Applied Math Track Math Content Courses

Courses satisfying the requirement of containing "primarily mathematical content" for the Applied Math (AM) concentration within the AMSC program. *All courses are 3 credits unless stated otherwise.*

- MATH 600 Abstract Algebra I
- MATH 601 Abstract Algebra II
- MATH 602 Homological Algebra
- MATH 603 Commutative Algebra
- MATH 606 Algebraic Geometry I
- MATH 607 Algebraic Geometry II
- MATH 620 Algebraic Number Theory I
- MATH 621 Algebraic Number Theory II
- MATH 630 Real Analysis I
- MATH 631 Real Analysis II
- MATH 632 Functional Analysis
- MATH 634 Harmonic Analysis
- MATH 636 Representation Theory
- MATH 642 Dynamical Systems I
- MATH 643 Dynamical Systems II
- MATH 660 Complex Analysis I
- MATH 661 Complex Analysis II
- MATH 670 Ordinary Differential Equations I
- MATH 671 Ordinary Differential Equations II
- MATH 673 Partial Differential Equations I
- MATH 674 Partial Differential Equations II
- MATH 712 Mathematical Logic I
- MATH 713 Mathematical Logic II
- MATH 730 Fund Concepts of Topology
- MATH 734 Algebraic Topology
- MATH 740 Fundamental Concepts of Differential Geometry
- MATH 742 Geometric Analysis
- MATH 744 Lie Groups I

- STAT 600 Probability Theory I
- STAT 601 Probability Theory II
- STAT 650 Applied Stochastic Processes
- STAT 658 Advanced Applied Stochastic Processes II
- STAT 700 Mathematical Statistics I
- STAT 701 Mathematical Statistics II
- STAT 702 Survival Analysis
- STAT 705 Computational Statistics
- STAT 710 Advanced Statistics I
- STAT 730 Time Series Analysis
- STAT 740 Linear Statistical Models I
- STAT 741 Linear Statistical Models II
- STAT 750 Multivariate Analysis
- STAT 770 Analysis of Categorical Data

- *AMSC 660 Scientific Computing I
- *AMSC 661 Scientific Computing II
- *AMSC 665 Scientific Computing III
- AMSC 698Q The Mathematics of Quantum Information Science
- *AMSC 714 Numerical Methods for Stationary PDEs
- *AMSC 715 Numerical Methods for Evolution Partial Differential Equations
- AMSC 721 Mathematical Population Biology
- *AMSC 763 Advanced Linear Numerical Analysis
- *AMSC 764 Advanced Numerical Optimization

Note

*starred AMSC courses meet the numerical analysis course requirement.