

**GRANDE PRAIRIE REGIONAL COLLEGE  
ACADEMIC UPGRADING DEPARTMENT  
MA 0130 COURSE OUTLINE  
WINTER 1995**

- INSTRUCTOR:** Frank Tesar
- CLASS TIME:** Mon. - Fri. 8:00-8:50
- OFFICE:** C421
- PHONE:** Bus. 539-2987
- 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, math set, 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 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 a medical certificate is supplied. 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