

Geometry
MTG 3212
SPRING 2020

Classroom: MAT 005

Instructor: Dr. Konstantina Christododouloupoulou

Office Location: 365 LIT

Office Hours: M3, W6, R4, and by appointment.

Open Door Policy: You are welcome to drop by to discuss any aspect of the course, anytime.

All course materials will be posted in e-Learning CANVAS <https://elearning.ufl.edu/>

Meeting Times: MWF5

Office Phone: (352) 294- 2315

Email: kchristod@ufl.edu

Text: *Foundations of Geometry*, by Gerard Venema, 2nd edition. We will cover most of Chapters 1-6 and 11, plus additional material, time permitting.

Course content and objectives: This course provides an axiomatic treatment of topics in Euclidean and non-Euclidean geometry and is particularly useful for prospective secondary-school mathematics teachers. In addition, this course will enrich the knowledge of all mathematics majors and ease their transition to more advanced mathematics courses. We will build the results of classical geometry from its basic axioms. We will be asking why various theorems in geometry are true, and we will pay particular attention to the use of mathematical reasoning to help us understand the underlying theory.

It is essential that you work on the material outside the classroom. Carefully read the textbook before coming to class and use pencil and paper to work through the material.

Reading: A tentative course calendar (subject to revision during the semester) is available at the end of the syllabus and also in the course homepage in CANVAS. There you can find which sections will be covered during each lecture. *It is expected that you have read the relevant textbook sections before each lecture, so that you will be able to better grasp the material presented. In addition, supplementary material not found in the textbook may be presented during lecture to complement your reading.*

Office Hours: I encourage you to take advantage of my office hours and my **open door** policy. You are welcome to drop by my office to talk about the course anytime I am in my office and my door is open. In addition, I will hold regular office hours for your convenience. If you cannot make my posted hours I will also be happy to set a meeting time that is convenient for the both of us.

Course Web Page: I will update CANVAS regularly with class announcements, homework assignments, and additional materials. All grades are posted in the CANVAS Gradebook. You are responsible for verifying that those grades are accurate. **You have one week after a score has been posted to contact me to resolve any grade concerns. We will not consider any grading disputes nor make any grade adjustments at the end of the semester. Be sure to save all original documents in case of grading questions.**

Grading:

Class Participation	5%
Homework	20%
GeoGebra Project	5%
Two Semester Exams	40% (20% each)
Cumulative Final Exam	30%

The following grading scale applies.

A	$\geq 90\%$	C	$\geq 70\%$
A–	$\geq 87\%$	C–	$\geq 67\%$
B+	$\geq 84\%$	D+	$\geq 64\%$
B	$\geq 80\%$	D	$\geq 60\%$
B–	$\geq 77\%$	D–	$\geq 56\%$
C+	$\geq 74\%$	E	$< 56\%$

Homework: I will regularly assign problems to be handed in by each individual. I expect all solutions to be written in full sentences and grammatically correct. Each problem will be graded on the following scale:

5	Correct mathematical solution and very well written
4	Small mathematical errors and/or grammatical errors
3	Contains good ideas, but overall an incorrect mathematical solution
2	Significant mathematical errors
1	Come and see me for help!

If you receive a grade ≤ 4 on any problem, you may turn that problem in again for an entirely new grade. I will keep only the highest score. Rewrites are due exactly one week from when I return homework.

UF grading policies for assigning grade points are available here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

You may work with your peers to prepare problems but you must write up solutions individually. Do not turn in what are essentially Xerox copies of each other's homework. Late homework submissions will only be accepted if there is an acceptable excuse consistent with university policies <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> and appropriate documentation is provided in a timely fashion.

Submitted work expectations: Submitted assignments should be neat, organized, and clearly presented. Homework must be on letter-size paper only and papers with multiple pages should be stapled. Papers not meeting these standards may have the scores reduced or may be returned ungraded.

Participation: You are expected to participate in class discussions. We will also have some occasional in-class writing activities which will also count towards your participation grade. Therefore, *it is absolutely essential that you attend class*. You will be allowed 3 absences with no penalty. After this point, I reserve the right to drop your final grade by 2% for each additional absence. Excused absences are consistent with university policies in the undergraduate catalog <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> and require appropriate documentation.

GeoGebra Project: The goal of the project will be for students to use the free dynamic geometry program GeoGebra to explore the statements and proofs of some of the most interesting theorems in the subject. More details will be provided in class and on CANVAS.

Using the Web: Please refrain from searching for homework solutions on the internet or using someone's notes from a previous semester. Your job in this course is to write proofs in geometry, not learn how to do a web search. Also, you will not have access to the internet on tests. It is very obvious to me when you have a solution that you did not write yourself, and this will not help you succeed in the course. If you are having trouble with a problem ask your instructor or a classmate for help.

Exams: Two semester exams and a final exam are scheduled for this course. The semester exams are tentatively scheduled for Friday, ?? and Wednesday, ??, and the final exam is scheduled for Thursday, April 30, 10AM-noon in our regular classroom. **The exams cannot be rescheduled unless you meet the University requirements; see** <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> Absolutely no collaboration on exams is allowed.

Make-up policies: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Acceptable absences include but are not limited to the following: you are participating in a UF-sponsored event and provide me with documentation at least a week in advance; you were verifiably ill during the exam and notified me within 24 hours of its conclusion; you are observing a religious holiday and have notified me of this during the first two weeks of classes; you have a court-ordered obligation and have provided me documentation a week in advance. Please note that "I just didn't feel well" without documentation, travel plans, and personal schedule conflicts are NOT excused.

Class guidelines: It is expected that everyone in our class will act in a respectful manner:

- Please be respectful of your classmates and me while in class or office hours.
- I expect that you are committed to learning and will not miss class. Arriving late (after we have started class) or leaving early is disruptive and disrespectful. If however, you cannot avoid it, please arrange it in advance with me.
- Turn off all cell phones before the start of class.
- Laptops are not to be used in class.

One-week policy: All grades are posted in the CANVAS Gradebook. You are responsible for verifying all grades are accurate. You have one week after a score is available to discuss any grade concerns with me. There is no grades dispute after one week.

Incomplete: A student who has completed a major portion of the course with a passing grade but is unable to complete the final exam or other course requirements due to illness or emergency may be granted an incomplete, indicated by a grade of "I". This allows the student to complete the course within the first six weeks of the following semester. You must contact me before finals week to sign an

incomplete grade contract (<http://clas.ufl.edu/forms/incomplete-grade-contract.pdf>), and must provide documentation of the extenuating circumstances preventing you from taking the final exam. The grade of "I" is never used to avoid an undesirable grade, and does not allow a student to redo work already graded or to retake the course. See the official policy at <http://www.math.ufl.edu/departments/incomplete-grades/>.

Students with disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Academic honesty: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

In addition, we remind you that *lectures and the course materials given in this class are the property of the University/faculty member and may not be taped/shared without prior permission from the lecturer and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.*

Online Course Evaluation: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or <https://viaufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students <https://atgatorevals.ua.ufl.edu/public-results/>.

Tips for the Course:

- *Mathematics is not a spectator sport.* Your participation and engagement with the material is essential.
- Discuss the topics with your classmates.
- Take advantage of my office hours. This time is set aside for us to help you.
- Don't hesitate to ask questions in class.
- Be reminded that 2 student hours devoted to assignments and preparation for every hour of classroom time is a reasonable expectation for an average student.
- Barring unforeseen medical or other serious conditions, I expect you to be in class on time every day. If you must miss a class, please let me know as soon as possible and be sure to contact a classmate to find out what you missed.
- If you are in trouble see me immediately. If you think you are in danger of failing (or of getting a grade that you do not want) you should see me immediately. I will not give you an extra credit assignment or an incomplete to help you avoid failing, but I can make recommendations regarding drops, study habits, test taking skills, future courses, etc.

Campus Resources:

Health and Wellness U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit <https://umatter.ufl.edu/> to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <https://shcc.ufl.edu/>.

University Police Department: Visit <https://police.ufl.edu/> or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center|: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; <https://ufhealth.org/emergency-room-trauma-center>.

This syllabus is subject to change. You will be notified if any changes are made. Version 1

SPRING 2020 –MTG3212 Calendar

Exam 1-Friday, February 14

Exam 2-Friday, March 27

Cumulative Final Exam-Thursday, April 30, 10:00AM-12:00PM

Monday	Wednesday	Friday
Jan 6 Euclid's Elements	8 Axiomatic Systems/Logic and Proof	10 Real Numbers
13 Incidence Geometry	15 Incidence Geometry	17 Incidence Geometry
20 MLK Holiday No class	22 Section 3.1-3.2	24 Section 3.2
27 Section 3.3	29 Section 3.3	31 Section 3.4
Feb 3 Section 3.5	5 Section 3.5	7 Section 3.6
10 Section 3.7	12 Review/Catch-up	14 Exam 1
17 Section 4.1	19 Section 4.2	21 Section 4.3
24 Section 4.3	26 Section 4.4	28 Section 4.5
Mar 2 HAPPY No class	4 SPRING No class	6 BREAK No class
9 Section 4.6	11 Section 4.7	13 Section 4.7
16 Section 4.8	18 Section 4.8	20 Section 4.9
23 Catch-up	25 Review/Catch-up	27 Exam 2
30 Section 5.1	Apr 1 Section 5.3	3 Section 6.1
6 Section 6.1	8 Section 6.2	10 Section 6.4 (If time)
13 Section 6.4 (If time)	15 Section 11.1	17 Section 11.2
20 Section 11.3	22 Catch-up/Review GeoGebra Project due	24 Reading Day No Class