Foundations of College Mathematics, Grade 11
MBF3C1

Course Description:
This course enables students to broaden their understanding of mathematics as a problem-solving tool in the real world. Students will extend their understanding of quadratic relations; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; develop their ability to reason by collecting, analyzing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Textbooks & Resources:
- Growing Success: Assessment, Evaluation and Reporting in Ontario Schools
- The Ministry Curriculum, Grades 11 & 12: Mathematics, 2007 (revised)
- TIPS4RM, Ontario Mathematics Coordinators Association
- Pearson Math 11 (Replacement Cost: $85.00)

Course Evaluation: Student Evaluation consists of three components...

1) Learning Skills & Work Habits:
Students are evaluated on 6 Learning Skills & Work Habits. They are:
- Responsibility
- Organization
- Independent Work
- Collaboration
- Initiative
- Self-Regulation
These six attributes are evaluated on a scale of Excellent (E), Good (G), Satisfactory (S) & Needs Improvement (N) and reported on the report card. They are not included in the course mark, unless specified in the curriculum expectations.

2) Term Mark (Assessment of Learning):
Student performance standards for knowledge and skills are described in the curriculum Achievement Chart. The curriculum is assessed in four categories:
- Knowledge and Understanding 35%
- Thinking and Inquiry 15%
- Communication 15%
- Application 35%
Evaluation of these four categories generates the term mark. The term mark accounts for 70% of the final mark.

It is the student’s responsibility to submit evidence of learning.

3) Final Evaluation (Assessment of Learning):
The final evaluation, administered at or towards the end of the course is based on the evidence shown to the right. The final evaluation accounts for 30% of the final mark.
The final evaluation consists of:
- Summative Evaluation 15%
- Exam 15%

Final Mark = 70% Term Mark + 30% Final Evaluation

For a detailed description on Course Evaluation, see “How Did I Get That Mark!” at www.satec.on.ca

Course Conduct Policies: See Student Agenda.

Please retain this page in the front of your notebook for future reference.
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## Course Outline:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>Approximate Length</th>
<th>Major Unit Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory Unit</td>
<td>Review from grades 9 and 10</td>
<td>1 week</td>
<td>none</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>Solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications.</td>
<td>2 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Quadratic Relations</td>
<td>Make connections between the numeric, graphical, and algebraic representations of quadratic relations, and use the connections to solve problems.</td>
<td>3.5 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Statistics</td>
<td>Solve problems involving one-variable data by collecting, organizing, analysing, and evaluating data.</td>
<td>2 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Probabilities</td>
<td>Determine and represent probability, and identify and interpret its applications.</td>
<td>2 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Exponential Relations</td>
<td>Demonstrate an understanding of exponents, and make connections between the numeric, graphical, and algebraic representations of exponential relations; describe and represent exponential relations, and solve problems involving exponential relations arising from real-world applications.</td>
<td>2.5 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Personal Finance</td>
<td>Compare simple and compound interest, relate compound interest to exponential growth, and solve problems involving compound interest; compare services available from financial institutions, and solve problems involving the cost of making purchases on credit; interpret information about owning and operating a vehicle, and solve problems involving the associated costs.</td>
<td>3 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Geometry</td>
<td>Represent, in a variety of ways, two-dimensional shapes and three-dimensional figures arising from real-world applications, and solve design problems.</td>
<td>2 weeks</td>
<td>assignments, tests, and quizzes</td>
</tr>
<tr>
<td>Summative</td>
<td>An overall summative project accountable for 15% of the course grade.</td>
<td>3 days</td>
<td>Project</td>
</tr>
</tbody>
</table>

*Note: The order of the units of study may change due to student needs and resources available during the course.*
Course Profile (Page 3)

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General Information:

Mathematics continually builds on previous lessons. Hence, daily attendance is important. Students are responsible for catching up on missed lessons and work.

It is expected that all students will write tests as a class group. If a student is unable to write the evaluation with the class, then the student must inform the teacher at least two school days in advance of the test so that alternate arrangements can be made.

Students who are absent on the day of the test due to illness or a family emergency must have their parents phone the math office at 416 396-3365 x20245 on the day of the test explaining why they will be absent. (Doctor's notes will be required from students who miss more than one scheduled test.) Alternate arrangements will be made for these students to write the test.

Students missing their tests or assignment deadlines due to unexplained absences will receive a mark of zero.

For more information on the missed test/assignment policies, please see the agenda.

This course meets Environment and ICT SHSM program requirements.