

Math 596: Discrete Geometry
Fall 2021
Lecture Schedule

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Below is a list of the topics we intend to cover, along with a rough schedule. Actual schedule is subject to change without notice. Last updated October 22, 2021.

Week	Topic
8/23 – 8/27	Introduction and Roadmap Preview of Polytopes
	Generating Functions
8/30 – 9/3	Generating Functions
9/6	<i>Labor Day: No Classes</i>
9/7 – 9/10	Generating Functions - Deep Cuts
9/13 – 9/17	Rational Generating Functions Quasipolynomials
9/20 – 9/24	The Bridge from Power Series to Geometry
	Polyhedral Geometry
9/27 – 10/1	Polytopes, Polyhedra, and Cones
10/4 – 10/8	Faces of Polyhedra
10/11 – 10/15	Face Lattice Combinatorics Dual Polytopes
10/18 – 10/22	Ehrhart Series of Polytopes Ehrhart Quasipolynomials
10/25 – 10/29	Triangulations
11/1 – 11/5	Catch-up Week
11/9	Midterm Exam: Tuesday, November 9
11/11	<i>Veteran's Day: No Classes</i>
	Proving the Big Theorems
11/15 – 11/19	A Proof of Ehrhart's Theorem
11/22 – 11/24	A Case Study: TBA
11/25 – 11/26	<i>Thanksgiving Break: No Classes</i>
11/29 – 12/3	Towards A Proof of Ehrhart Reciprocity
12/6 – 12/9	A Proof Ehrhart Reciprocity
12/14	Final Presentations: Tuesday, December 14