GENERAL CURRICULUM IN MATHEMATICS

This is the default curriculum required for students who do not declare a concentration.

STAT 301  Statistics I  4
or STAT 305  Introduction to Probability and Simulation
or STAT 425  Probability Theory

Tracks
Choose three tracks from the following list, with at least one track chosen from the first four tracks listed. A track consists of two paired courses representing depth of study with a particular focus.¹

MATH 413 & MATH 414  Introduction to Analysis II and Introduction to Analysis III
MATH 482 & MATH 483  Abstract Algebra II and Abstract Algebra III
MATH 406 & MATH 413  Linear Algebra III and Introduction to Analysis II
or MATH 440  Topology I
MATH 482 & MATH 413  Abstract Algebra II and Introduction to Analysis II
or MATH 440  Topology I
MATH 304 & MATH 404  Vector Analysis and Introduction to Differential Geometry
MATH 335 & MATH 435  Graph Theory and Discrete Mathematics with Applications I
MATH 344 & MATH 416  Linear Analysis II and Differential Equations II
or MATH 418  Partial Differential Equations
MATH 350 & MATH 341  Mathematical Software and Theory of Numbers
or MATH 344  Linear Analysis II
MATH 408 & MATH 409  Complex Analysis I and Complex Analysis II
MATH 437 & MATH 453  Game Theory and Numerical Optimization
MATH 442 & MATH 443  Euclidean Geometry and Modern Geometries
MATH 451 & MATH 452  Numerical Analysis I and Numerical Analysis II

Select from the following approved electives:  16
CSC/CPE 202  Data Structures
CSC/CPE 203  Project-Based Object-Oriented Programming and Design
CSC 349  Design and Analysis of Algorithms
MATH 304  Vector Analysis
MATH 335  Graph Theory
MATH 341  Theory of Numbers
MATH 344  Linear Analysis II
MATH 350  Mathematical Software
MATH 404  Introduction to Differential Geometry
MATH 406  Linear Algebra III
MATH 408  Complex Analysis I
MATH 409  Complex Analysis II
MATH 413  Introduction to Analysis II
MATH 414  Introduction to Analysis III
MATH 416  Differential Equations II
MATH 418  Partial Differential Equations
MATH 419  Introduction to the History of Mathematics
MATH 435  Discrete Mathematics with Applications I
MATH 437  Game Theory
MATH 440  Topology I
MATH 442  Euclidean Geometry
MATH 443  Modern Geometries
MATH 451  Numerical Analysis I
MATH 452  Numerical Analysis II
MATH 453  Numerical Optimization
MATH 459  Senior Project Seminar
or MATH 460  Senior Project Applied Seminar
MATH 461  Senior Project I
& MATH 462  and Senior Project II
MATH 470  Selected Advanced Topics
MATH 475  Advanced Topics in Mathematics ²
MATH 476  Advanced Topics in Applied Mathematics ²
MATH 482  Abstract Algebra II
MATH 483  Abstract Algebra III
PHYS 132  General Physics II
or PHYS 133  General Physics III
PHYS 211  Modern Physics I
PHYS 301  Thermal Physics I
PHYS 302  Classical Mechanics I
PHYS 322  Vibrations and Waves
PHYS 323  Optics
PHYS 405  Quantum Mechanics I
PHYS 408  Electromagnetic Fields and Waves I
STAT 301  Statistics I
STAT 302  Statistics II
STAT 305  Introduction to Probability and Simulation
STAT 425  Probability Theory
STAT 426  Estimation and Sampling Theory
STAT 427  Mathematical Statistics

Total units  44

¹ A single course cannot be used to satisfy multiple tracks.
² Maximum 8 units combined between MATH 475 and MATH 476.