Queens College

Foundations of GEOMETRY

MATH 618

Spring 2018

Instructor: Alex Ryba

Required text:

Saul Stahl:
A Gateway to Modern Geometry: The Poincare Half-Plane,
2nd Edition, 2008,
Jones and Barlett
ISBN: 9780763753818

Classes: Wednesday, 05.00pm – 07.50pm, Kiely 258

Instructor:

Alex Ryba
alexander.ryba@qc.cuny.edu
718-997-3488
office: SB A116
office hours: Wednesday 10am – 10.30am
Wednesday 3.45pm – 4.15pm
or by appointment.

Course Website:

`http://venus.cs.qc.edu/~ryba/math618/`

Reminder:

The class will not meet on:
Wednesday, April 4
Wednesday, April 11 (Friday schedule)

Requirements:

There are two midterms and a final exam (all cumulative).

Homework problems for each class are posted on the course website. These problems are intended to help prepare you for exams, the homework will not be graded and does not count for credit. Preliminary reading assignmenets are also posted on the website. Each reading assignment should be completed before the corresponding class.

Exams:

Each exam will carry a maximum score of 30 points. Grades will be based on the two best exam scores according to the following curve:

Points required	Grade
60	A+
50	A
48	A-
45	B+
40	B
38	B-
35	C+
30	C
25	C-
0	F

The first midterm will be in class on Wednesday March 14th, 2018.

The second midterm will be in class on Wednesday May 16th, 2018.

At present the college has scheduled the final exam for

Wednesday May 23rd, 2018 from 04.00pm to 06.00pm.

This date and time might be changed by the college during the semester.

Course Topics:

Week 1: Euclidean Geometry (Chapter 1)
Week 2, 3, 4: Spherical geometry and trigonometry (Chapter 11)
Week 5, 6: Inversions (Chapter 3)
Week 7: Midterm 1 Weeks 8, 9: The Hyperbolic Plane (Chapter 4, 5, 6, 7)
Week 10, 11: Hyperbolic trigonometry (Chapter 8)
Week 12: Hyperbolic angles, areas (Chapters 6, 7)
Week 13: Isometries in Euclidean and Hyperbolic geometry (Chapter 2)
Week 14: Midterm 2

Learning Goals. A solid understanding of the rigorous development of Euclidean geometry, Spherical geometry and the non-Euclidean geometry of Bolyai and Lobachevski. Successful students will be able to solve exam problems that test this material.

Policy: Academic dishonesty such as plagiarism or cheating will be dealt with seriously in accord with the University's policy on academic integrity.