

Math 403 - Euclidean and Non-Euclidean Geometry

Fall 2022

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Time: Tu,Th 1:30 - 2:45 pm

Office Hours: Tu, Th 12:30-1:20pm and by appointment

Textbook: *Axiomatic Geometry* by John Lee; Published by the American Mathematical Society.

Number of credits: 3

Prerequisites: MATH 301 with a C or better.

Course description: We will cover the following topics: Incidence Geometry; Neutral Plane Geometry; Angles; Triangles; Quadrilaterals; Similarity; Right Triangles; Circles; Hyperbolic Geometry.

Course Expectations: At the end of this course students will be able to:

- Use geometry as a deductive system of logic.
- Use an axiomatic system to build specific geometries such as incidence and planar geometry.
- Prove geometric properties of triangles, quadrilaterals, and circles.
- Use definitions of angle, betweenness, congruent, parallel, perpendicular, similar, and distance to prove geometric claims.
- Prove basic claims in non-Euclidean geometries such as hyperbolic, spherical, and projective geometries.

Grading Policy: The components contributing to your grade in the course are weighted as follows: homework(50%), class participation (10%), midterm exam (20%) and final exam (20%).

Your letter grade will be determined as follows:

%	Grade
[90, 100]	A
[87, 90)	A-
[83, 87)	B+
[80, 83)	B
[77, 80)	B-
[73, 77)	C+
[70, 73)	C
[67, 70)	C-
[63, 67)	D+
[60, 63)	D
[0, 60)	F

Homework: There will be regular homework assignments. It is fine for students to work together on finding solutions for these problems. However, each student must write up the solutions on his or her own.

Absences: Making up missed work (including exams, homework, etc) will be arranged only with prior approval or in case of illness documented by a doctor's note. If you miss a lecture, you are responsible for obtaining lecture notes from another student. You are also responsible for determining if any announcements were made.

WSU Disability Statement: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center. For more information contact a Disability Specialist at 509-335-3417, Access.Center@wsu.edu or visit the website <http://accesscenter.wsu.edu>.

Academic integrity: Washington State University, a community dedicated to the advancement of knowledge, expects all students to behave in a manner consistent with its high standards of scholarship and conduct. Students are expected to uphold these standards both on and off campus and acknowledge the university's authority to take disciplinary action. The purpose of these standards and processes is to educate students and protect the welfare of the community. The standards of Conduct for Students can be found at <http://conduct.wsu.edu>.

WSU Safety and Emergency: Washington State University is committed to enhancing the safety of the students, faculty, staff, and visitors. It is highly recommended that you review the Campus Safety Plan (<http://safetyplan.wsu.edu/>) and visit the Office of Emergency Management web site (<http://oem.wsu.edu/>) for a comprehensive listing of university policies, procedures, statistics, and information related to campus safety, emergency management, and the health and welfare of the campus community.