College of Staten Island, City University of New York (CUNY)

Math 623 (Section 16415): Fall 2022 Syllabus

Geometry for Secondary School Teachers

Instructor: **Joseph Maher**

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Office hours: M 2:30-4:25, W 3:35-4:25

Course location: MW 4:40-6:20 1S-114

Textbook: Saul Stahl, *Geometry from Euclid to Knots* , edition, Dover Publications
ISBN:

Grading policy: 20% Homework and quizzes

30% Midterm

20% Report

30% Final

Additional info:

Disability policy: Qualified students with disabilities will be provided reasonable academic accommodations if determined eligible by the Office for Disability Services. Prior to granting disability accommodations in this course, the instructor must receive written verification of student's eligibility from the Office of Disability Services, which is located in 1P-101. It is the student's responsibility to initiate contact with the Office for Disability Services staff and to follow the established procedures for having the accommodation notice sent to the instructor.

Integrity policy: CUNY's Academic Integrity Policy is available online at
`http://www.cuny.edu/about/info/policies/academic-integrity.pdf`

Joseph Maher/ teaching/ 2022/ fall/ geometry/ schedule

Date	Section	Topic	Exercises
Mon 29 Aug	1.1	Geometry of triangles	HW 1
	2.1		
	2.2		
Wed 31 Aug	2.3	Geometry of triangles	
Mon 5 Sep		**No class**	
Wed 7 Sep	2.3	Geometry of triangles	
Mon 12 Sep	3.1	Non-neutral Euclidean Geometry	
Wed 14 Sep	3.2	Non-neutral Euclidean Geometry	HW 2
Mon 19 Sep	3.3	Non-neutral Euclidean Geometry	
	3.4		
Wed 21 Sep	3.5	Non-neutral Euclidean Geometry	
Mon 26 Sep		**No class**	
Wed 28 Sep	4.1	Circles	HW 3
Thu 29 Sep	4.2	Circles	
Mon 3 Oct	4.3	Circles	
Wed 5 Oct		**No class**	
Mon 10 Oct		**No class**	
Wed 12 Oct	4.4	Circles	HW 4
Mon 17 Oct	5.1	Towards projective geometry	
	5.2		
Wed 19 Oct	5.3	Projective geometry	HW 5
Mon 24 Oct	6.1	Planar symmetries	
Wed 26 Oct	6.2	Planar symmetries	
Mon 31 Oct		Review	
Wed 2 Nov		**Midterm exam**	
Mon 7 Nov	6.3	Planar symmetries	
Wed 9 Nov	6.4	Planar symmetries	HW 6
	6.5		
Mon 14 Nov	1.1	Spherical geometry: points, lines	
Wed 16 Nov		Spherical geometry	
Mon 21 Nov		Girard's Theorem, Euler's Formula	
Wed 23 Nov		Spherical trigonometry	HW 7
Mon 28 Nov		Taxicab geometry	
Wed 30 Nov		Hyperbolic geometry	
Mon 5 Dec		Hyperbolic geometry	
Wed 7 Dec		Report presentations	
Mon 12 Dec		Review	

Undergraduate Catalog Course Description

College of Staten Island

Course prefix:	MTH
Course number:	623
Course title:	Geometry for Secondary School Teachers
Subject	Mathematics
Minimum credits:	4
Maximum credits:	4
Hours per week:	4
Course description:	Finite geometries, properties of axiomatic systems, a critique of Euclid. An axiomatic development of Euclidean geometry and the reproving of major theorems of Euclid. Non-Euclidean geometry: the concept of parallelism, its history; the geometry of Bolyai-Lobachevsky; a comparison of hyperbolic and Euclidean properties.
Prerequisite:	MTH 233 or MTH 236 or permission of the department.
Comments:	