CROCUS PLAINS REGIONAL SECONDARY SCHOOL
COURSE OUTLINE AND ASSESSMENT GUIDE

Applied Mathematics 40S (MAD40S)

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Course Description: Grade 12 Applied Mathematics (40S) is a continuation of studies intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem solving techniques as they relate to the world around us.

Text/Other Resources: Foundations of Mathematics 12 (Nelson)

Unit Title	Learning Outcomes *It is expected that students will:*	Proposed Time
Set Theory & Logic	• 12A.L.1. Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies. • 12A.L.2. Solve problems that involve the application of set theory. • 12A.L.3. Solve problems that involve conditional statements.	8 days
Counting Methods	• 12A.P.4. Solve problems that involve the fundamental counting principle. • 12A.P.5. Solve problems that involve permutations. • 12A.P.6. Solve problems that involve combinations.	10 days
Probability	• 12A.P.1. Interpret and assess the validity of odds and probability statements. • 12A.P.2. Solve problems that involve the probability of mutually exclusive and non–mutually exclusive events. • 12A.P.3. Solve problems that involve the probability of independent and dependent events.	12 days
Polynomial & Exponential Functions	• 12A.R.1. Represent data, using polynomial functions (of degree of 3, to solve problems. • 12A.R.2. Represent data, using exponential and logarithmic functions, to solve problems.	10 days
Sinusoidal Functions	• 12A.R.3. Represent data, using sinusoidal functions, to solve problems.	8 days

Financial Mathematics	• 12A.FM.1. Solve problems that involve compound interest in financial decision making.
	• 12A.FM.2. Analyze costs and benefits of renting, leasing and buying.
	• 12A.FM.3. Analyze an investment portfolio in terms of:
	  • interest rate
	  • rate of return
	  • total return.
		12 days

Design & Measurement	• 12A.D.1. Analyze objects, shapes and processes to solve cost and design problems.	8 days

Academic Achievement

Grades will be calculated on summative assessment information only. The final calculation will be a fair reflection of a student's achievement of the learning outcomes.

Term Work..... 80%

- **Assessment Activities & Projects..... 20%**
- **Tests 60%**

Final Assessment..... 20%

- **Provincial Standards Exam ..... January or June**