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

INSTRUCTOR: Christine Frattini

CLASS TIME: Mon., Wed., Fri.   2:00 - 2:50 p.m.
Tues., Thur.   2:30 - 3:20 p.m.

OFFICE: C416

PHONE: Bus. 539-2010; Res. 539-7465

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

TEXT: College Algebra and Trigonometry, Third Edition, Jerome E. Kaufmann

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.

TESTS AND ASSIGNMENTS: There are seven units in this course. Each unit will have a test and/or assignment which will count 6% towards the final grade except for the trigonometry unit which will count for 9%. 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. College team members must notify the instructor prior to the test date if they are to be away. 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	45%
Mid-term Exam	15%
Final Exam	40%

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

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