

Mr. Hazlewood

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Grade 12 Precalculus

Pre-Calculus Math 40S – Course Outline

Credit Value: 1 Credit

Course Code: 3939

Prerequisites: None

Required Materials: Binder, paper, pen, calculator

Textbook: McAskill, B. et al. 2012. Pre-Calculus 12. McGraw-Hill Ryerson, Whitby, ON.

Mathematical wisdoms...

"Mathematics is a game played according to certain simple rules with meaningless marks on paper."

- David Hilbert

"In mathematics, you don't understand things. You just get used to them."

- Johann von Neumann

Course Description

Pre-calculus Math 40S is a course designed to prepare students for future university studies that will center around theoretical calculus disciplines. This course will focus on developing critical thinking skills in students, through the analysis of mathematical formulae and theorems.

The goal of this course is to provide students with the basic understanding of calculus, and help them to develop their critical thinking and problem solving skills in an abstract content area. As they complete the more challenging problems in this course, students will hopefully become more independent learners who are able to succeed at the next level.

Course Timeline

Unit 1: Polynomial Functions

**Graphing*

**Factoring*

(Assessment Feb. 18)

Unit 2: Radical Functions

**Graphing Transformations*

**Solving Equations*

(Assessment Mar. 11)

Unit 3: Rational Functions

**Graphing Transformations*

**Solving Equations*

(Assessment Mar. 27)

Unit 4: Trig Functions & Identities

**Graphing Functions*

**Proving Identities*

(Assessment Apr. 21, May 14)

Unit 5: Exponents and Logarithms

**Graphing Functions*

**Solving Equations*

(Assessment May 28)

Unit 7: Probability

**Perms & Combs*

**Binomial Theorem*

(Assessment June 11)

Assessment – curriculum available at <https://www.edu.gov.mb.ca/k12/cur/index.html>
Course Work (70%) – Each topic will have multiple formative assessments to help students recognize areas of strength and areas to continue to improve on. There will also be at least one summative assessment in each topic that will be weighted based on the amount of time spent on that section. Larger sections that the class finds interesting will have larger assessments worth a greater percentage of the course mark. Final mark will be a percentage grade.

Final Exam (30%) – The final exam is cumulative, and will focus on material covered on various topic assessments. *There is no Provincial Exam being written in this course this year, but students will be writing a final exam during the regular exam period.*

Academic Dishonesty – any act of cheating, plagiarizing, or copying of work by a student will result in stiff penalties. The first offense will be a choice of zero on the assignment or a redo at my convenience, as well as a letter sent home to your parents. The second offense will be an automatic zero, with a referral to administration for any further discipline.

Late Assignments – There are no assignments in this course. Performance assessments and inquiry projects are due on or before the date set. Other than medical emergencies and prior arrangements, failure to do so will result in a grade of 0.

Missed Assessments & Rewrites – Any missed assessment will be given a grade of 0 unless valid reasons are given (*eg. hospitalization*). A student who misses an assessment will be required to complete it during the lunch hour (or spare) **on the day they return to school**. Assessments can be rewritten upon the request of the student, but will only be granted after that student has earned the opportunity. This requires attendance at lunch (or spare) for extra help and practice, as well as multiple formative assessments in order to demonstrate sufficient understanding.

Attendance – Please attend class. If you miss a class it is your responsibility to catch up on missed work. If you need extra help I am available most lunch hours upon request. Missing 10 classes will result in a meeting with parents and principal to determine status in the course.

Technology – Cell phones are only to be used in class when instructed to do so. All students will be required to hand in phones at the beginning of each class.

Class Expectations – Be on time for class, with all required materials. Be involved in class discussions and complete all assigned work. Ask for extra help when needed or when missing class.