
ASHEVILLE-BUNCOMBE TECHNICAL COMMUNITY COLLEGE
MATHEMATICS DEPARTMENT
COMMON SYLLABUS DIRECTORY

PREFIX: MAT **NUMBER:** 172A **TITLE:** Precalculus Trigonometry Lab

CONTACT HOURS: 2 **CREDIT HOURS:** 1

CCL DESCRIPTION: This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.*

PREREQUISITE(S): MAT 171

COREQUISITE(S): MAT 172

TEXTBOOK: Sullivan & Sullivan, Algebra and Trigonometry Enhanced with Graphing Utilities, 5th Edition, ISBN 978-0-13-600492-9

DELIVERY METHOD: On-Line

GRADING POLICY: (Online Quizzes – 50%; Online Labs – 50%)

CONTENT OUTLINE:

Lab 1: Composite Functions, One-to-One Functions, Exponential Functions

Lab 2: Logarithmic Functions, Properties of Logarithms, Logarithmic and Exponential Equations

Lab 3: Angles and Their Measure, Right Triangle Trigonometry

Lab 4: Computing the Values of Trigonometric Functions and Acute Angles, Trigonometric Functions of General Angles

- Lab 5: Unit Circle Approach and Properties of the Trigonometric Functions, Graphs of the Sine and Cosine Functions, Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
- Lab 6: The Inverse Sine, Cosine, and Tangent Functions
- Lab 7: Trigonometric Identities, Sum and Difference Formulas, Double-Angle and Half-Angle Formulas
- Lab 8: Product-to-Sum and Sum-to-Product Formulas, Trigonometric Equations
- Lab 9: Applications Involving Right Triangles, The Law of Sines
- Lab 10: The Law of Cosines, The Area of a Triangle
- Lab 11: Polar Coordinates, Polar Equations and Graphs, The Complex Plane and DeMoivre's Theorem
- Lab 12: Vectors, the Dot Product
- Lab 13: Conics, the Parabola
- Lab 14: The Ellipse, the Hyperbola

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.
