Guide to Graduate Mathematical Courses Fall 2015

Analysis Core

515 Real Analysis I (F)
516 Real Analysis II (S)
511 Functions of a Single Complex Variable (S)

Algebra Core

504 Abstract Algebra I (F)
505 Abstract Algebra II (S)
510 Linear Algebra (F)

Applied Mathematics Core

519 Methods of Applied Mathematics I (F)
520 Methods of Applied Mathematics II (S)
557 Ordinary Differential Equations and Dynamical Systems (F)

Numerical Analysis Core

561 Numerical Analysis I (F)
562 Numerical Analysis II (S)
517 Finite Difference Methods (S)

Advanced Analysis

631 Harmonic Analysis (F even)
624 Manifolds, Tensors and Differential Geometry (S odd)
633 Functional Analysis (F odd)
502 Topology (S)

Advanced Algebra

615 General Theory of Algebraic Structures I (F even)
616 General Theory of Algebraic Structures II (S odd)
617 Category Theory (F odd)
618 Representation Theory (S even)

Discrete Mathematics

605 Design Theory and Association Schemes (F even)
606 Enumerative Combinatorics and Ordered Sets (S odd)
607 Modern (Structural) Graph Theory (F odd)
608 Extremal Graph Theory (S even)

Advanced Numerical Analysis

666 Finite Element Methods (F even)
523 Numerical Analysis of High Performance Computing (S)
667 Computational Methods for Hyperbolic Partial Differential Equations (F odd)*
565 Continuous Optimization (S)

Applied Mathematics

655 Partial Differential Equations I (F)
656 Partial Differential Equations II (S)
507 Applied Linear Algebra (F)
646 Mathematical Modeling of Complex Physical Systems (S)

Probability

641 Foundations of Probability Theory (F)
642 Advanced Probability Theory (S)
554 Introduction to Stochastic Processes (F)
645 Advanced Stochastic Processes (S)

Other

501 Introduction to Real Analysis (F)
533 Cryptography (S)
535 Steganography and Digital Imaging Forensics (S even)
566 Discrete Optimization (F)
601 Mathematical Logic (F odd)

*Currently an Experimental course

Notes:
F = Fall, S = Spring
Even = even numbered years
Odd = odd numbered years