Course Description

MATHEMATICS 20-3
MATH 20-3

5 credits, 16 weeks, 5 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:  Tuesday / Thursday  1.00 – 3.00;  Wednesday  1.00 – 2.00pm.

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 – Thursday (8.30 – 9.00; 12.00 – 12.30)  
Monday/Tuesday (3.00 -3.30pm)

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:**

<table>
<thead>
<tr>
<th>Module Assignments</th>
<th>70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

**KEYANO COLLEGE GRADING SCALE**

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

- 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*, or as included in the student package.

In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies…” (*KCCC, 2014/2015,*), 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.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATES</th>
<th>UNIT</th>
<th>TOPIC</th>
<th>TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &amp; 2</td>
<td>Sept 2 - 12</td>
<td>1</td>
<td><strong>Slope and Rate of Change.</strong> Rise over Run; Grade, Angle of Elevation and Distance; Rate of Change.</td>
<td>Sept 12th</td>
</tr>
<tr>
<td>3 - 5</td>
<td>Sept 15 – Oct 3</td>
<td>2</td>
<td><strong>Graphical Representations.</strong> Broken Line Graphs; Bar Graphs; Histograms; Circle Graphs.</td>
<td>Oct 3rd</td>
</tr>
<tr>
<td>6 - 8</td>
<td>Oct 6 - 22</td>
<td>3</td>
<td><strong>Surface Area, Volume and Capacity.</strong> Surface Area of Prisms; Surface Area of Pyramids, Cylinders, Spheres &amp; Cones; Volume and Capacity of Prisms &amp; Cylinders; Volume &amp; Capacity of Spheres, Cones &amp; Pyramids.</td>
<td>Oct 22nd</td>
</tr>
<tr>
<td>8 - 9</td>
<td>Oct 23 - 31</td>
<td>4</td>
<td><strong>Trigonometry of Right Triangles.</strong> Solving for Angles, lengths and Distances; Solving Complex Problems in the Real World.</td>
<td>Oct 31st</td>
</tr>
<tr>
<td>10-12</td>
<td>Nov 3 - 18</td>
<td>5</td>
<td><strong>Scale Representations.</strong> Scale Drawings and Models; 2-D Representations; 3-D Representations.</td>
<td>Nov 18th</td>
</tr>
<tr>
<td>12 -13</td>
<td>Nov 19 - 28</td>
<td>6</td>
<td><strong>Financial Services.</strong> Choosing an Account; Simple and Compound Interest; Credit Cards &amp;</td>
<td>Nov 28th</td>
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<tr>
<td>Store Promotions; Personal Loans, Lines of Credit &amp; Overdrafts.</td>
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<td>---------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>14 &amp; 15</strong></td>
<td>Dec 1 - 12</td>
<td>7</td>
<td><strong>Personal Budgets.</strong> Preparing to Make a Budget; The Budgeting Process; Analyzing a Budget.</td>
<td>Dec 12th</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td>Dec 15 - 19</td>
<td><strong>Final Exam Week</strong></td>
<td>Monday Dec 15th</td>
<td></td>
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</tbody>
</table>

**Please Note:**

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

**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.

**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
MATH 20-3_Section M_Fall_2014_Outline.

AUTHORIZATION

This course outline has been authorized by

_____________________________________________________
Linda Mason  (Instructor)  

_____________________________________________________
Lisa Turner, Chair  Date authorized

_____________________________________________________
Guy Harmer, Dean School of Arts, Science, Business & Education,  Date authorized.

Signed copies to be delivered to;  
Instructor,  
Office of The Registrar.