WILMINGTON UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
BASIC COURSE INFORMATION

COURSE NUMBER: MAT331

COURSE TITLE: Geometry

Faculty Name:

Contact Information:

Pre-Requisite: MAT200 with a minimum grade of C or precalculus equivalent

Text/Software:

Credits: 3

40 Hours of Structured Learning Activities

COURSE DESCRIPTION: This course presents the core concepts and principles of Euclidean geometry in two and three dimensions. Topics include geometric constructions, congruence, similarity, transformations, measurement, and coordinate geometry. Axiomatic systems and proofs are covered. An overview of non-Euclidean geometries is provided.

At the conclusion of this course students will be asked to evaluate the course based on the following objectives:

Gain factual knowledge (terminology, classifications, methods, trends).
Learn fundamental principles, generalizations or theories.
Learn to apply course material (to improve thinking, problem solving and decisions).
COURSE GOALS

GOAL A: Apply the core concepts of Euclidean geometry.

Learning Objectives: The student will:
A-1 Identify and use properties and relationships of angles, lines, shapes, and structures.
A-2 Understand measurement units and concepts.
A-3 Apply formulas for perimeter, circumference, and area, the Pythagorean Theorem, surface area, and volume.
A-4 Perform constructions to discover relationships among geometric shapes.
A-5 Apply trigonometric principles to solve geometric problems.
A-6 Apply concepts of slope, distance, and equations of lines to solve geometric problems.

GOAL B: Create direct, indirect, coordinates and statement-reason proofs to logically draw conclusions with given information.

Learning Objectives: The student will:
B-1 Describe and justify that two geometric objects are congruent.
B-2 Describe and justify that two geometric objects are similar.
B-3 Describe and justify that relationships between angles, lines and geometric shapes.

GOAL C: Understand how transformations affect geometric objects.

Learning Objectives: The student will:
C-1 Apply rigid motions, such as translations, rotations and symmetry, to geometric objects.
C-2 Use vectors to describe transformations.

EVALUATION PROCEDURE AND GRADING POLICY:

LATE ASSIGNMENT POLICY:

CAS CLASSROOM STANDARDS: See Blackboard “Syllabus” area

COURSE SCHEDULE (all assignments/exams and due dates):