



AMISKWACIY

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A C A D E M Y

# MATHEMATICS 10-3

## COURSE OUTLINE

Mathematics 10-3 is a 5 credit course and is the prerequisite course for Mathematics 20-3, followed by Mathematics 30-3. This course sequence is designed to provide students with the mathematical understanding and critical thinking skills identified for entry into the majority of trades and for direct entry into the workforce. Math 10-3 focuses on introductory finance, geometry, measurement, and trigonometry and on their relationship to everyday life.

### Distribution of Marks:

Module 1: Linear Measurement & Daily Living	12.5%
Module 2: Perimeter Area & Volume	12.5%
Midterm Exam	20%
Module 3: Angles, Triangles & Other Polygons	12.5%
Module 4: Trigonometry	12.5%
Final Exam	<u>30%</u>

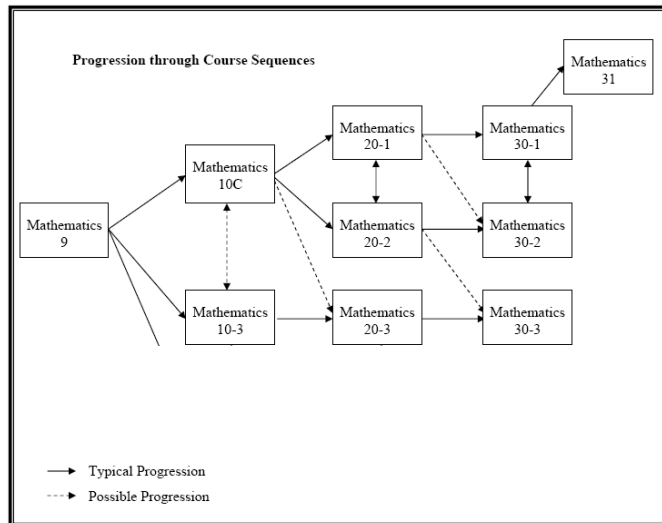
**TOTAL** **100%**

PLEASE NOTE: ALL assignments MUST BE completed and handed in. Work must be shown for all questions, including multiple choice.

Your teacher will explain what you need to do and when your assignments are due. BE SURE TO ASK FOR CLARIFICATION IF NEEDED!

## Math 10 Common MATH 10-C (MAT1791)

### Course Outline



Math 10C is a combined course, taking the place of Math 10 Pure and Math 10 Applied, and is intended on providing students with mathematical understandings and critical-thinking skills identified for entry into post-secondary programs. The design of the math course sequences is such that students successfully finishing Math 10C can go into either:

- Math 20-1 (for students entering post-secondary programs requiring the study of calculus)  
or
- Math 20-2 (for students entering post-secondary programs NOT requiring the study of calculus)

Students struggling throughout this course should speak to their teacher as it may be possible to switch to Math 10-3. If students are unsuccessful in Math 10C (<50%), students can also make a possible progression to Math 20-3.

**Prerequisite:** Grade 9 Math, recommended 50% or higher

**Materials:** Pearson: *Foundations and Pre-calculus Mathematics 10*

Graphing Calculator (TI-83 or TI-83 plus recommended)

**Time Commitment:** Students should be dedicated to their studies for duration of the 2.5 hour class period. If additional time is required by the student, they may need to take materials home or stay after school. If extra help is required outside of class time, please schedule it in advance with your teacher.

**Course Content:**

In this course, students will be expected to understand and analyze a variety of topics spread amongst 7 module assignments. In addition, there will be 3 Unit Exams and a cumulative Final Exam. The breakdown and distribution are as follows:

Module 1	Measurement	pages 4 – 67 (timeline: 1.5 week)
Module 2	Trigonometry	pages 70 – 127 (timeline: 1.5 week)
Unit 1 Exam		
Module 3	Factors and Products	pages 134 – 201 (timeline: 1.5 week)
Module 4	Roots and Powers	pages 204 – 249 (timeline: 1.5 week)
Unit 2 Exam		
Module 5	Relations and Functions	pages 256 – 329 (timeline: 1 week)
Module 6	Linear Functions	pages 332 – 391 (timeline: 1 week)
Module 7	Systems of Linear Equations	pages 394 – 455 (timeline: 1 week)
Unit 3 Exam		
Cumulative Final Exam		

**Weighting:**

Modules	40%
Unit Exams	30%
Final Exam	<u>30%</u>
	100%

# Math 20-1 Course Outline

Teacher: Ms. Matsuba

Text: McGraw-Hill Ryerson, Pre-Calculus II

**Prerequisite:** Math 10C with 50% or higher; usually taken when 30-1 is a university requirement

**Calculator:** TI-83 plus

The success you experience in this course is largely dependent on the **time and effort** you put into your daily assignments. Each module will take approximately 5 classes but this is subject to change. You will be given notice when each module is due.

It is important that you ask for help as soon as it's required and do not wait until it's too late.

## Course Content:

Module 1: Sequences and Series

Module 2: Trigonometry

Module 3: Quadratic Functions

Module 4: Quadratic Equations, Absolute Value, and Reciprocal Functions

Module 5: Radical Expressions and Equations

Module 6: Rational Expressions and Equations

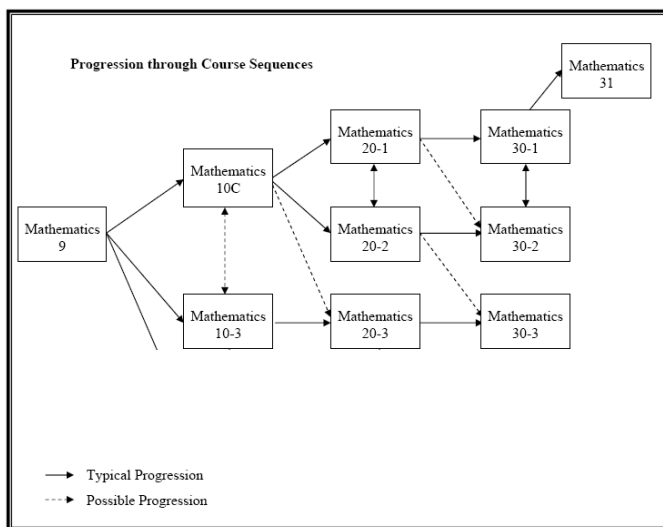
Module 7: Systems of Equations

Module 8: Linear and Quadratic Inequalities

Final Exam

## Math 20-2 (MAT2792)

### Course Outline



Math 20-2 takes the place of Applied Math 20 and is intended on providing students with mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that do not require the study of Calculus. Upon successful completion of this course, students can proceed to Math 30-2. Again this course is geared for students entering post-secondary programs NOT requiring calculus (i.e. Bachelor of Arts).

Students struggling throughout this course should speak to their teacher as it may be possible to switch to Math 20-3 course sequence. If students complete the course but are unsuccessful (between 40%-50%), students can also make a possible progression to Math 30-3.

**Prerequisite:** Math 10 Common, recommended 50% or higher

**Materials:** Nelson: *Principles of Mathematics 11*

Graphing Calculator (TI-83 or TI-83 plus recommended)

Access to a computer with internet

**Time Commitment:** Students should be dedicated to their studies for duration of the 2.5 hour class period. If additional time is required by the student, they may need to take materials home or stay after school. If extra help is required outside of class time, please schedule it in advance with your teacher.

**Course Content:**

In this course, students will be expected to understand and analyze a variety of topics spread amongst 8 module assignments. Within each module, a section of the course project will be included and will be totaled for a final project mark. In addition, there will be three Unit Exams and a cumulative Final Exam. The breakdown and distribution are as follows:

Module 1	Inductive & Deductive Reasoning	pages 2 – 65
Module 2	Properties of Angles & Triangles	pages 66 – 125
Unit 1 Exam		
Module 3	Acute Triangle Trigonometry	pages 126 – 171
Module 4	Radicals	pages 172 – 231
Module 5	Statistical Reasoning	pages 232 – 317
Unit 2 Exam		
Module 6	Quadratic Functions	pages 318 – 391
Module 7	Quadratic Equations	pages 392 – 439
Module 8	Proportional Reasoning	pages 440 – 513
Unit 3 Exam		
Cumulative Final Exam		

**Weighting:**

Modules	40%
Unit Exams	20%
Project	10%
Final Exam	<u>30%</u>
	100%

# MATHEMATICS 20-3

## COURSE OUTLINE

Mathematics 20-3 is a 5 credit course. The prerequisite course is Mathematics 10-3 or 10-C, followed then by Mathematics 30-3. This course sequence is designed to provide students with the mathematical understanding and critical thinking skills identified for entry into the majority of trades and for direct entry into the workforce. Math 20-3 focuses on developing numeric, spatial, algebraic, critical and statistical reasoning while solving problems involving: area, volume and capacity, rate of change, graphs, triangles, budgeting, and personal finance.

### Distribution of Marks:

Units:	70%
Unit 1: Slope and rate of Change	
Unit 2: Graphical Representations	
Unit 3: Surface Area, Volume, and Capacity	
Unit 4: Trigonometry and Scale Representations	
Unit 5: Financial Services	
Unit 6: Personal Budgets	
Final Exam	<u>30%</u>
TOTAL MARKS	100%

PLEASE NOTE: ALL assignments MUST BE completed and handed in. Work must be shown for all questions, including multiple choice.

Your teacher will explain what you need to do and when your assignments are due. BE SURE TO ASK FOR CLARIFICATION IF NEEDED!



## **MATERIALS:**

- Textbook: MathWorks 11, Pacific Educational Press

### **Unit 1          Slope and Rate of Change**

- Ch. 1 pp. 10 - 33

### **Unit 2          Graphical Representations**

- Ch. 2 pp. 54 - 101

### **Unit 3          Surface Area, Volume and Capacity**

- Ch. 3 pp. 114 - 148

### **Unit 4          Trigonometry of Right Triangles**

- Ch. 4 pp. 164 - 200

### **Unit 5          Scale Representations**

- Ch. 5 pp. 208 - 243

### **Unit 6          Financial Services**

- Ch. 6 pp. 252 - 288

### **Unit 7          Personal Budgets**

- Ch. 7 pp. 300 - 338

- **Unit Exam**