

Course Syllabus
MA 502: Spatial Visualization, Shape and Measurement
Summer 2009

Instructor: Dr. David Buhl
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Textbook: No Text – All materials online.

Course description:

This course examines historical and philosophical foundations of mathematics and their relationships to measurement, Euclidean and non-Euclidean geometries, analytical geometry, trigonometry, transformations, shape and dimension, and applications.

Objectives:

This course will deepen students' understanding of the mathematical foundations of different geometries. Students will explore the role of visualization, shape, and measurement in relation to understanding, describing, and solving problems encountered throughout history, and they will become more aware of connections between topics studied in this course and topics taught in the elementary and secondary curriculum.

Instructional Methods and Activities:

The class is offered online and I will be readily available for consultation. While I will spend time on illustrating certain topics, you are expected to actively participate in the development and study of the course content. One main goal is to provide you with opportunities to learn to construct both theoretical and practical mathematical skills as they relate to the content of the course.

Course Requirements:

Unit 1 (Foundations of Geometry)	30%
Unit 2 (Transformational Geometry)	30%
Unit 3 (Miscellaneous Apps. of Geometry)	40%

Evaluation:

100 – 90	A
90 – 80	B
80 – 70	C
70 – 60	D
Below 60	F