

Earl of March Secondary School
Foundations for College Mathematics, Grade 12, College Preparation (MAP4C)
Revised: March 2021

Course Description:

This course is designed primarily for students with a credit in Foundations for College Mathematics, Grade 11, College Preparation, MBF3C, although there are other pathways. 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.

Curriculum: The major strands and the overall expectations for the course are summarized below.

To learn more about the curriculum follow this [link](#).

By the end of the course students will. . .

A. 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.

B. 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.

C. 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.

D. 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.

Earl of March Homework Policy - Helping Learning “Stick”

Learning requires a sincere commitment to work and study. Choosing to do homework is an essential part of a student’s educational development. Homework helps students improve their academic and study skills, and is critical in the reinforcement of ideas and concepts presented in class. Also, homework helps students develop responsibility, independence, perseverance, time management skills and curiosity. The Ontario Curriculum emphasizes that there is a direct relationship between effort and student achievement. Homework will be assigned to students based upon reasonable expectations, and with the understanding that many students are involved in a variety of worthwhile activities outside of the school setting.

Assessment Strategies

A variety of teaching/assessment strategies to address students' needs will be used during this course. Formative assessments will be ongoing throughout the academic year and students will receive descriptive feedback intended to help them improve their learning. The chart below outlines levels with their descriptors. Levels will be used when assigning marks in this course.

Level	Descriptors
R: not a passable level of achievement	Insufficient demonstration of understanding
1: much below the provincial standard	Limited understanding, weak, lacking purpose
2: approaching the provincial standard	Some understanding, simplistic, somewhat purposeful
3: the provincial standard	Considerable understanding, solid, standard, purposeful, effective
4: surpassing the provincial standard	Consistent, thorough understanding, in depth, insightful to a purpose, efficient

Evidence of Student Achievement

Students may demonstrate their understanding of the course material in a wide variety of ways. Evidence of student achievement may come from observations, conversations, and students products. Student products may include tests, assignments, performance tasks, and examinations. A balanced combination of a student's Knowledge and Understanding, Thinking, Communication, and Application will be assessed. These 4 categories will not be separately evaluated. Instead, they will be *"considered as interrelated, reflecting the wholeness and interconnectedness of learning."* – from the Ontario Ministry of Education curriculum documents.

Source of Evidence	Description	
Observations	The teacher may record evidence of student achievement observed as students work on investigations in class.	
Conversations	The teacher may record evidence of student achievement elicited during a conversation with a student	
P r o d u c t s	Tests	There will be major unit tests.
	Assignments	Students may complete in-class assignments.
	Tasks	Students may demonstrate their creativity, knowledge and understanding of the material through in-class performance tasks.
	Summative Task	Students will show evidence of their learning by performing a district-wide task in class that will include many overall expectations of the course.
	Final Examination	There is no final examination in this course.

How Can Parents Help?

First of all, don't panic if you have forgotten your high school math. You can support your children's learning without teaching them. Having a positive attitude towards learning in general and mathematics in particular can go a long way. Consider also that teenagers are often unaware that the pathway to "success" is rarely a straight line; sharing your own personal experiences of frustration and struggle, perseverance and accomplishment may help your child see his or her own experiences in a new way. Thirdly, why not take a look at some of the sites below and see what you think; the internet is full of resources!

1. This Ontario Ministry of Education [Student Success page](#) provides links for parents, students, teachers and employers.
2. [This PowerPoint presentation](#) is designed for parents of students of all ages. Many ideas, questions and links are provided although not all are focussed on secondary education.
3. A school in Ohio has produced some fun [videos](#) about math.
4. Starting to think about [careers](#)? Visit the link for career planning options.

If you have any questions, please feel free to contact your child's teacher.