Course Description:	Level:	University	
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	Credit Value: Pre-requisite: Department:	1.0 MCR3U Mathematics	
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.	Course Fees:\$0The Advanced Functions Course(MHF4U) must be taken prior to orconcurrently with the Calculus andVectors Course (MCV4U)		

Textbooks & Resources:

- Growing Success: Assessment, Evaluation and Reporting in Ontario Schools
- The Ontario Curriculum Document, Grades 11 and 12: Mathematics, 2007 (revised)
- McGraw Hill Advanced Functions (Replacement Cost: \$87.00)

Course Evaluation: Student Ev	valuation consists of thr	ee components	
1) Learning Skills & Work Habits: Students are evaluated on 6 Learni Habits. The 6 essential skills are:	ng Skills & Work	These six attributes are ev Excellent (E) Good (G)	valuated on a scale of Satisfactory (S) & Needs
 Responsibility Organization Independent Work 	Collaboration Initiative Self-Regulation	Improvement (N) and rep They are not included in t specified in the curriculum	orted on the report card. he course mark, unless n expectations.
 2) Term Mark (Assessment of Learn Student performance standards for are described in the curriculum Ac curriculum is assessed in four categ Knowledge and Understanding Thinking and Inquiry Communication Application 	ing): knowledge and skills hievement Chart. The gories: 30% 20% 20% 30%	Evaluation of these four c term mark. The term mark final mark. It is the student's respon evidence of learning.	ategories generates the accounts for 70% of the asibility to submitting
3) Final Evaluation (Assessment of L The final evaluation, administered the course is based on the evidence final evaluation accounts for 30% of	Learning): at or towards the end of e shown to the right. The of the final mark.	The final evaluation cor Exam	nsists of: 30 %
Final Mark = 70% Term Mark + For a detailed description on Cours	- 30% Final Evaluation se Evaluation, see "How	Did I Get That Mark!" at w	vww.satec.on.ca

Course Conduct Policies: See Student Agenda.

Please retain this page in the front of your notebook for future reference.





Scarborough Academy for Technology, Environment & Computers @ WA Porter CI

.

-

Advanced Functions MHF4U1

Unit	Description	Approximate Length	Unit Evaluation
Polynomial Functions	Identify and describe some key features of polynomial functions, and make connections between the numeric, graphical, and algebraic representations of polynomial functions; demonstrate an understanding of average and instantaneous rate of change, and determine and interpret the average rate of change of a function over a given interval and the instantaneous rate of change of a function at a given point.	3 weeks	assignments, tests, quizzes
Polynomial Equations & Inequalities	Solve problems involving polymial equations graphically and algebraically; solve polynomial inequalities.	2 weeks	assignments, tests, quizzes
Rational Functions	Identify and describe some key features of the graphs of rational functions, and represent rational functions graphically; solve problems involving simple raitonal functions graphically and algebraically; solve simple rational inequalities.	2 weeks	assignments, tests, quizzes
Trigonometry	demonstrate an understanding of the meaning and application of radian measure; solve problems involving trigonometric equations and prove trigonometric identities.	2 weeks	assignments, tests, quizzes
Trigonometric Functions	make connections between trigonometric ratios and the graphical and algebraic representations of the corresponding trigonometric functions and between trigonometric functions and their reciprocals, and use these connections to solve problems.	2 weeks	assignments, tests, quizzes
Exponential & Logarithmic Functions	Demonstrate an understanding of the relationship between exponential expressions and logarithmic expressions, evaluate logarithms, and apply the laws of logarithms to simplify numeric expressions; identify and describe features of the graphs of log functions, make connections among the numeric, graphical, and algebraic representations of log functions	2 weeks	assignments, tests, quizzes
Solving Exponential & Logarithmic Equations	solve exponential and related logarithmic equations algebraically and graphically	2 weeks	assignments, tests, quizzes
Combined Functions fe: The order of	determine functions that result from the addition, subtraction, multiplication, and division of two functions and from the composition of two functions, describe some properties of the resulting functions, and solve related problems; compare the characteristics of functions, and solve problems by modelling and reasoning with functions, including problems with solutions that are not accessible by standard algebraic techniques.	3 weeks	assignments, tests, quizzes

General Information:

Mathematics continually builds on previous lessons. Hence, daily attendance is important. Students are responsible for catching up on missed lessons and work.

It is expected that all students will write tests as a class group. If a student is unable to write the evaluation with the class, then the student must inform the teacher at least two school days in advance of the test so that alternate arrangements can be made.

Students who are absent on the day of the test due to illness or a family emergency must have their parents phone the math office at 416 396-3365 x20245 on the day of the test explaining why they will be absent. (Doctor's notes will be required from students who miss more than one scheduled test.) Alternate arrangements will be made for these students to write the test.

Students missing their tests or assignment deadlines due to unexplained absences will receive a mark of zero.

For more information on the missed test/assignment policies, please see the agenda.