Math 115
Technical Mathematics I

COURSE OUTLINE

Prerequisites:

Placement recommendation for Math 115, Algebra 1 and Geometry, or Algebra 1 and Algebra 2, or equivalent

Course Description: (taken from the VCCS Master Course file)

Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. Part I of II

Semester Credits: 3 Lecture Hours: 3 Lab/Recitation Hours 0

Technical Mathematics I

Course Outcomes

At the completion of this course, the student should be able to:

1.   **Convert vectors to component forms and perform vector operations.**

2.   **Solve both right and non-right triangle problems using trigonometric ratios.**

3.   **Use matrices to solve 2x2 and 3x3 systems of equations.**

4.   **Graph and analyze linear and quadratic functions.**

5.   **Solve applied problems associated with engineering technology.**

Math 115 Technical Mathematics I

Required Materials:

Graphing Calculator Preferably the TI-89

Students are strongly encouraged to purchase a TI-89 graphing calculator in order to be able to carry out computations. The TI-89 is also recommended by the Engineering Division for courses in the Engineering Technology curriculum.

Textbook:

Technical Mathematics, Calter and Calter, 6th edition, John Wiley & Sons,
ISBN #: 9780470534922

Math 115 Technical Mathematics I

Topical Description

Chapters to cover

1	Ch 2	Algebra review (optional)
2	Ch 4	Functions (optional)
3	Ch 5	Graphing linear equations
4	Ch 6	Geometry
5	Ch 7	Trigonometry and Vectors for right triangles
6	Ch 8	Trigonometry and Vectors for oblique triangles
7	Ch 9	Systems of Linear equations
8	Ch 10	Systems of equations using matrices
9	Ch 11	Factoring and Fractions
10	Ch 12	Quadratic equations
11	Ch 13	Exponents and Radicals

Math 115 Technical Mathematics I

Notes to Instructors

 The structure and order of topics covered in this class correspond to other courses in engineering technology which students may be enrolled in at the same time. The topics should be covered in the order prescribed above.