GRANDE PRAIRIE REGIONAL COLLEGE
ACADEMIC UPGRADING DEPARTMENT
MA 0130 COURSE OUTLINE
WINTER 1998

INSTRUCTOR: Sukhvir Sandhu

CLASS TIME: 8:00 - 8:50 (M-F)

OFFICE: B301

PHONE: 539-2835

OFFICE HOURS: 11:00 - 12:00 (T, R) in A208;
2:00-3:00 (M, W, F) in A208 or by appointment

PREREQUISITE: MA 0120 or MA 0130 placement
Recommended: at least 6 in MA 20/MA0120

TEXT: College Algebra and Trigonometry, 3rd Edition, Jerome E. Kaufman

REQUIRED: Scientific calculator, graph paper

COURSE GOALS: This course is designed to provide the student with an understanding of polynomials, logarithms, trigonometry, sequences and series, quadratic functions, statistics, permutations and combinations, and probability. This course prepares the student for university transfer mathematics courses. The student will develop problem solving skills and gain an appreciation of the mathematics of modern society.

ATTENDANCE: Regular attendance is expected from all students and is essential for passing the course. Students who miss classes will find themselves falling behind and failing. Any student missing more than 10% of scheduled class time may be denied the privilege of writing the final exam.

TESTS AND ASSIGNMENTS: There are seven units in this course. Each unit will have a test and/or assignment. Each test will count 5% towards the final grade, and each assignment will count 4%. Any student not attending class on a test date will receive a grade of zero for that test unless an explanation of the absence satisfactory to the instructor is provided. There will be a mid-term exam after the first three units. There will be a final exam after the course is completed with emphasis on the last half of the course.

Assignments should be handed in on the specified dates. Late assignments will be decreased by 10% per day and will not be marked once assignments have been returned to the rest of the class.

EVALUATION:

Assignments and Tests	12% + 35% =	47%
Mid-term Exam		15%
Final Exam		38%

MA 0130

UNIT DESCRIPTION

1. **Polynomial Functions** (Chapter 6)
   - dividing polynomials; Remainder Theorem; Factor Theorem; solving and deriving polynomial equations; graphing polynomial functions

2. **Exponential and Logarithmic Functions** (Chapter 5)
   -laws and properties of exponents and logarithms; exponential and logarithmic functions; solving exponential and logarithmic equations; graphing exponential and logarithmic functions; applications

3. **Trigonometry** (Chapters 7, 8, and 9)
   -radian measure; exact values of the Unit Circle; trigonometric functions of an angle; graphing trigonometric functions including all parameters; trigonometric identities and addition and subtraction identities; solving trigonometric equations; Sine and Cosine Laws.

MIDTERM EXAM

4. **Conic Sections** (Parts of chapters 3 and 12)
   circles; parabolas; ellipses; hyperbolas; general quadratic equation in two variables

5. **Sequences and Series** (Chapter 13)
   -arithmetic and geometric sequences and series; summation notation and expanding a series; applications

6. **Permutations and Combinations** (Chapter 14)
   -fundamental counting principle; permutations; combinations; Binomial Theorem

7. **Statistics**
   -mean and standard deviation from individual and grouped data; normal distribution; z-scores; probability

FINAL EXAM

The 9-Point Grading System

9 or 8 ---------- Excellent
First Class Standing
7 or 6 ---------- Good
Second-class Standing
5 or 4 ---------- Pass
3, 2, or 1 ---------- Fail