

St. Clair Catholic District School Board
Student Information Sheet/ Outline of Course Study

School	Ursuline College Chatham
Department	Mathematics
Course Title	Foundations for College (MAP4C0)
Grade and Level	Grade 12, College Preparation
Credit	One full
Prerequisite	Grade 11 Mathematics College Preparation, or Grade 11 Functions, University/College Preparation (or Functions and Relations, Grade 11, University Preparation)
Textbook	College and Apprenticeship Mathematics 12 (Addison Wesley Book)
Teacher(s)	Mr. A. Seward, Mr. C. Parent, Mr. D. Kalp
Department Head	Mrs. M. Taylor-Joyes
Ministry Document	Mathematics Grade 11 and 12 (Revised 2007)
Date	September 2009/February 2010

Course Description

The course enables students to broaden their understanding of real-world applications of mathematics. Students will analyze 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 exponential expressions and solve exponential 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.

How this course supports the Ontario Catholic Graduate Expectations:

The following expectations from the Ontario Catholic Graduate Expectations will be stressed throughout the course: The graduate is expected to be: - An effective communicator who reads, understands and uses written materials effectively; - A reflective, creative and holistic thinker who thinks reflectively and creatively to evaluate situations and solve problems ; - A self-directed , responsible, lifelong learner who sets appropriate goals and priorities in school , work and personal life; - A collaborative contributor who works effectively as an independent team member; - A responsible citizen who accepts accountability for one's one actions.

How this course supports the competencies of Choices Into Action:

Career exploration activities through classroom experience (page 19, Choices into Action)

1) Expectations regarding Learning Skills

It is expected that students will demonstrate the following:

(this is not intended to be an exhaustive list)

- Independent learning ability
- Team work ability
- Organizational skills on a daily basis
- Strong work habits during class time
- Completed homework and assignments
- Initiative in all areas of the course

Learning skills will be assessed according to criteria, which have been clearly communicated to students and will be reported separately from student achievement of the curriculum

expectations. The student's demonstrated learning skills in each course will be evaluated using the four-point scale, E- Excellent, G- Good, S- Satisfactory, N – Needs Improvement.

2) Overall expectations for student learning

Through this course, the student will be expected to demonstrate knowledge, skills and values related to the following strands:

<p>Unit 1: Working with One Variable Data</p> <ul style="list-style-type: none"> • Collect, analyze, and summarize data involving one variable using a variety of tools and strategies • Interpret and draw conclusions from one variable data situations that personalize the course and possible pathways for post-secondary careers • Distinguish situations requiring one-variable and two-variable data analysis • Analyze the use and misuse of data in the media 	<p>Unit 2: Working with Two Variable Data</p> <ul style="list-style-type: none"> • Collect, analyze , and summarize data involving two variables using a variety of tools and strategies • Interpret and draw conclusions from two variable data situations that personalize the course and possible pathways for post-secondary careers • Distinguish situations requiring one-variable and two-variable data analysis • Analyze the use and misuse of data in the media
<p>Unit 3: Exponential Computations</p> <ul style="list-style-type: none"> • Perform Exponential operations: including evaluation of powers with rational exponents, simplification of algebraic exponential expressions; and the solution of exponential equations both graphically and with common bases • Describe trends based on exponential graphs and the given properties and solve problems by modeling relationships graphically and algebraically. • Demonstrate and understanding of annuities, including mortgages, and solve related problems using technology 	<p>Unit 4: Renting, Owning and Designing Budgets</p> <ul style="list-style-type: none"> • Interpret and compare costs involved in owning and renting accommodation • Prepare budgets based on possible wages connected to career choice and case studies, based on fixed and variable costs
<p>Unit 5: Measurement and Geometry</p> <ul style="list-style-type: none"> • Perform unit conversions (imperial and metric) in a practical problems context • Consolidate an understanding of perimeter, area surface area and volume through real life problems • Explore the optimization of two and three dimensional figures 	<p>Unit 6: Trigonometry</p> <ul style="list-style-type: none"> • Solve problems using primary trig ratios of acute and obtuse triangles • Use the sine and cosine law to solve oblique triangles and problems from real-world applications
<p>Unit 7: Culminating Project</p> <ul style="list-style-type: none"> • Prepare a presentation to demonstrate an occupation that makes use of some aspect of the material from this course • Describe the education and training needed and the use of mathematics for the particular chosen occupation 	

3) Individual Education Plan

Whenever accommodations are made to address student learning needs, or alternative or modified expectations are identified for a student, these accommodations, modifications, or alternative expectations will be outlined in an IEP and will be communicated to parents.

4) Course breakdown & assessment and evaluation strategies

Unit title/Description	Suggested Timing
Working with One-Variable Data	10 periods
Working With Two Variable Data	10 periods
Exponential Computations	15 periods
Renting, Owning and Budgets	15 periods
Measurement and Geometry	13 periods
Trigonometry	14 periods
Culminating Project	5 periods
Summative Performance Tasks/Review	5 periods

5) Teaching/Learning Strategies

Instruction in this course will be evaluated according to the following breakdowns:
Group work, pairs activities, individual work, computers and graphical calculators.

6) Assessment and Evaluation

Student achievement of the learning expectations will be evaluated according to the following breakdowns:

Categories of Knowledge, Skills and Values	Weighting (%)	
	Term Evaluation (100%) Evaluation	Final
Knowledge & Understanding	45	Culminating
Thinking, Inquiry, Problem Solving	15	Assessment
Communication	15	And
Applications	25	Final Exam
BREAKDOWN OF FINAL MARK	70% of term mark	30%

7) School, department and classroom policies

- a) See student handbook for school rules
- b) **HOMEWORK** will be assigned almost every day. Depending on the topic, the time required to complete the assignment will vary, but at the grade twelve level the homework should require 30-35 minutes per night. To ensure success, any suggested homework assignments are to be completed for the beginning of the next class. The completion of assignments, neat and orderly notes, and routine correction of problems are essential for success.
- c) **REGULAR** and **PROMPT** attendance is required in order to be successful. If a student is absent it is their responsibility to make up for missed work. Notes should be copied from a reliable student, and homework exercises attempted. Extra help is available and can be arranged with the teacher.
- d) **TESTS AND ASSIGNMENTS MISSED OR LATE.** The reasons for the absence or late will be taken into account, but a mark of zero can be assigned to the student for circumstances that seem to warrant such a mark. Assignments not submitted within the stated time frame may be cause for the student's overall grade to fall to a lower level.

Every effort should be made to write the test at the scheduled time period. Below are some test and assignment procedures:

- i) If you know that you will be away for a scheduled test and/or assignment due date for some legitimate reason, inform your teacher and make alternate arrangements before you leave.
- ii) If a test is missed due to a legitimate or sudden absence, it will be written at a time determined by the teacher after consultation with the student. The usual date for writing the test would be the first day back after the absence. A note signed by the parent/guardian must support such legitimate absences.
- iii) As a general rule, there will be no make-up tests or assignments. If special circumstances warrant, make-up tests or assignments may be provided to students who have demonstrated that earlier difficulties have been corrected.

To the student, Parent(s) or Guardian(s):

We have read and understand this Students Information Sheet/Outline of Course of Study

Course Code: MAP 4CO (Grade 12 College and Apprenticeship Mathematics)

Student: _____

Date: _____

Parent/Guardian: _____

Date:
