Teacher: Mrs. Major

Prerequisite Course: Foundations of Mathematics, Grade 10, Applied

Description and Overall Expectations: 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, analysing, 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.

Math Processes: The mathematical processes will be integrated into student learning throughout the course and include: problem-solving, reasoning and proving, reflecting, selecting tools and computational strategies, connecting, representing, and communicating.

Mathematical Models: Make connections between the numeric, graphical, and algebraic representations of quadratic relations, and use the connections to solve problems; 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.

Personal Finance: 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.

Geometry and Trigonometry: represent, in a variety of ways, two-dimensional shapes and three-dimensional figures arising from real-world applications, and solve design problems; solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications.

Data Management: solve problems involving one-variable data by collecting, organizing, analysing, and evaluating data; determine and represent probability, and identify and interpret its applications.

Required Materials to meet with success in this course: Students should bring loose-leaf paper in a dedicated math binder, pencils, eraser, ruler. The TI-Nspire CAS APP for iPad is strongly recommended, however a TI-Nspire handheld or a handheld scientific calculator is also appropriate.

Catholic Graduate Expectations: Our goal for all students is to experience an education based on our Catholic Graduate Expectations. We work in community to develop graduates that are:
- Discerning Believers Formed in the Catholic Faith Community
- Effective Communicators
- Reflective and Creative Thinkers
- Self-Directed, Responsible, Life-Long Learners
- Collaborative Contributors
- Caring Family Members

Responsible Citizens   http://www.iceont.ca

Assessment, Evaluation and Reporting: The primary purpose of assessment and evaluation is to improve student learning. Students will understand what is expected of them, using learning goals, and success criteria, based on the overall expectations. Feedback (self, peer, teacher) supports learning, and plays a critical role in academic achievement and success.

The development of learning skills and work habits is a key indicator of future success. The following learning skills and work habits will be developed, assessed, and reported during this course:

1. Responsibility	fulfills responsibilities and commitments *(e.g. accepts and acts on feedback)*
2. Organization	manages time to complete tasks and achieve goals *(e.g. meets goals, on time)*
3. Independent work	uses class time appropriately to complete tasks *(e.g. monitors own learning)*
4. Collaboration	works with others, promotes critical thinking *(e.g. provides feedback to peers)*
5. Initiative	demonstrates curiosity and an interest in learning *(e.g. sets high goals)*
6. Self-Regulation	sets goals, monitors progress towards achieving goals *(e.g. sets, reflects goals)*

Group work supports collaboration, an important 21st century skill. This will be assessed only as a learning skill. Homework may also be assessed as a learning skill. Evaluation completed in class will be based only on individual student work. Regular attendance is important to support group work, various forms of feedback, and to allow students to demonstrate evidence of their learning. Students are responsible for providing evidence of their own learning (with references where required), in class, within given timelines. Next steps in response to academic integrity issues, such as lack of work completion, plagiarism, or other forms of cheating, range from providing alternate opportunities, to a deduction of marks.

The achievement chart identifies four levels, based on achievement of the overall expectations:

Level 1	achievement falls below the provincial standard	(50-59%)
Level 2	achievement approaches the provincial standard	(60-69%)
Level 3	achievement is at the provincial standard	(70-79%)
Level 4	achievement surpasses the provincial standard	(80-100%)

The report card grade will be based on evidence of student performance, including observations, conversations and student products. Consideration will be given to more recent evidence (skill development) and the most consistent level of achievement.

Mark Breakdown:

Term Work (70%) will include a variety of assessments designed to demonstrate students' development in their knowledge and understanding, thinking and inquiry, communication and application, of all overall expectations.

Summative evaluation (30%) takes place towards the end of the semester, is completed in class, and provides the final opportunity for students to demonstrate what they know, and the skills they have learned, based on the overall expectations. In Foundations for College Math 3C, the summative evaluation will consist of a rich summative assessment task (15%) and a final exam (15%).

Awarding of Course Credit: Students who demonstrate evidence of achievement of overall expectations, **and** earn a mark of 50% or greater, will earn one credit for the course with the following exception:

Students who do not complete their summative evaluation (exam and/or end of year summative task) will not earn their credit regardless of their mark.

Student and Parent/Guardian Acknowledgement

We have read the above course outline and are aware of the student responsibilities to attend class on a regular basis and to provide evidence of learning within the established timelines.

Student's Name (print): _____	Student's Signature: _____

Parent/Guardian Name (print):_____	Parent/Guardian Signature: _____