Alexandria Technical and Community College

MATH 1431: Geometry

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 3
Lab Hours/Week: *.*
OJT Hours/Week: *.*

Prerequisites:
This course requires any of these six prerequisites
  Algebra College Level
  ATCC Calculus-Level Placement
  A score of 2 on test Algebra
  MATH 0431 - Intermediate Algebra (Minimum grade: 2.0 GPA Equivalent and Number of Years Valid: 5)
  MATH 1421 - College Algebra
  MATH 1425 - Precalculus

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

This course meets Minnesota Transfer Curriculum (MnTC) goal area 4. The purpose of this course is to teach methods of finding various dimensions of geometric shapes. This course includes both plane and solid geometry. No theorem proofs are done. Prerequisite: MATH0431.

B. COURSE EFFECTIVE DATES: 12/16/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

  1. Analyze diagonals of quadrilaterals.
  2. Analyze inscribed angles, chords, secants, and, tangent lines.
  3. Analyze triangles, quadrilaterals, and other polygons.
  4. Define common terms in Euclidean geometry.
  5. Solve for missing angles created by intersecting lines in two-dimensional space.
  6. Analyze the Pythagorean Theorem.
  7. Calculate volume of prisms, cylinders, and cones.
  8. Solve area and volume problems using scale and proportion.
  9. Solve for missing dimensions in similar shapes.

D. LEARNING OUTCOMES (General)

  1. The learner will be able to analyze and solve geometric problems involving angles, lines, and points.
  2. The learner will be able to apply geometry theorems to solve for missing values.
  3. The learner will be able to apply formulas to solve geometric word problems.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

  Goal 04 - Mathematical/Logical Reasoning

  1. Explain what constitutes a valid mathematical/logical argument(proof).
  2. Apply higher-order problem-solving and/or modeling strategies.
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted