



# CARDINAL LEGER CATHOLIC SECONDARY SCHOOL

75 Mary Street  
 Brampton, Ontario L6W 3K5  
 905-453-2232

*We believe that each one, created in the image and likeness of God, is called by name into the Dufferin-Peel community to realize the Ontario Catholic School Graduate Expectations to the fullest extent possible as we all journey from the early years to vocation.*

## COURSE OUTLINE

<b>Department:</b>	Mathematics
--------------------	-------------

<b>Course:</b>	Grade 12 College Mathematics
----------------	------------------------------

<b>Course Code:</b>	MAP4C1
---------------------	--------

<b>Common Course Calendar</b>	<b>Course Description:</b>
	<p>This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyse data using statistical methods; solve problems involving applications of geometry and trigonometry; solve financial problems connected with annuities, budgets, and renting or owning accommodation; simplify expressions; and solve equations. 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.</p> <p>This course will help students address the Ontario Catholic School Graduate Expectation that they adopt a holistic approach to life by integrating learning from various subject areas and experience.</p>

Ministry/ICE Curriculum Documents	Strand/Unit Title	Corresponding Catholic Graduate Expectation Indicators for each Strand/Unit
	<p><b>Mathematical Models</b>            By the end of this course, students will:</p> <ol style="list-style-type: none"> <li>1. evaluate powers with rational exponents, simplify algebraic expressions involving exponents, and solve problems involving exponential equations graphically and using common bases;</li> <li>2. 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;</li> <li>3. 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.</li> </ol>	<p><b>- Integrates learning from various subject areas and experiences</b></p>

	<p><b>PERSONAL FINANCE</b></p> <p>By the end of this course, students will:</p> <ol style="list-style-type: none"> <li>1. demonstrate an understanding of annuities, including mortgages, and solve related problems using technology;</li> <li>2. gather, interpret, and compare information about owning or renting accommodation, and solve problems involving the associated costs;</li> <li>3. design, justify, and adjust budgets for individuals and families described in case studies, and describe applications of the mathematics of personal finance. the development of mathematical models</li> </ol>	<p>- <b>Thinks critically about the meaning and purpose of work.</b></p>
	<p><b>GEOMETRY AND TRIGONOMETRY</b></p> <p>By the end of this course, students will:</p> <ol style="list-style-type: none"> <li>1. solve problems involving measurement and geometry and arising from real-world applications;</li> <li>2. explain the significance of optimal dimensions in real-world applications, and determine optimal dimensions of two-dimensional shapes and three-dimensional figures;</li> <li>3. 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</li> </ol>	<p>- <b>Applies effective communication, decision-making, problem-solving, time and resource management skills.</b></p>
	<p><b>DATA MANAGEMENT</b></p> <p>By the end of this course, students will:</p> <ol style="list-style-type: none"> <li>1. collect, analyse, and summarize two-variable data using a variety of tools and strategies, and interpret and draw conclusions from the data;</li> <li>2. demonstrate an understanding of the applications of data management used by the media and the advertising industry and in various occupations</li> </ol>	<p>- <b>thinks reflectively and creatively to evaluate situations and solve problems</b></p>

### Assessment and Evaluation:

Category Weightings	Weight %
Knowledge/Understanding	30
Thinking	20
Application	30
Communication	20

Assessments	% of Grade
Term Work	70%
Culminating Task	10%
Final Exam	20%

### Learning Skills and Work Habits

E= Excellent G=Good S=Satisfactory N= Needs Improvement

Responsibility	<ul style="list-style-type: none"> <li>• Fulfills responsibility and commitments.</li> <li>• Takes responsibility for and manages own behavior.</li> </ul>
Organization	<ul style="list-style-type: none"> <li>• Devises and follows a plan and process for completing tasks.</li> <li>• Establishes priorities and manages time</li> </ul>
Independent Work	<ul style="list-style-type: none"> <li>• Independently monitors, assesses, and revises plans to complete tasks and meet goals.</li> <li>• Uses class time to complete tasks.</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>• Accepts various roles and an equitable share of work in a group.</li> <li>• Builds healthy peer-to-peer relationships.</li> </ul>
Initiative	<ul style="list-style-type: none"> <li>• Looks for and acts on new ideas and opportunities.</li> <li>• Approaches new tasks with a positive attitude.</li> </ul>
Self-Regulation	<ul style="list-style-type: none"> <li>• Sets own goals and monitors progress towards achieving them.</li> <li>• Seeks clarification or assistance when needed.</li> </ul>

