Concepts in Geometry–Math 441—Fall 2025

INSTRUCTOR: Dr. Stefan Forcey EMAIL: sforcey@uakron.edu
OFFICE: CAS 275 PHONE: 972-6779

OFFICE HOURS: MTuW 3:00 - 4:00. Lots more by appointment!

Text and Coverage: Geometry: The Line and the Circle by Maureen T. Carroll and Elyn Rykken, AMS/MAA Textbooks (ISBN: 978-1-4704-4843-1)

Website for schedule, homework problems and announcements:
https://sforcey.github.io/sf34/class_home/geom/geomf25.htm

GRADING POLICY:
1000 points possible. For each of these three categories the fraction of points you receive is the same fraction that you earn out of the total possible. So if you get a 49 out of 50 on Test 1 then you earn (49/50)*300 = 294 points.

100 pts: Homework, quizzes (10%)
600 pts: 2 Tests at 300 pts each. (60%)
300 pts: Final Exam (30%)

900 pts. guarantees an A
800 pts. guarantees a B
700 pts. guarantees a C
600 pts. guarantees a D
(+,- at my discretion)

Course Outline with dates:

- Aug. 25 Day 1 (Monday)
- Aug. 31: Last day to add.
- Sep 1: No class for labor day (Monday).
- Review of sets, logic, Chapters 1-3,6,14
- Sep. 7: Last day to drop.
- TEST 1:
- Oct. 12: Last day to w/draw.
- Chapter 4,5,12,13,16
- TEST 2
- Chapters 7,8,9,10,11,15,16
- Nov. 27,28: Thanksgiving
- Dec. 5: Last day.
- Test 3: Comprehensive Final Exam.

Evaluation Procedure:

• When graded, quizzes and homework will be given a grade out of ten or twenty points, where full credit will be assigned when the graded problems (if any) have correct answers with all correct work shown. Points may be subtracted for each graded problem with an incorrect answer, incorrect work, or not all work shown. The quiz/homework average will be calculated by dropping a total of 15 raw quiz points which means that I'll calculate your percentage by first adding up to 15 points back on to your raw score, limited by the maximum number of hw/quiz points possible. This will have the effect of making a 100% quiz average possible despite missing a homework/quiz.

• There will be 2 in-class closed book tests and the final exam during the semester over the material from lectures, homework and the book. No test may be taken early or late.

• **No calculators, notes, formula sheets or books may be used on the Final or any test.** Homework may not be copied, but collaboration and research are allowed. All other work is individual. Any incidence of academic dishonesty carries a minimum penalty of a non-removable zero for that work. No active cellular phones, pagers, media players, computers or other electronic communication devices are permitted during the tests. Usage of or an attempt to use any of these devices during exams carries a minimum penalty of a non-removable zero for that exam.

This course includes the study of axiomatic, modern, and transformational geometry. In particular: the foundations of geometry (points, lines, segments, angles, polygons, and circles), Euclidean and non-Euclidean geometry.

Students are expected to be able to

- Communicate mathematical results through the proper use of mathematical notation and words.
- Understand whether a definition is correct, whether two definitions are equivalent, and whether something satisfies a definition.
- Understand the axiomatic and logical structure of Euclidean and non-Euclidean geometry through the development of absolute geometry.
- Understand basic terms and use them in proofs. This includes points, lines, rays, segments, betweenness, angles, congruence, distance, polygons, circles, and similarity.
- Develop skills with compass and straight edge constructions.

For information on *"WHAT STUDENTS NEED TO KNOW,"* go to What Students Need To Know : The University of Akron, Ohio (uakron.edu) (see the list of items below).

- The Student Code of Conduct and academic misconduct
- Statement about the ethical use of ChatGPT and other AI tools
- Inclusive Excellence
- Title IX
- Sexual harassment and sexual violence
- Students with disabilities
- Religious accommodations for students
- ZipAssist