

ALGEBRA AND TRIGONOMETRY FOR CALCULUS

MATH 1340

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1.0 Course Description

- 1.1 Overview of Content and Purpose:** (4 hours) A combined algebra and trigonometry course for science and engineering students planning to enroll in Calculus I (MATH 1950). Topics include: fundamental algebra, systems of equations, polynomials, and rational functions, exponential and logarithmic functions, trigonometric functions and their inverses, trigonometric identities and applications, conic sections, complex numbers and polar coordinates, elementary combinatorics, sequences and series. Credit for both MATH 1320/1324 and MATH 1340, or both MATH 1330 and MATH 1340 will not be given.
- 1.2 For Whom Intended:** Science and engineering students planning to take Calculus I (MATH 1950).
- 1.3 Prerequisites:** Two years of high school algebra and satisfactory score on the MPE within the last two years, or MATH 1310.
- 1.4 Unusual Circumstances:** None

2.0 Objectives

- 2.1 Performance Objectives for The student:** Provide a solid and sophisticated combined algebra and trigonometry course necessary for students planning to continue with the traditional calculus sequence.

3.0 Content and Organization

- 3.1 Topics:**
- 1) Review of fundamentals of algebra
 - 2) Systems of equations and inequalities
 - 3) Polynomials and rational functions
 - 4) Transcendental functions, exponential, logarithmic, and trigonometric
 - 5) Inverse trigonometric functions
 - 6) Fundamentals of trigonometry, identities, and applications
 - 7) Complex numbers and polar coordinates
 - 8) Conic sections
 - 9) Sequences and series

4.0 Teaching Methodology

- 4.1 Methods to be Used:** Lecture and Discussion

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5.0 Evaluation

5.1 Basis for Evaluating Student Performances:

Five 50-minute tests	(67% of grade)
Comprehensive final exam	(33% of grade)

5.2 Grading Scale:

A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

6.0 Resource Material

6.1 Current Bibliography Of Resources: Blitzer, Algebra and Trigonometry, ISBN 0-13-101917-1, Prentice Hall Publishers

6.2 Other Suggested Reading (if any): Dugopolski, Student Solution Manual, ISBN 0-201-38393-4, Addison-Wesley Publishers

6.3 Other Sources: Scientific Calculator or TI-83 graphics calculator (required)

6.4 Current Bibliography Resources: Dugopolski, College Algebra and Trigonometry, 2nd/99, Addison-Wesley Publishers