Mathematics 587: Seminar in Geometry for Teachers
Summer, 2008

3 credit hours

Instructor: Dr. Mark Klespis   Office: LDB 421E
                  Phone: 936-294-1577   Hours: Tues: 10:30 - Noon
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Location: LDB 431

Meeting times: See calendar

Description: This course covers topics in transformational geometry including motions of the plane, similarity transformations, groups of transformations, and topological transformations.   There will be a brief study of non-Euclidean geometry. Students solve problems, write proofs, and carry out geometric constructions and investigative activities, doing some work with interactive dynamic geometry computer software.   The course is designed for secondary school mathematics teachers and two-year college mathematics instructors.

Objectives: Learn geometry via a transformational approach; prove theorems using transformational axioms & theorems; study algebraic structure of transformations; use dynamic geometry software to explore transformational geometry; learn one model of non-Euclidean geometry.

Attendance   Students are required to be present at all class meetings**.** Participation in on-line meetings is strongly encouraged. Any student who misses more than two class meetings is subject to grade penalties.

Grading: Exams—500 points (midterm–250; final–250).

                  Homework—200 points

                  Projects—300 points (Two projects, 150 points each.)

Grading plan: A: 900-1000 points
                  B: 800-899 points
                  C: 700-799 points
                  F: Less than 700 points.

Text: Libeskind, S. (2008). *Euclidean and Transformational Geometry: A Deductive Inquiry.* Jones & Bartlett Publishers

Coverage: Chapter 1, sections 2, 3; Chapter 2, Section 6, Chapter 3, Sections 1-4, Chapter 4, Sections 1-3, 5, 6; Chapter 5, sections 1-5, Chapter 6, sections 4,5. Text supplements to be provided.

Materials: *Geometer's Sketchpad – Student version*, (Version 4.0). Key Curriculum Press.

Tentative course calendar – MTH 363
Summer, 2008

Monday	Tuesday	Wednesday	Thursday	Friday
July 7	8 Course intro Chapter 1 Triangle congruence	9 Chapter 1 Triangle congruence	10 Chapter 1 Parallel postulate HW #1 due	11 Chapter 1 Parallel postulate Project #1 given
14 Internet Ch2 Circle properties HW #2 due	15 Internet Ch2 Circle properties	16 Internet Ch2 Inscribed circles	17 Internet Ch2 Inscribed circles	18 Internet Project #1 due
21 Chapter 5 Section 1	22 Chapter 5 Section 2 Ch 5 HW due	23 Chapter 5 Section 3	24 Chapter 5 Section 4 Ch5 HW due Mid-term given	25 No classes
28 Internet Mid-term due Project #2 given	29 Internet	30 Internet	31 Internet	August 1 No classes
4 Chapter 6 Section 1	5 Chapter 6 Section 2 Ch6 HW due	6 Student presentations for Project #2 Final given	7 Final due	8