Prerequisite	**Required for**
Introduction to Ring Theory (W1)	Field Extensions and Galois Theory (W2–W3)
	K-Theory (W2)
	Bad Domains, Bad Factorization (W3)
	Algebraic Groups (W3)
	Algebraic Number Theory (W4)
Introduction to Graph Theory (W1)	Almost Planar (W2)
	Graph Minors (W2)
	King Chicken Theorems (W3)
	Graph Colorings (W3)
	The Hadwiger–Nelson Problem (W3)
	Random Graphs (W3)
	Harmonic Functions on Graphs (W4)
	Spectral Graph Theory (W4)
Introduction to Group Theory (W1)	Geometric Group Theory (W2)
	Group Actions (W2)
	Field Extensions and Galois Theory (W2–W3)
	The Banach–Tarski Paradox (W2)
	A Tale of Combs and Hedgehogs (W3)
	Algebraic Groups (W3)
	What Can We Exponentiate? (W3)
	Representation Theory of Finite Groups (W3–W4)
	Random Groups (W4)
	The Word Problem for Hyperbolic Groups (W4)
	Universal Properties (W4)
	Algebraic Number Theory (W4)
	Ponzi Schemes in Infinite Groups (W4)
	Burnside's Lemma (W4)
	Harmonic Analysis on Abelian Groups (W4)
	The Fundamental Group (W4)
Linear Algebra (W1)	Field Extensions and Galois Theory (W2–W3)
	Extending Inclusion-Exclusion (W2)
	Multilinear Algebra (W2)
	The Banach–Tarski Paradox (W2)
	Algebraic Groups (W3)
	What Can We Exponentiate? (W3)
	Representation Theory of Finite Groups (W3–W4)
	Problem Solving: Polynomials (W4)
	From Matrices to Representations (W4)
	Ponzi Schemes in Infinite Groups (W4)
	Quantum Mechanics (W4)
	Spectral Graph Theory (W4)
	Harmonic Analysis on Abelian Groups (W4)
The Democracy of Number Systems (W1)	Algebraic Number Theory (W4)—rec.
Field Extensions and Galois Theory (W2–W3)	Algebraic Number Theory (W4)
Bad Domains, Bad Factorization (W3)	Algebraic Number Theory (W4)

Class	Requires
Geometric Group Theory (W2)	Introduction to Group Theory (W1)
Group Actions (W2)	Introduction to Group Theory (W1)
Field Extensions and Galois Theory (W2–W3)	Introduction to Ring Theory (W1)
	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Almost Planar (W2)	Introduction to Graph Theory (W1)
Extending Inclusion-Exclusion (W2)	Linear Algebra (W1)
Multilinear Algebra (W2)	Linear Algebra (W1)
Graph Minors (W2)	Introduction to Graph Theory (W1)
K-Theory (W2)	Introduction to Ring Theory (W1)
The Banach–Tarski Paradox (W2)	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Bad Domains, Bad Factorization (W3)	Introduction to Ring Theory (W1)
King Chicken Theorems (W3)	Introduction to Graph Theory (W1)
A Tale of Combs and Hedgehogs (W3)	Introduction to Group Theory (W1)
Algebraic Groups (W3)	Introduction to Ring Theory (W1)
	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Graph Colorings (W3)	Introduction to Graph Theory (W1)
The Hadwiger–Nelson Problem (W3)	Introduction to Graph Theory (W1)
What Can We Exponentiate? (W3)	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Random Graphs (W3)	Introduction to Graph Theory (W1)
Representation Theory of Finite Groups (W3–W4)	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Random Groups (W4)	Introduction to Group Theory (W1)
The Word Problem for Hyperbolic Groups (W4)	Introduction to Group Theory (W1)
Universal Properties (W4)	Introduction to Group Theory (W1)
Problem Solving: Polynomials (W4)	Linear Algebra (W1)
Algebraic Number Theory (W4)	The Democracy of Number Systems (W1)—rec.
	Field Extensions and Galois Theory (W2–W3)
	Bad Domains, Bad Factorization (W3)
From Matrices to Representations (W4)	Linear Algebra (W1)
Harmonic Functions on Graphs (W4)	Introduction to Graph Theory (W1)
Ponzi Schemes in Infinite Groups (W4)	Introduction to Group Theory (W1)
	Linear Algebra (W1)
Quantum Mechanics (W4)	Linear Algebra (W1)
Spectral Graph Theory (W4)	Introduction to Graph Theory (W1)
	Linear Algebra (W1)
Burnside's Lemma (W4)	Introduction to Group Theory (W1)
Harmonic Analysis on Abelian Groups (W4)	Introduction to Group Theory (W1)
	Linear Algebra (W1)
The Fundamental Group (W4)	Introduction to Group Theory (W1)