OTTAWA CATHOLIC SCHOOL BOARD	**St. Peter Catholic High School** **Grade 12 Foundations for College Mathematics MAP4C** **2019-2020**	DEDICATED TO EXCELLENCE ST. PETER CATHOLIC HIGH SCHOOL

Teacher: Mrs. Saunders & Mr. Couturier

Prerequisite Course: Foundations for College Mathematics, College Preparation (MBF3C), or Functions and Applications, Grade 11, University/College Preparation (MCF3M).

Description and Overall Expectations: This course enables students to broaden their understanding of real-world applications of mathematics. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for college programs in areas such as business, health sciences, and human services, and for certain skilled trades.

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: evaluate powers with rational exponents, simplify algebraic expressions involving exponents, and solve problems involving exponential equations graphically and using common bases; describe trends based on the interpretation of graphs, compare graphs using initial conditions and rates of change, and solve problems by modelling relationships graphically and algebraically; make connections between formulas and linear, quadratic, and exponential relations, solve problems using formulas arising from real-world applications, and describe applications of mathematical modelling in various occupations.

Personal Finance: demonstrate an understanding of annuities, including mortgages, and solve related problems using technology; gather, interpret, and compare information about owning or renting accommodation, and solve problems involving the associated costs; design, justify, and adjust budgets for individuals and families described in case studies, and describe applications of the mathematics of personal finance.

Geometry and Trigonometry: solve problems involving measurement and geometry and arising from real-world applications; explain the significance of optimal dimensions in real-world applications, and determine optimal dimensions of two-dimensional shapes and three-dimensional figures; solve problems using primary trigonometric ratios of acute and obtuse angles, the sine law, and the cosine law, including problems arising from real-world applications, and describe applications of trigonometry in various occupations.

Data Management: collect, analyse, and summarize two-variable data using a variety of tools and strategies, and interpret and draw conclusions from the data; demonstrate an understanding of the applications of data management used by the media and the advertising industry and in various occupations.

Course Resources: Key resource(s) along with supplementary resources / digital tools and sites / passwords; include replacement cost for resources if lost/damaged.

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

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 4C, 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: _____