NorthWest Arkansas Community College
Division of Science and Mathematics

Course Number and Title

MATH 1285, Precalculus

Catalog Description

This course covers topics in college algebra and plane trigonometry. It is designed for students who will take MATH 2554.

Prerequisites

Appropriate score on the ACT Math section or other placement tools (see placement chart)

Credit hours/Contact hours/Load hours

5 credit hours/5 contact hours/5 load hours

Target Audience/Transferability

This course is designed for students who plan to continue into the Calculus sequence. Transfer depends on the receiving institution.

Student Learning Outcomes

Upon successful completion of this course students will exhibit mastery of certain knowledge and basic skills. These skills include, but are not limited to:

1) Apply applications of radian measure such as arc length, area, and angular speed.
2) Define, apply, and find the exact values of the six trigonometric functions.
3) Graph the six trigonometric functions manually.
4) Analyze and write equations of simple harmonic motion.
5) Verify and apply trigonometric identities.
6) Solve trigonometric equations.
7) Define, use, and apply inverse trigonometric functions.
8) Define, use, and apply the Law of Sines and Law of Cosines.
9) Perform operations with and apply vectors.
10) Convert between parametric and rectangular equations of curves and graph parametric curves.
11) Convert between rectangular & polar coordinates and graph polar coordinates and equations.

Topics

1. Analyzing & Classifying Angles
2. Right triangle trigonometry

3. The Unit Circle and Circular Functions
4. Applications of Radian Measure
5. Graphs of Trigonometric Functions
6. Trigonometric Identities
7. Solving Trigonometric Equations
8. Inverse Trigonometric Functions
9. Vectors
10. Laws of Sines and Cosines
11. Parametric Equations
12. Polar coordinates and graphing

Forms of Assessment

Assessment of student learning outcomes will be administered according to the math department's current assessment plan.