
ASHEVILLE-BUNCOMBE TECHNICAL COMMUNITY COLLEGE
MATHEMATICS DEPARTMENT
COMMON SYLLABUS DIRECTORY

PREFIX: MAT **NUMBER:** 122 **TITLE:** Algebra/Trigonometry II

CONTACT HOURS: 4 **CREDIT HOURS:** 3

CCL DESCRIPTION: This course extends the concepts covered in MAT 121 to include additional topics in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, translating and scaling of functions, Sine Law, Cosine Law, vectors, and statistics.

PREREQUISITE(S): MAT 121

COREQUISITE(S): None

TEXTBOOK: John C. Peterson, *Technical Mathematics*, Third Edition, ISBN: 0-7668-6188-0.

DELIVERY METHOD: Traditional

GRADING POLICY: Chapter Tests – 60%; Quizzes – 20%, Mid-Term I – 10%, Mid-Term II – 10%

CONTENT OUTLINE:

- 7.1 Special Products
- 7.2 Factoring
- 7.3 Factoring Trinomials
- 7.4 Fractions
- 7.5 Multiplication and Division of Fractions
- 7.6 Addition and Subtraction of Fractions
- 8.1 Introduction to Vectors
- 8.2 Adding and Subtracting Vectors

- 8.3 Applications of Vectors
- 8.4 Oblique Triangles: Law of Sines
- 8.5 Oblique Triangles: Law of Cosines
- 10.1 Sine and Cosine Curves; Amplitude and Period
- 10.2 Sine and Cosine Curves; Horizontal and Vertical Displacement
- 10.3 Combinations of Sine and Cosine Curves
- 10.4 Graphs of the Other Trigonometric Functions
- 10.5 Applications of Trigonometric Graphs
- 10.6 Parametric Equations
- 10.7 Polar Coordinates
- 12.1 Exponent Functions
- 12.2 The Exponent Function e^x
- 12.3 Logarithmic Functions
- 12.4 Properties of Logarithms
- 12.5 Exponential and Logarithmic Equations
- 12.6 Graphs Using Semi Logarithmic and Logarithmic Paper
- 13.1 Probability
- 13.2 Measures of Central Tendency
- 13.3 Measures of Dispersion
- 13.4 Statistical Process Control

COMMENTS: Any policy concerning the possible acceptance of a late assignment or the possibility of a special arrangement that might be made with the student who missed a scheduled examination due to circumstances beyond his/her control is left to the discretion of the instructor.
