

Miami-Dade Community College
MTG 2204L Geometry for Educators Laboratory

Course Description: This is an accompanying laboratory to MTG 2204 in which students will perform constructions, work on projects and presentations, and use technology in exploring geometric properties and patterns. (1 credit/2 contact hours)

Pre/Co-requisite: MTG 2204 or equivalent

Competency 1: The Student will demonstrate knowledge of basic measurement principles by:

- a. Measuring lengths, surface areas, and volumes using standard and non- standard units, and appropriate instruments.
- b. Measuring angles using a protractor.
- c. Estimating lengths, perimeters, areas, and volumes.

Competency 2: The Student will demonstrate knowledge of operations on plane figures by:

- a. Performing rigid transformations, or isometries (reflections, rotations, translations) on plane figures.
- b. Performing tessellations.

Competency 3: The Student will demonstrate knowledge of plane figures by:

- a. Performing basic constructions such as drawing a line perpendicular or parallel to a given line, drawing an angle congruent to a given angle, drawing a triangle congruent to a given triangle, drawing an angle bisector, drawing altitudes, medians and bisectors of angles of a triangle.

Competency 4: The Student will demonstrate knowledge of the development of geometry from the ancient to the modern world by:

- a. Drawing and exploring geometric figures and their properties using appropriate computer software.
- b. Describing visually and verbally, topics from spherical geometry and topology.