



NORTH TORONTO COLLEGIATE INSTITUTE

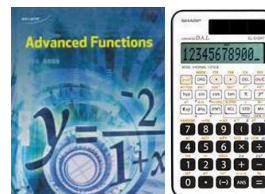
Mathematics Department

Telephone 416-393-9180, ext. 20080

Teacher: E. Xherro

Course Title	Course Code	Prerequisite
Advanced Functions, Grade 12, University	MHF4U	Functions, University, Grade 11 (MCR3U) Grade 12 Math for College Tech (MCT4C)

TEXTBOOK: Advanced Functions 12, published by Nelson in 2009 (Replacement Cost: \$135)



REQUIRED MATERIALS: Graph paper, notebook, writing utensils, and a scientific calculator.

The only approved calculator for tests, quizzes, and assignments is the SHARP EL-510

<https://www.staples.ca/products/437262-en-sharp-el510rtb-scientific-calculator-white>

COURSE DESCRIPTION

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

OVERALL EXPECTATIONS:

The course is organized into **4 strands**:

1. **Polynomial and Rational Functions**
2. **Trigonometric Functions**
3. **Exponential and Logarithmic Functions**
4. **Characteristics of Functions**

Specifically, the course overview breaks these strands into their subgroups:

1. **Polynomial Functions**
2. **Polynomial Equations and Inequalities**
3. **Rational Functions and Equations**
4. **Trigonometric Functions in Radian Measures**
5. **Trigonometric Identities and Equations**
6. **Exponential and Logarithmic Functions and Equations**
7. **Piecewise Functions, and Absolute Value Equations, Combinations of Functions**
8. **Rate of Change**

ASSESSMENT AND EVALUATION BREAKDOWN

To promote student success, ongoing assessment and feedback will be given regularly to the students. A variety of assessment and evaluation strategies will be used in this course, **including quizzes, tests, assignments**. Expectations will be evaluated based on the provincial curriculum expectations and the achievement levels outlined in the ministry document. Expectations are organized into four categories of knowledge and skills. The course evaluation is broken down according to the strands and percentages listed below:

Term Evaluation 70 %		Final Evaluation 30 %	
Knowledge and Understanding	20 %	Final Exam	30%
Thinking	15 %		
Communication	15 %		
Application	20 %		

Learning Skills

The evaluation of learning skills (responsibility, collaboration, independent work, organization, self regulation, and initiative) will be reported as needs improvement, satisfactory, good or excellent. Students will find that concentrating on these skills will result in a higher level of success in meeting the course expectations.

General Expectations:

Regular and punctual attendance, daily homework practice, active participation in class activities, and a positive attitude are the most effective ways to ensure success in the course. Please enter the classroom with the mindset of teamwork and respect. If you are late, you are to go to the office to obtain a late slip prior to coming to the class.

Due Dates & Test Dates:

Students are responsible to hand in work in accordance with the due date. In the case of a known absence (e.g., a field trip, a sports meet, or an unavoidable medical appointment) on the day an evaluation is scheduled, a student must speak to the teacher in advance and provide acceptable documentation to arrange an evaluation makeup opportunity during lunch or after school at the teacher's discretion. In the case of an unexpected absence, a student must communicate with the teacher on the day upon return to school to make alternate arrangements. Failure to do so may jeopardize any makeup opportunity. Once a marked evaluation is returned to the class, a student can no longer make up for the missed evaluation, and a mark of zero will be issued.

Student Accommodations:

Appropriate accommodations for exceptional and ELL students are provided by the teacher in accordance with the recommendations as outlined in each identified student's Individual Education Plan (IEP) and/or Annual Education Plan (AEP). Please speak to your teacher if you have an IEP or need any accommodations to support your success. Open communication between students and the teacher is key to math learning in the classroom.

If you have an IEP, please inform your teacher within the first days of class so accommodations can be implemented right away.

Absences:

You are responsible for any work missed while you are away. It is best to find out what was covered up in class. Class material will be provided on the digital platforms used in class (Brightspace, OneNote, Google Classroom)

Extra Help and Homework:

Extra help is available several days a week after school, and during lunch. Most classes will begin with homework help. Homework is assigned on most days. Homework is expected to be completed on a regular basis.

Respect and Behaviour:

Students and parents should make themselves aware of the contents of the [North Toronto Code of Respect and Behaviour](https://drive.google.com/file/d/1pZKsmmdeN-Pw7t1pT1zwx56gOw5GLEXZ/view), at: <https://drive.google.com/file/d/1pZKsmmdeN-Pw7t1pT1zwx56gOw5GLEXZ/view>. This document contains the specifics regarding in-person and on-line expectations, and school procedures for attendance and evaluations. This can be found on the [NTCI website](https://www.northtorontoci.ca/), at <https://www.northtorontoci.ca/>.

We look forward to supporting your mathematics learning journey!

Note: Information provided by this course outline is subject to change without further written notice