# *Course of Study:  _Principles of Mathematics_10_*

| Academic Year: | 2019 - 2020 | Teacher Name: | |
|---|---|---|---|
| Department: | Mathematics | Department Head: | S. Burtch |
| Date developed:  June 2009 | | Revised:       June 2015 | |
| **Course Title** | Principles of Mathematics | **Course Code** | MPM2D1/3 |
| **Prerequisite** | Principles of Mathematics, Grade 9, Academic | **Grade** | 10 |
| **Level** | Academic | **Credit Value** | 1.0 |

| Course Description |
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| **Ontario Ministry of Education Document:** |
| This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems. |
| **Textbook:  MathPower 10 – McGraw-Hill Ryerson** |

| Instructional Strands/Units | | |
|---|---|---|
| *Strand/Unit Titles* | *Approx. Time Spent* | *Overall Expectations/Unit Description* |
| Quadratic Relations of the Form $y = ax^2 + bx + c$ | 3 Months | • determine the basic properties of quadratic relations;<br>• relate transformations of the graph of $y = x2$ to the algebraic representation $y = a(x - h)2 + k$;<br>• solve quadratic equations and interpret the solutions with respect to the corresponding relations;<br>• solve problems involving quadratic relations. |

| Instructional Strands/Units  (Cont'd) | | |
|---|---|---|
| *Strand/Unit Titles* | *Approx. Time Spent* | *Overall Expectations/Unit Description* |
| Analytic Geometry | 3 Months | • model and solve problems involving the intersection of two straight lines; <br>• solve problems using analytic geometry involving properties of lines and line segments; <br>• verify geometric properties of triangles and quadrilaterals, using analytic geometry. |
| Trigonometry | 3 Months | • use their knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity; <br>• solve problems involving right triangles, using the primary trigonometric ratios and the Pythagorean theorem; <br>• solve problems involving acute triangles, using the sine law and the cosine law. |

| Student Evaluation Criteria | | | |
|---|---|---|---|
| **Term Work** | | **Culminating Activities** | |
| *Categories* | | | |
| Knowledge/Understanding (K/U) | 20% | Final Exam | 20% |
| Inquiry/Thinking (T/I) | 15% | Culminating Activity | 10% |
| Communication (C) | 15% | | |
| Application  (A) | 20% | | |
| *Term Total  70%* | | *Culminating Activity Total  30%* | |

| | First Report | Second Report | Interim Report | Final Report |
|---|---|---|---|---|
| **Report Cards** | Nov 24, 2017 | Feb 13, 2018 | Apr 19, 2018 | Jun 28, 2018 |
| **Parent/Teacher Interviews** | Nov 30, 2017 | Feb 15, 2018 | | |

| Assessment of Learning Skills |
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| *The 6 learning skills: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self Regulation, will be assessed using a variety of techniques including, but not limited to, homework checks, group work/research, class involvement, cooperative activities and independent work* |

| Assessment and Evaluation Tools | | |
|---|---|---|
| *Knowledge/Understanding* | *Thinking/Inquiry and Application* | *Communication* |
| Quizzes | Investigations | Discussions |
| Tests | Projects | Participation |
| In-Class Assignments | Problem Solving | Written and oral communication of mathematical ideas |
| Homework | Real-World Applications | |
| | Explorations | |
| | Word Problems | |

| Communication | |
|---|---|
| *Parents* | *Contact the Math department at 393-1790 ext. 20038* |
| *Students* | *Contact your teacher in person Check your googleclassroom site* |
| *Extra help* | *Mornings 8-8:30 Lunch Tues and Thursday Or please make an arrangement with me* |
| *School Website* | *http://schools.tdsb.on.ca/OakwoodCl* |

### *Success Plan*

1. **Come to class every day, on time, with a pencil, eraser, ruler , scientific calculator and binder.**
2. **Listen to, and participate in, the lesson.**
3. **Complete the work assigned in class.**
4. **Ask for help when you need it.**
5. **Help your classmates.**
6. **Complete all evaluations to the best of your ability.**

### *Textbooks*

*Students will be issued a textbook for use during the school year and are expected to bring it to class each period.  Replacement cost $80*

### *Evaluation*

*Evaluation takes a balanced approach (see above) to the 4 categories of achievement (K/U, T/I, C, A) and blends these so that most evaluation tasks include 2 or more of the categories.  For purposes of simplification, the final mark will be calculated as follows:*

*Course Work, including: Tests, Quizzes, Assignments, etc.*          *70%*
*(K/U, C, A)*

*Culminating Activities (incl. Final Exam)*          *30 %*
*(K/U, T/I, C, A)*

*Teachers will communicate to students the approximate value of assignments and their placement in the evaluation chart.*

### **Attendance, Punctuality and Work Habits**

**It is expected that students arrive punctually to all classes and that attendance is regular.  When students are absent, it is the responsibility of the student to find out what was missed.  This should be done at an appropriate time such as before school on the date of return.  Students are not to disrupt the learning of others by catching up on missed work during class.  This includes requests for missed/lost handouts. All such matters should be dealt with before class commences.**

**Homework will be assigned on a regular basis.  Students are expected to demonstrate initiative and self-direction in their approach to homework.  Failure to do homework will adversely affect a student's ability to achieve high marks.**

## Coursework – Tests, Assignments, etc.

Students are expected to write tests/quizzes on the set date. Students must make arrangements with the teacher in advance of the test date if they know that they will be away. In such cases, the student is expected to make arrangements with their teacher to make up the missed evaluation. If students are absent for an officially recognized excuse, they must present documentation and the teacher will set a date for an alternative test to be written.

Assignments – each assignment has a due date. Assignments are due at the start of the period on the due date, unless otherwise specified. Late assignments will be accepted until the ultimate due date. This is usually the date on which marked assignments are returned. After this date, assignments may not be submitted and the student will receive a zero. Teachers may use a variety of techniques to encourage students to submit late work. This may include, if necessary, a mark reduction of 10%.

## Exams and Culminating Activities

Exams and culminating evaluations must be done on the due date. It is usually not possible to reschedule these evaluations or to provide alternative assignments. Therefore a mark of zero will be assigned unless suitable documentation (medical certificate, etc.) is received. In such cases, the teacher, in consultation with colleagues and the administration, will determine an appropriate mark.

*Course:*

*Teacher:*
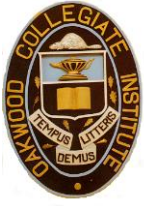
**COURSE:**  _____

**TEACHER:** _____

**Please acknowledge that you have read this outline:**

| | |
|---|---|
| *Date:* | **Parent Signature** |
| *Date:* | **Student Signature** |
| | |

Please return this to                       by