34, or as included in the student package.

In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies...” (*KCCC, 2014/2015*, p. 32), students should turn cell phones and pagers off when they come to class, and refrain from bringing children or other visitors to class.

## **CLASS STRUCTURE**

Through the semester, we will be working independently at the computer and with our modules, together as a class, and in pairs.

-Auto Skills work will be completely independent work at the computer. No more than 5 students in AFM 007 and AFM 009 can access the program at the same time, so we may break into 2 alternating groups.

-It is easier to learn some math skills by using tools and performing activities. Therefore, when a new topic is being introduced, and 1 or 2 days before a test, we may work as a class on some projects.

## **CLASSROOM EXPECTATIONS**

In order to make the learning center a happy and productive place to learn, each student is expected to:

- attend classes regularly;
- arrive to school on time;
- phone the learning center to notify the instructor should she/he be unable to attend classes that day;
- limit the use of the school telephone to short important phone calls;
- keep her/his work table tidy;
- wash her/his own dishes;
- wear indoor shoes or slippers to help keep the classroom floors clean;
- show respect to fellow students and contribute to maintaining a peaceful learning atmosphere.

## **Counselling and Disability Services**

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career, and academic counselling.

Disability Services provides educational services to students with disabilities.

Both Counselling and Disability Services are located in CC167.

**MATH 007**

<b>WEEK</b>	<b>DATES</b>	<b>CHAPTER</b>	<b>TOPIC</b>	<b>TESTS</b>
1 & 2	Sept 2 - 12	1	<b>Whole Numbers</b> – Addition; Subtraction; Multiplication; division; rounding & estimating. Exponents.	<b>Sept 12</b>
3	Sept 15 - 19	2	<b>Integers</b> – Addition; subtraction; Multiplication; division. Order of Operations.	<b>Sept 19</b>
4	Sept 22 – 26	3	<b>Fractions</b> –Dividing; multiplying; Simplifying. Applications.	<b>Sept 26<sup>th</sup></b>
5	Sept 29 – Oct 3	4	<b>Fractions / Mixed Numerals</b> ; LCM; Addition; Subtraction; order of Operations.	<b>Oct 3<sup>rd</sup></b>
6 & 7	Oct 6 – 17	5	<b>Decimals</b> – Order, rounding, addition, subtraction, multiplication, division. Converting from fraction to decimal.	<b>Oct 17<sup>th</sup></b>
8	Oct 20 – 24	6	<b>Ratio and Proportion</b> – ratios, unit prices, proportions. Applications.	<b>Oct 24<sup>th</sup></b>
9 & 10	Oct 27 – Nov 7	7	<b>Percentages</b> – percents and fractions; percent equations; sales tax; interest.	<b>Nov 7<sup>th</sup></b>
11	Nov 10 - 14	8	<b>Data, graphs and Statistics</b> – averages, medians, modes. Tables, bar, line graphs, circle graphs.	<b>Nov 14<sup>th</sup></b>
12	Nov 17 - 21	9	<b>Measurement</b> – Linear – American / Metric; weight and mass; volume; time and temperature.	<b>Nov 21<sup>st</sup></b>
13 – 14	Nov 24 – Dec 5	10	<b>Geometry</b> – perimeter, Area; circles, volume, angles, triangles, square roots, Pythagoras' theory.	<b>Dec 5<sup>th</sup></b>
15	Dec 8 - 12	11	<b>Algebra</b> – introduction, solving equations. Applications. <b>Review if possible</b>	<b>Dec 12<sup>th</sup></b>
16	Dec 15 - 19	<b>Exam Week</b>		<b>Mon Dec 15<sup>th</sup></b>

**Please Note:**

This schedule may be modified at the instructor's discretion to facilitate unforeseen time constraint

## IMPORTANT DATES

Orientation Day	September 2
First Day of Class	September 3
Last day to ADD Courses	September 9
Tuition is due (\$100 late fee charged after this date)	September 9
Last day to DROP Courses with full refund (\$100 deposit is non-refundable)	September 16
Last day to WAIVE SAKC health and dental plan or add family	September 16
Last day to submit Keyano College Fall Awards Applications	September 30
Last day to WITHDRAW with a refund (50%)	October 10
Last day to WITHDRAW (Grade of W)	November 26

## Authorizations

This course outline has been reviewed and approved by the Program Chair.

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Linda Mason, Instructor

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Lisa Turner, Chair, College and Career Preparation

Date Authorized

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Guy Harmer, Dean, School of Arts, Science, Business & Education

Date Authorized

### Signed copies to be delivered to:

Instructor

Office of the Registrar