

# MATH 30-1 COURSE OUTLINE

**Instructor:** Mr. T. Bailey  
**Text:** Pre-Calculus 12, McGraw-Hill Ryerson

**School Phone:** 403-246-4771 ext. 4672

## **Objectives of the Course:**

### **“-1” Course Sequence**

This course sequence is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that require the study of calculus. Topics include algebra and number; measurement; relations and functions; trigonometry; and permutations, combinations and binomial theorem.

## **Units of Study**

### **Unit 1 (3 weeks): Transformations and Function Operations (Chapters 1 & 10)**

- Operations on Functions
- Reflections
- Inverses
- Translations
- Stretches

### **Unit 2 (4 weeks): Trigonometry (Chapters 4, 5, & 6)**

- Unit Circle
- Trig Ratios
- Trig Equations
- Trig Identities
- Graphs of Trig Functions
- Transformations

### **Unit 3 (3.5 weeks): Functions (Chapters 2, 3, & 9)**

- Radical Functions
- Square Root of a Function
- Polynomial Functions
- Factor Theorem
- Remainder Theorem
- Rational Functions

### **Unit 4 (3 weeks): Exponential & Logarithmic Functions (Chapters 7 & 8)**

- Exponential Functions
- Logarithmic Functions
- Transformations
- Solving Equations
- Laws of Logarithms

### **Unit 5 (1.5 weeks): Combinatorics (Chapter 11)**

- Permutations
- Combinations
- Binomial Theorem

## **Supplies Needed:**

- Notebook/binder, loose leaf paper, textbook, pencil (recommended), eraser, graphing calculator (TI-83+/TI-84), graph paper, laptop (for access to Moodle)

## Class Expectations:

How Will You **RISE** in Math 30-1?

**R – Responsibility** - At all times, you are responsible for your own effort and attitude and how you interact with others. Always treat classmates, staff, and our learning space with respect.

**I – Integrity** - Be someone who is worthy of trust and admiration.  
Work submitted as your own must be created entirely by you.  
Credit others where credit is due: this includes citing information used in your work and also crediting and thanking those who help you on your way.

**S – Strength** - One of the best ways to learn is to fail. Embrace this, learn, and try again.  
This building is full of caring people. Seek help and support when you need it – from friends, teachers, and counsellors.  
Understand that we all experience stress and problems. How we deal with them and overcome them demonstrates strength in our character.

**E – Excellence** - Excellence can never be achieved without a foundation of responsibility, integrity, and strength.  
Excellence is PERSONAL excellence. Your personal excellence may look very different than another person. Set realistic goals and strive to meet them.

### **Acceptable Standard (50-79%)**

Typically, these students have gained new skills and a basic knowledge of the concepts and procedures relative to the general and specific outcomes defined for Mathematics 20-1 in the program of studies. These students can apply this knowledge to a limited range of familiar problem contexts.

### **Standard of Excellence (80-100%)**

Typically, these students have gained a breadth and depth of understanding regarding the concepts and procedures, as well as the ability to apply this knowledge to a broad range of familiar and unfamiliar problem contexts.

## Procedures when Absent:

- from a regular class: You are responsible to obtain missed notes from another student or check the Moodle page
- from a quiz/assignment: Quizzes are formative assessment and will not count toward your final grade.
- from a unit exam: if the absence is excusable, you will be required to write the exam at the earliest possible date.

## Evaluation:

Unit tests	42%
Chapter 11 quiz	5.25%
Project	10.5%
Question Analysis	5.25%
Portfolio	7%
Diploma	30%