

OFFICIAL SYLLABUS
MATH125 – PRE-CALCULUS MATHEMATICS WITH
TRIGONOMETRY

Catalog Description: Exponential and logarithmic functions, trigonometric functions and their applications, inverse trigonometric functions, trigonometric identities and equations, laws of sines and cosines, binomial theorem, and introduction to partial fractions. Prerequisite: Satisfactory placement score or 120 with a grade of C or better.

Textbook: PRECALCULUS, 3rd Edition, by Robert Blitzer

Course Outline and Topics

Chapter 3 – Exponential and Logarithmic Functions

- 3.1 Exponential Functions
- 3.2 Logarithmic Functions
- 3.3 Properties of Logarithms
- 3.4 Exponential and Logarithmic Equations

Note: Include applications involving exponential growth and decay

Chapter 4 – Trigonometric Functions

- 4.1 Angles and Radian Measure
- 4.2 Trigonometric Functions: The Unit Circle
- 4.3 Right Triangle Trigonometry
- 4.4 Trigonometric Functions of Any Angle
- 4.5 Graphs of Sine and Cosine Functions
- 4.6 Graphs of Other Trigonometric Functions
- 4.7 Inverse Trigonometric Functions
- 4.8 Applications of Trigonometric Functions

Chapter 5 – Analytic Trigonometry

- 5.1 Verifying Trigonometric Identities
- 5.2 Sum and Difference Formulas
- 5.3 Double-Angle, Power-Reducing, and Half-Angle Formulas
- 5.5 Trigonometric Equations

Chapter 6 – Additional Topics in Trigonometry

- 6.1 The Law of Sines
- 6.2 The Law of Cosines

Additional Topics

- 10.5 The Binomial Theorem
- 7.3 Partial Fractions
- Objectives 1 and 2*

Any instructor should cover all of the material specified. Additional sections are optional.