Foundations of Geometry

MATH 302 - Section 001

Fall 2017

Instructor: Prof. Rebecca Goldin

Classroom Time & Location: MW 1:30-2:45pm, Robinson A412

Office and Hours: Exploratory Hall, Room 4214, MW 2:45-3:30pm and by appointment.

E-mail: rgoldin@gmu.edu

Book: *Foundations of Geometry,* Second edition by Gerard Venema, Pearson, 2012.

Syllabus: The material we cover may change over the semester depending on how much fun we are having. Roughly speaking, we will touch on:

- Chapter 1: Prologue: Euclid's Elements

- Chapter 2: Axiomatic Systems and Incidence Geometry

- Chapter 3: Axioms for Plane Geometry

- Chapter 4: Neutral Geometry

- Chapter 5: Euclidean Geometry

- Chapter 6: Hyperbolic Geometry

- Chapter 8: Circles

Plan to **read the book** before class. That will make our conversation far more productive! This course is *proof based* and you will be required to develop the skills for writing convincing proofs as the course progresses.

Web page: You should have access to the Blackboard course. It is your responsibility to monitor Blackboard frequently for updates. I will post announcements, practice problems for class (ungraded), homework (graded), solutions to homework, information on tests, etc. You will always have at least two days to complete any homework due, but this includes weekends. If I post homework on Saturday that is due on Monday, you are responsible to know and complete it.

Practice Problems from the text: This is a list of problems from the text that I will post on the web page for the course and which will be updated regularly. Your work on these problems will not be turned in for credit, but it is important to do as many of them as possible in order to get the most out of the lectures.

Graded Homework Problems: Each class, problems will be posted that are due the next class or at most a week later. You must do your own work for these problem sets.

In class work: there will be regular in-class discussions and group work. You may not copy a peer's work and points will be deducted for doing so. You are welcome to get feedback on your work and to improve your assignment before turning it in!

Exams: There will be two in-class exams, tentatively scheduled for:

October 2 and

November 8

Final Exam: The cumulative final will be held 1:30-4:15pm on Wednesday, December 13, 2017.

Grading:

In-class tests: 20% each

Graded homework: 20%*

Participation: 10%**

Final exam: 30%

*You may work together on problem sets, however you need to turn in your own work. This means that *no copying* is permitted, and you must understand what you did well enough to show your knowledge on all in-class assessments and classroom discussions!

**In class participation will include attendance, presenting problem sets, participating in group work, and being prepared for class. You are welcome to ask me about your attendance grade at any point.

There will be no make-up tests, however there will be options for corrections for grade improvement if your score is very low. We will discuss this in class.

Scale:

A+	97-100;	B+	87-90;	C+	77-79;	D	60-69;
A	93-96;	B	83-87;	C	70-77;	F	0-59.
A-	90-92;	B-	80-82;	C-	Rare/Never;		

Disability Services: If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703/993-2474 and http://ods.gmu.edu/. All academic accommodations must be arranged through that office. If you need accommodation, it is your responsibility to contact me *at least* one weeks before any exam.