

MTG 3212: Geometry

Spring 2018

Location: LIT 125
Time: MWF 11:45pm-12:35pm
Instructor: Michael Hull
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Office Hours: TBA

Course Description

Axiomatic treatment of topics in Euclidean, non-Euclidean, projective geometry and (time permitting) fractal geometry. Particularly useful for prospective secondary-school mathematics teachers.

Textbook

Foundations of Geometry by Gerard A. Venema.

Before Class

Students will be assigned to read one or more sections of the textbook for each class period. This reading should be done before the start of class, and students should especially pay close attention to the proofs of theorems in each section. In addition, students are expected to read and think about the exercises at the end of each section.

During Class

During each class period, students will be called upon to present either a proof of one of the theorems in the textbook or a solution to one of the exercises at the end of the section. The majority of class time will consist of these student presentations.

Grades

Each time a student gives a presentation in class, they will receive a score on a scale of 1-10. In most cases, a student will receive one of the following scores:

0-The student passed, was not present, or was not able to make any progress toward a correct solution/proof.

5-The student made some progress but was unable to finish the solution/proof being presented.

8-The student need some assistance in order to finish but was able to present most of the main ideas.

9-The student accurately presented a correct solution/proof.

10-The student gave an exceptional presentation, solved a difficult problem, and/or was able to demonstrate an exceptional level of understanding.

A student's grade will be determined as the average of the scores they have received on the presentations they have given in class after dropping the lowest score (i.e. each student gets one free "pass"). These scores will then get converted to letter grades as follows:

8.5-10: A

7.5-8.5: B

6.5-7.5: C

5.5-6.5: D

0-5.5: E

+’s and –’s may be assigned at the instructors discretion for students who are near the border between two grades.

Attendance and Participation

Attendance and participation in class is necessary in order for this class to work. Whether they are giving a presentation in class or not, students are required to attend class and expected to pay attention to their classmate's presentations, ask questions when they do not understand something, and contribute ideas to classroom discussions when appropriate. If there is inadequate attendance and participation in class, it may be necessary to start assigning written homework in addition to the in-class presentations. In particular, students who have four or more unexcused absences will be assigned additional written homework. In this case the written homework will be graded on the same scale as the in-class presentations and a student's final grade will be computed as the average over all written homework assignments and in-class presentations. If a student continues to accrue excessive unexcused absences beyond this point they may also suffer a direct penalty to their final grade.

Disability Accommodation

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu> during the last two or three weeks of the semester. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.