



MATHEMATICS 20-3

Section M
COURSE OUTLINE
FALL 2013

Course Description

MATH 20-3
MATHEMATICS 20-3

5 credits, 16 weeks, 6 hours / week

This course is intended for students wishing to pursue post-secondary studies in trades, certified occupations or direct entry into the workforce. It covers the following aspects of mathematics – communication, connections, mental math and estimation, problem-solving, reasoning, technology, visualization and critical thinking.

The curriculum is delivered through projects, activities and problems set in real-world contexts.

Course Hours, Instructor Contact Information, Office Hours

Course Hours: Monday/Tuesday: (9:00-11:00) Wednesday: (2:00-3:00 pm)

E-mail: linda.mason@keyano.ca

Phone Number: 780-828-4433

Blackberry: 780-838-1652

Office: Dorothy McDonald Learning Centre, Fort McKay.

Office Hours: Monday –Wed: (7.45-8.30), Mon-Thurs: (12.00-12.30), Thurs: (8.30-9.00) Fri (9.00-9.15)

Required and Recommended Resources

1. Mathworks 11 – Pacific Educational Press
2. Geometry set
3. Scientific calculator
4. Binder, lined paper, pencils
5. Teacher prepared materials as required.

STUDENT LEARNING OUTCOMES

It is expected that students will:-

- Solve problems that require the manipulation and application of formulas related to slope and rate of change.
- Demonstrate an understanding of slope as rise over run and rate of change by solving problems.
- Solve problems that involve creating and interpreting line graphs, including bar graphs, histograms, line graphs and circle graphs.
- Solve problems that involve SI and imperial units in surface area measurements and verify the solutions.
- Solve problems that involve SI and imperial units in volume and capacity measurements.
- Solve problems that require the manipulation and application of formulas related to: volume and capacity; surface area.
- Solve problems by applying proportional reasoning and unit analysis.
- Solve problems that involve two and three right triangles.
- Solve problems that involve scale.
- Model and draw 3-D objects and their views.
- Draw and describe exploded views, component parts, and scale diagrams of simple 3-D objects.
- Demonstrate an understanding of simple and compound interest.
- Demonstrate an understanding of financial institution services used to access and manage finances.
- Demonstrate an understanding of credit options, including credit cards and loans.
- Solve problems that require the manipulation and application of formulas related to simple interest and finance charges.
- Solve problems that involve personal budgets.
- Solve problems that involve creating and interpreting graphs, including bar graphs, histograms, line graphs and circle graphs.

EVALUATION:

Module Assignments	70%
Final Exam	30%
Total	100%

KEYANO COLLEGE GRADING SCALE

Descriptor	Alpha Grade	4.0 Scale	Percentage
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
	C-	1.7	60 -63
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 2013-2014*, on pages 36-40, or as included in the student package.

In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies...” (*KCCC, 2013/2014*, p. 37), students should turn cell phones and pagers off when they come to class, and refrain from bringing children or other visitors to class.

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;

CLASS STRUCTURE

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

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 will work as a class on some projects.

SCHEDULE

WEEK	DATES	UNIT	TOPIC	TESTS
1 & 2	Sept. 4 – 13	1	Slope and Rate of Change. Rise over Run; Grade, Angle of Elevation and Distance; Rate of Change.	Sept 13
3 - 5	Sept 16 – Oct 4	2	Graphical Representations. Broken Line Graphs; Bar Graphs; Histograms; Circle Graphs.	Oct 4
6 - 8	Oct 7 - 21	3	Surface Area, Volume and Capacity. Surface Area of Prisms; Surface Area of Pyramids, Cylinders, Spheres & Cones; Volume and Capacity of Prisms & Cylinders; Volume & Capacity of Spheres, Cones & Pyramids.	Oct 21
8 - 9	Oct 22 – Nov 1	4	Trigonometry of Right Triangles. Solving for Angles, lengths and Distances; Solving Complex Problems in the Real World.	Nov 1
10-12	Nov 4 - 18	5	Scale Representations. Scale Drawings and Models; 2-D Representations; 3-D Representations.	Nov 18
12 -13	Nov 19 – 29	6	Financial Services. Choosing an Account; Simple and Compound Interest; Credit Cards & Store Promotions; Personal Loans, Lines of Credit & Overdrafts.	Nov 29
14 & 15	Dec 2 - 13	7	Personal Budgets. Preparing to Make a Budget; The Budgeting Process; Analyzing a Budget.	Dec 13
16	Dec 16-20		Final Exams	Mon. Dec 16th

Please Note:

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

LEARNER ASSISTANCE PROGRAM

If you have been diagnosed with a Learning Disability in the past, or you feel that you would benefit from some assistance from a Disabilities Counsellor, please call our office 780-792-5608 to book an appointment. Services and accommodations are intended to assist you in your course, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, receiving accommodations, and your overall success at Keyano College.

IMPORTANT DATES:

- Sept 10 - last day to add courses
- Sept 17 - last day to drop courses
- Oct 11 - last day to withdraw with 50% refund
- Oct 25 - last day to withdraw without academic penalty

AUTHORIZATION

This course outline has been authorized by:

Linda Mason (Instructor)

Janet Lowndes, Chair

Date authorized

Guy Harmer, Dean

Date authorized.

Signed copies to be delivered to:
Instructor,
Office of the Registrar.

