

**AFM 007M – 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.

Prerequisite: AFM 006

**Instructor:**

Linda Mason  
Dorothy McDonald Learning Centre, Fort McKay  
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**Office Hours**

Office Hours: Monday – Thursday (8.30 – 9.00am)  
Monday – Wednesday (12.00 – 1.00pm)

**Hours of Instruction**

Monday – Thursday: 1.00 – 3.00pm

**Required Resources**

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

**Course 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 **100%**

*The minimum pre-requisite for progression is 1.7 (refer to Grading System below)*

**Grading System**

<b>Descriptor</b>	<b>4.0 Scale</b>	<b>Percent</b>
Excellent	4.0	96 – 100
	4.0	90 – 95
	3.7	85 – 89
Good	3.3	81 – 84
	3.0	77 – 80
	2.7	73 – 76
Satisfactory	2.3	69 – 72
	2.0	65 – 68
	<b>Minimum Prerequisite</b>	1.7
Poor	1.3	55 – 59
Minimum Pass	1.0	50 – 54
Failure	0.0	0 – 49

## Proposed Schedule of Topics

WEEK	DATES	CHAPTER	TOPIC	TESTS
1 & 2	Jan 5 - 16	1	<b>Whole Numbers</b> – Addition; Subtraction; Multiplication; division; rounding & estimating. Exponents.	<b>Jan 16</b>
3	Jan 19 - 23	2	<b>Integers</b> – Addition; subtraction; Multiplication; division. Order of Operations.	<b>Jan 23</b>
4	Jan 26 - 30	3	<b>Fractions</b> –Dividing; multiplying; Simplifying. Applications.	<b>Jan 30</b>
5	Feb 2 - 6	4	<b>Fractions / Mixed Numerals</b> ; LCM; Addition; Subtraction; order of Operations.	<b>Feb 6</b>
6 & 7	Feb 9 - 20	5	<b>Decimals</b> – Order, rounding, addition, subtraction, multiplication, division. Converting from fraction to decimal.	<b>Feb 20</b>
8	Feb 23 - 27		<b>Reading Week</b>	
9 & 10	Mar 2 - 13	6	<b>Ratio and Proportion</b> – ratios, unit prices, proportions. Applications.	<b>Mar 13</b>
11	Mar 16 -20	7	<b>Percentages</b> – percents and fractions; percent equations; sales tax; interest.	<b>Mar 20</b>
12	Mar 23 - 27	8	<b>Data, graphs and Statistics</b> – averages, medians, modes. Tables, bar, line graphs, circle graphs.	<b>Mar 27</b>
13 - 14	Mar 30 – Apr 10	9	<b>Measurement</b> – Linear – American / Metric; weight and mass; volume; time and temperature.	<b>Apr 10</b>
15	Apr 13 - 17	10	<b>Geometry</b> – perimeter, Area; circles, volume, angles, triangles, square roots, Pythagoras' theory.	<b>Apr 17</b>
16	Apr 20 - 22	11	<b>Algebra</b> – introduction, solving equations. Applications. <b>Review if possible</b>	<b>Apr 23</b>
	Apr 24 - 29	<b>Exam Week</b>	<b>Final Exam</b>	<b>Apr 24</b>

**Please Note:**

Date and time allotted to each topic is subject to change. It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College Credit Calendar.

**Student Attendance**

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and / or notes that may be due.

**Academic Misconduct**

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications
- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment

Penalties for academic offences range from a verbal reprimand to dismissal from the College, and in certain circumstances may involve legal action.

**Specialized Supports****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.

**SKILL Centre**

The SKILL Centre is a learning space in the Clearwater Campus at Keyano College where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff.

The SKILL Centre, through a variety of delivery methods, provides assistance in skill development to Keyano students. Assistance is provided by instructors, staff and student tutors. Individuals wishing to improve their mathematics, writing, grammar, study, or other skills, can take advantage of this unique service.

**Authorization**

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

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[First Name, Last Name], Instructor

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Lisa Turner, Chair

Date Authorized

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Guy Harmer, Dean

Date Authorized

**Signed copies to be delivered to:**

Instructor

Registrar's Office