

## MTG 4212

MODERN GEOMETRIES

4 CREDIT HOURS

### INSTRUCTOR.

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### TEXTBOOKS.

Wallace, E. C. and West, S. F. *Roads to Geometry*, Prentice Hall, 2003.

**COURSE DESCRIPTION.** Sets of axioms and finite geometries, groups of transformations, Euclidean motions of 2-space and 3-space, convexity in 2-space and 3-space. Euclidean geometry of polygon and circle, constructible numbers, constructions and non-Euclidean geometry.

**COURSE GOALS.** The objective of this course is to provide the student with a broad understanding of the principles of geometry.

**PREREQUISITES.** The prerequisite for this course is MAC 2311, or consent of the instructor.

**COURSE REQUIREMENTS.** Class attendance is essential for success in this class. Every student is expected to attend every class.

This course will have four examinations to be given in class on Wednesday September 13, Wednesday October 18, Wednesday November 8 and Wednesday November 29. Each of these examinations will be worth 100 points. **There will be no make-up exams!** The lowest grade amongst these examinations will be dropped.

There will also be a project required for this course. The project will be due no later than the beginning of class on Wednesday November 29. The project must be submitted electronically as a pdf file enclosure. The project will be worth 100 points. The score for the project will not be dropped. The project must be completed and submitted. Use of Geometer's Sketchpad will be a required element of the project.

The final examination will be given at a date and time to be determined later. The final examination is worth 100 points. The final exam must be taken and the score on the final exam will not be dropped.

**GRADING.** The grading scheme for the course is as follows.

<b>Grade Scale</b>	<b>Course Points</b>
A	450-500
B	400-449
C	300-399
D	250-299
F	000-249

**NOTE.** *The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.*

**NOTE.** *UCF faculty support the UCF creed. Integrity - practicing and defending academic and personal honesty - is the first tenet of the UCF Creed. This is in part a reflection of the second tenet, Scholarship: - I will cherish and honor learning as a fundamental purpose of membership in the UCF community. - Course assignments and tests are designed to have educational value; the process of preparing for and completing these exercises will help improve your skills and knowledge. Material presented to satisfy course requirements is therefore expected to be the result of your own original scholarly efforts. Plagiarism and cheating - presenting another's ideas, arguments, words or images as your own, using unauthorized material, or giving or accepting unauthorized help on assignments or tests - contradict the educational value of these exercises. Students who attempt to obtain unearned academic credentials that do not reflect their skills and knowledge can also undermine the value of the UCF degrees earned by their more honest peers. UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can include a failing grade in an assignment or in the course, or suspension or expulsion from the university. See <http://www.osc.sdes.ucf.edu/> for more information about UCF's Rules of Conduct. All work in this course must be completed in a manner consistent with the UCF Golden Rule. See: <http://www.goldenrule.sdes.ucf.edu>*

**NOTE.** This syllabus is subject to change without warning. Students are expected to attend class and have their e-mail address up-to-date.