

WEBSTER UNIVERSITY

COURSE SYLLABUS

MTHC 5310.01

Craig Hannick

COURSE NUMBER AND SECTION

INSTRUCTOR

GEOMETRY FOR SECONDARY SCHOOL TEACHERS

TERM: F I

YEAR: 2006

COURSE TITLE

F II

SP I X

50 WH225 5:30-8:00 PM

SP II X

SITE ROOM TIME

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1. Course Description: (Student focus, rationale, scope, prerequisites)

This course is an overview of topics of interest to Secondary School teachers in Geometry with an emphasis on using Geometer's Sketchpad software to explore ideas and discover Geometry. Knowledge of High School Geometry is assumed. Course will include ample time for students' use of computer.

This course is designed to meet the Math MAT goals: helping our students become better mathematicians, better problem solvers, and through modeling effective teaching, more accomplished teachers

2. Learning Outcomes: (Goals, objectives, course outcomes, etc.)

Students will gain a deeper appreciation for the subject of Geometry through an emphasis on discovering Geometry by making conjectures and modeling problems using Geometer's Sketchpad software. The students will become proficient with the use of the software. Students will produce Lesson Plans for use in their own classrooms

3. Schedule of required readings, class preparations and assignments, lectures, discussions, student presentations, and exams:

WEEK 1: Introduction; Overview of Geometer's Sketchpad
1/23/06

WEEK 2: Explorations in basic geometry
1/30/06

WEEK 3: More explorations
2/6/06

WEEK 4: Constructions
2/13/06

WEEK 5: More constructions
2/20/06

WEEK 6: Advanced constructions
2/27/06

WEEK 7: More advanced constructions
3/6/06

WEEK 8: Other explorations with Geometer's Sketchpad
3/20/06

WEEK 9: Non-Euclidean Geometry
3/27/06

WEEK 10: Non-Euclidean Geometry
4/3/06

WEEK 11: Non-Euclidean Geometry
4/10/06

WEEK 12: Non-Euclidean Geometry
4/17/06

WEEK 13: Non-Euclidean Geometry
4/24/06

WEEK 14: Non-Euclidean Geometry
5/1/06

WEEK 15: Non-Euclidean Geometry
5/8/06

4. Resources

Text Used: None; handouts and worksheets

Supplemental Readings: (List and indicate how these are to be used.)
Articles of interest

Audio Visual/Other:

5. EVALUATION: Note: This course is offered on a CR/NC
(Credit/No Credit) basis.

- a) Term Paper(s)
- b) Examinations
- c) Class participation X
- d) Class presentation
- e) Other X Lesson Plan

This syllabus is subject to change at the discretion of the instructor.
Therefore, regular attendance is required.