MATHEMATICS 31 COURSE OUTLINE

TEACHER: Mr. T. Moratto

OBJECTIVES: MATHEMATICS 31 is a required prerequisite for students entering Physics, Engineering, and Honours Mathematics. It is highly recommended as a prerequisite for students entering Science, Commerce, Economics, Computing Science, and Education (if majoring in Math). It is hoped that you will develop an understanding of the algebra of functions and transformations, and develop a fluency in algebraic computations. You will be introduced to the principal concepts and methods of differential and integral calculus along with simple applications in the physical, biological sciences, engineering, business and the social sciences. As per the Alberta Education Program of studies for Math 31 (1995), we will cover the following topics. (www.education.gov.ab.ca/k%5F12/curriculum/bySubject/math/)

CONTENT:

1. Precalculus and Limits.
2. Derivatives
3. Application of Derivatives
4. Maximum and Minimum
5. Curve Sketching
6. Trig Functions
7. Derivatives of Trig Functions
8. Elective (Suggested)
   - *Calculus of Exponential and Logarithmic Functions
   - Further Methods of Integration
   - Volumes of Revolution
   - *Proofs of Limit, Derivative and Integral Theorems

PREREQUISITE: PureMath 30 with a passing grade of 75%
TEXT: Calculus: A First Course (McGraw-Hill) by Stewart, Davidson, Ferroni.
AUXILIARY RESOURCES: web resources
EVALUATION:

Assignments and Quizzes	15%
Unit Exams	35%
Term Exam I	25%
Term Exam II	25%

To learn Math you must write lots and review often. Remember Math is not a spectator sport, just because you know it today doesn't mean you will know it tomorrow! Make sure you have PureMath 30 trig notes for reference.