

Waterloo-Oxford District Secondary School  
Mathematics Department

**Student Course Outline: MFM 2PI 2019-2020 Semester 2**

**Textbook**     Foundations of Mathematics 10: McGraw-Hill Ryerson                      (Replacement Cost \$100)

**Teachers**

Mrs. L. Bender                      ✉ lesley\_bender@wrdsb.ca                      <https://teachers.wrdsb.ca/bender>  
Mr. D. Vanhouwelingen           ✉ dustin\_vanhouwelingen@wrdsb.ca           <http://vanhouwelingen.pbworks.com>

**Units of Study**

Unit	Title	Essential Skills
0	Review of Prerequisite Skills	<ul style="list-style-type: none"> <li>Review of Integers, Fractions and Rounding</li> </ul>
<b>PART A: MODELLING LINEAR RELATIONSHIPS</b>		
1	Solving Linear Equations	<ul style="list-style-type: none"> <li>Solve multi-step first degree equations with integral coefficients.</li> <li>Solve first degree equations with fractional coefficients.</li> <li>Use substitution to solve for a variable in an equation.</li> <li>Solve equations involving proportions algebraically.</li> </ul>
2	Graphing Linear Relations	<ul style="list-style-type: none"> <li>Determine the significance of <math>m</math> and <math>b</math> in the equation <math>y = mx + b</math>.</li> <li>Graph lines by hand using table of values, slope and <math>y</math>-intercept or using <math>x</math> and <math>y</math>-intercepts.</li> <li>Determine the equation of a line from a graph or information.</li> <li>Rearrange the equation of a line from <math>Ax + By + C = 0</math> to <math>y = mx + b</math>.</li> <li>Use the slope formula to calculate slope.</li> </ul>
3	Solving Linear Systems	<ul style="list-style-type: none"> <li>Solve a system graphically.</li> <li>Solve a system using the method of elimination.</li> <li>Solve a system using the method of substitution.</li> <li>Write a system of equations from a description of a real-world situation.</li> </ul>
<b>PART B: MEASUREMENT &amp; TRIGONOMETRY</b>		
4	Measurement	<ul style="list-style-type: none"> <li>Perform everyday unit conversions.</li> <li>Calculate the surface area of prisms, cylinders, pyramids, cones and spheres.</li> <li>Calculate the volume of prisms, cylinders, pyramids, cones and spheres.</li> </ul>
5	Similar Triangles	<ul style="list-style-type: none"> <li>Determine lengths of sides of similar triangles using proportional reasoning.</li> </ul>
6	Trigonometry	<ul style="list-style-type: none"> <li>Use Pythagorean Theorem to solve for unknown sides in right triangles.</li> <li>Use trigonometry ratios to determine the measures of sides and angles in right triangles.</li> </ul>
<b>UNIT C: IDENTIFYING CHARACTERISTICS OF QUADRATIC RELATIONS</b>		
7	Simplifying Quadratic Expressions	<ul style="list-style-type: none"> <li>Expand and simplify the product of two binomials.</li> <li>Common factor.</li> <li>Factor a difference of squares.</li> <li>Factor simple trinomials.</li> </ul>
8	Graphing Quadratic Relations	<ul style="list-style-type: none"> <li>Graph from a table of values, including sketching the curve or the curve of best fit.</li> <li>Identify the key features of the graph of a parabola (from the graph or from the equation).</li> <li>Identify the <math>x</math> and <math>y</math>-intercepts from <math>y = ax^2 + bx + c</math> or <math>y = (x - r)(x - s)</math>.</li> </ul>
9	Solving Quadratic Word Problems	<ul style="list-style-type: none"> <li>Solve problems by interpreting graphs of quadratic relations</li> </ul>

**Reporting**

Parent-Teacher Interviews: April 8, 2020

Progress Reports: April 27, 2020 and July 6, 2020

Parents are encouraged to contact the teacher whenever they have a concern or question.

## Evaluation

Content (Assignments, Quizzes, Cumulative Tests).....	70%
In-Class Examination (Attendance Mandatory).....	10%
Final Examination (Scheduled during June Exam Period).....	20%

## Supplies (Mandatory for every class!)

Three ring binder with paper.

Pencils, erasers, pens and ruler.

Scientific Calculator: must have trigonometric functions: (sin, cos, tan).

**Please Note: iPods, cell phones and other electronic storage devices may not be used in class or during evaluations as a calculator.**

Graph paper: you may purchase this from your teacher when graphing units arise.

## Expectations

Food/Drink: There is no food or drink (except water) allowed in the classroom.

Homework: Mathematical skills are developed in the classroom and strengthened with homework. Homework must be completed daily. If you have trouble completing your homework or understanding a topic, see your teacher for extra help. Do not let difficulties drag on until the end of a unit.

Attitude: Come to class with a positive attitude. Be diligent in your work, attentive during lessons, volunteer ideas, ask questions and work quietly and cooperatively. Come prepared with all required materials, be on time and be prepared to work for the entire period. Work to the best of your ability and respect the rights of others to learn.

Absences: The Waterloo-Oxford District Secondary School policy states that all students are expected to attend all classes and arrive on time. Excessive absences may contribute, directly or indirectly, to the student losing the credit. When the bell rings students should be in their seats ready to begin class. If a student arrives late he/she should sit down quietly and join the class.

Please make sure that you check your WRDSB email account and our course website to get caught up on any material you might have missed while you were away.

Missed

Quizzes/Tests: Students are expected to write missed quizzes/tests on the first day back to school. See your teacher to write your test.

In the event that the student does not take responsibility to write the test (as stated above), his/her teacher will:

- speak with the student to negotiate a new test date.
- communicate with the student's parent or guardian about the missed test.

Tests not completed after the negotiated date will be designated as incomplete. The essential learning skills required for this test will still need to be demonstrated and the teacher will use his/her professional judgment to determine an appropriate mark.

Extra Help: I am happy to provide extra help as needed. Please speak with me to arrange a time that works with both our schedules.