Course Code		Course Title	Instructor	Undergrad Prerequisites
MAT1060H	Fall	PDE I	Stefanos Aretakis	MAT354H1/MAT457H1 (concurrent accepted), MAT244H1 (80%)/ MAT267H1 (70%), strongly recommended MAT351Y1
MAT1100H	Fall	Algebra I	Julie Desjardins	MAT347Y1
MAT1300H	Fall	Differential Topology	Alexander Kupers	MAT257Y1, MAT240H1, MAT327H1, MAT347Y1, MAT267H1
MAT1600H	Fall	Probability I	Jeremy Quastel	permission of the instructor
MAT1850H	Fall	Linear Algebra and Optimization	Adam Stinchcombe	APM462H1/ (MAT337H1/MAT357H1, MAT224H1/MAT247H1), APM346H1/ MAT351Y1
MAT1061H	Winter	PDEII	Robert Haslhofer	MAT1060, familiarity with Sobolev and Holder spaces, and in particular with funamental embedding and compactness theorems.
MAT1101H	Winter	Algebra II	Florian Herzig	MAT1100H
MAT1301H	Wnter	Algebraic Topology	Dro Bar-Natan	MAT327H1/MAT257Y1, MAT347Y1
MAT1601H	Winter	Probability II	Benjamin Landon	MAT377H1/MAT370H1, MAT457H1, MAT1600H
MAT1501H		Graph Theory	Mike Molloy	permission of the instructor
MAT1105H	Fall	Topics in Representation Theory: Representations of reductive p-adic groups	Mathilde Gerbelli-Gauthier	MAT415H1/MAT1210H, MAT445H1

MAT1190H	Fall	Algebraic Geometry I	Michael Groechenig	MAT327H1, MAT1100H, MAT1101H
MAT1190H	Winter	Algebraic Geometry II	Daniel Litt	TBD
MAT1192H	Winter	Advanced Topics in Algebraic Geometry: Geometric representation theory	Nick Rozenblyum	TBD
MAT1210H	Fall	Topics in Number Theory: Galois cohomology with applications to number theory	Kumar Murty	permission of the instructor
MAT1191H	Winter	Topics in Algebraic Geometry: Prismatic F-gauges	Vologodsky	TBD
MAT1013H	Fall	Theory of Several Complex Variables II: Complex Geometry	Tristan Collins	MAT464H1, MAT354H1, MAT457H1
MAT1120H	Winter	Lie Groups and Lie Algebras I	Lisa Jeffrey	MAT1300H/ MATD67H3/ MATC63H3/ MAT307/ MAT305/ MAT332H1
MAT1062H	Fall	Analysis and PDEs: Geometric Fluid Dynamics	Boris Khesin	MAT244H1/MAT267H1, APM346H1/MAT351Y1, MAT367H1, MAT301H1/MAT347Y1
MAT1312H	Fall	Topics in Geometry: Geometry of Quantum Mechanics	Marco Gualtieri	MAT240H1/MAT247H1, MAT157Y1/MAT257Y1, MAT354H1, MAT267H1, MAT347Y1. Specialist in 3rd or 4th year
MAT1347H	Winter	Topics in symplectic geometry and topology: mirror symmetry and Langlands duality	Benjamin Gammage	MAT448H1, MAT445H1

Course	Term	Title	Instructor	Prerequisites
MAT1502H	Winter	Topics in Geometric Analysis: Complex Monge-Ampere equations and Kahler geometry	Freid Tong	MAT354H1, MAT367H1, MAT457H1
MA1739H	Fall	Topics in Mathematical Physics: Introduction to PDE in physics and geometry - techniques and applications	Israel Michael Sigal	MAT357H1/ MAT337H1/ MAT336H1/ MAT457H1, APM346H1/ MAT351Y1/ APM466H1 or permission of the instructor
MAT1502H	Fall	Optimal Transportation and Its Applications	Robert McCann	MAT357H1
MAT1520H	Fall	Wave propogation: Introduction to nonlinear dispersive equations	Catherine Sulem	MAT351Y1
MAT1739H	Winter	Topics in General Relativity: Self-Similarity and the Einstein Vacuum Equations	Yakov Shlapentokh-Rothman	MAT457H1, MAT458H1, MAT464H1, MAT1060H
MAT1128H	Winter	Topics in Probability: Stochastic differential equations	Jeremy Quastel	permission of the instructor
MAT1128H	Fall	Gaussian distributions with applications	Dmitry Panchenko	MAT1600H
MAT1510H	Winter	Deep Learning	Vardan Papyan	MAT223H1/ MAT240H1, MAT235Y1/ MAT237Y1/MAT257Y1, MAT244H1/MAT267H1, (STA237H1, STA247H1, STA257H1, STA261H1/MAT377H1

MAT1800H	Winter	Methods of Applied Mathematics	Adam Stinchcombe	MAT336H1/MAT337H1/MAT357H1
MAT1314H	Winter	Introduction to Noncommutative Geometry	George Elliott	MAT436H1, Three of MAT377H1/ MAT367H1/ MAT357H1/ MAT347Y1/ MAT354H1. Corequisite: MAT437 OR permission of the instructor
MAT1435H	Fall	Topics in Set Theory: Forcing	Stevo Todorcevic	permission of the instructor
MAT1210H	Winter	Topics in Number Theory: Ellipitcal Curves	Arul Shankar	TBD
MAT1304H	Winter	Topics in Combinatorics - Advanced graph theory: structural, probabilistic and spectral	Lior Gishboliner	MAT332H1