Salisbury University Department of Mathematical Sciences
MATH 140 :   College Algebra and Trigonometry
Syllabus (Tentative)

Description: Applications-oriented college algebra and trigonometry course for students planning to study science or additional mathematics. Emphasizes computational, qualitative, visual and symbolic approaches. Topics include functions and graphs; exponential, logarithmic and trigonometric functions; and dierence equations. 4 Hours Credit: Meets four hours per week. Meets General Education IVB or IVC.

Prerequisites: High school Algebra II and plane geometry.

Credit: Credit may only be received for one of MATH 135 and MATH 140

Intended Audience: Students interested in improving their algebraic and problem-solving skills in preparation for taking courses in calculus or science.

Objective: To develop a foundation for MATH 201: Calculus I

Textbooks: *Algebra & Trigonometry Enhanced with Analytic Geometry*, by Swokowski & Cole; Brooks/Cole, ISBN: 9781111495916.

Technology: Multiple technologies may be used in this class. These may including Webassign, graphing calculator, Mathematica, Desmos, GeoGebra, etc. Computer software is either available in campus labs or is freely available.

Topic	Weeks
Graphs, Equations and Inequalities, Exponents, Algebraic Expression	3
Algebraic and Fractional Expressions. Exponents and Radicals. Solving Equations and Inequalities. Graphing Lines and Circles.	
Functions and their Graphs	2
Denition of Functions. Domain of Functions. Linear and Quadratic Functions. Operations on Functions. Graphing Functions. Mathematical Models.	
Polynomial and Rational Functions	1.5
Power Functions. Polynomial Functions. Rational Functions. Real Zeros.	
Exponential and Logarithmic Functions	2
Composite Functions. Inverse Functions. Properties of Exponential Functions. Properties of Logarithms. Solving Exponential and Logarithmic Equations.	
Trigonometric Functions and Applications	3
Angles. Right Triangle Trigonometry. Trigonometric values at special and at general angles. Unit Circle. Graphs of Trigonometric Functions.	
Analytic Trigonometry	1.5
Inverse Trigonometric Functions. Trigonometric Identities and Formulas. Solving Trigonometric Equations.	
Tests, Review or Optional Topics	1
Possible topics include: Laws of Sines and Cosines. Areas of Triangles. Growth and Decay.	
Total	**14**

Evaluation

Quizzes & Selected Problems	15 { 25%
Tests (4)	50 - 60%
Final Exam	15 - 25%