

MATH 302 - Foundations of Geometry Fall 2019

Instructor: Gabriela Bulancea

Office: Exploratory Hall 4217

Office Hours: Tuesday, Thursday 10:30 a.m.- 12:30 p.m., or by appointment

E-mail: gbulance@gmu.edu

Text: *Exploring Geometry, Second Edition*, by Michael Hvidsten, CRC Press, 2017. We will cover portions of Chapters 1, 2, 5, 7, 8, in the text and the on-line chapter on Hilbert's axioms. The on-line chapter can be found at <http://homepages.gac.edu/~hvidsten/geom-text/>.

Prerequisite: Completion of 6 hours of MATH.

Broad purpose of the course: Give a mathematically rigorous treatment of Euclidean geometry and of the development of non-Euclidean geometry. Students will have the opportunity to explore geometry and its applications and to develop their abilities for abstract reasoning and writing proofs.

Homework: Problem sets will be assigned regularly throughout the semester. You are expected to solve all the assigned problems, although only some of these problems will be handed in and graded. You are encouraged to discuss the assigned problems with your classmates, but you will have to write your solutions individually.

Computer projects: You will have to work on and hand in several computer projects. These will be worked in groups, each group will have to hand in one report for each project. For these projects you will use the geometry software package Geometry Explorer which can be downloaded from <http://homepages.gac.edu/~hvidsten/geom-text/tutorials/gex/index.php>.

Class Tests: There will be two class tests given during class time. There is a tentative schedule for the tests below. You are responsible for keeping up with all information announced in the classroom and on Blackboard. There will be no makeup tests.

Test dates:

Test 1 Thursday, October 3

Test 2 Thursday, November 7

Final Exam: The final will be on Tuesday, December 17 between 1:30 and 4:15 p.m. It will be a cumulative exam. The final exam is mandatory regardless of your class standing prior to that. You may replace your lowest test grade with your final exam percentage. In order for this to happen you must write a note above your name on your final exam.

Grading: Each of the class tests counts for 25%, the graded homework for 15%, projects 10% and the final exam for 25%.

UNIVERSITY POLICIES: The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at <http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies.

Honor Code: It is expected that each student in this class will conduct himself or herself within the guidelines of the Honor Code. Among other things, this means that sharing information of any kind about exams or quizzes (either before or during the exam) will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See <http://academicintegrity.gmu.edu/honorcode> for a copy of the Honor code.

Disability Services: Reasonable accommodations are available for students who have a documented disability. Please contact Disability Services if you require accommodations: Office of Disability Services, Student Union Building I (SUB I), room 4205, Phone: 703-993-2474

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; <http://caps.gmu.edu>