GENERAL CURRICULUM IN MATHEMATICS

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

STAT 301  
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.

MATH 413 & MATH 414  
Introduction to Analysis II and Introduction to Analysis III

MATH 406 & MATH 440  
Linear Algebra III and Topology I

MATH 482 & MATH 413  
Abstract Algebra II and Introduction to Analysis II

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

MATH 350 & MATH 434  
Mathematical Software and 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

Approved Electives
Select from the following:

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

MATH 460  
Senior Project Applied Seminar

MATH 461 & MATH 462  
Senior Project I and Senior Project II

MATH 470  
Selected Advanced Topics

MATH 475  
Advanced Topics in Mathematics 3

MATH 476  
Advanced Topics in Applied Mathematics 3

MATH 482  
Abstract Algebra II

MATH 483  
Abstract Algebra III

PHYS 132  
General Physics II

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
General Curriculum in Mathematics

1. A single course cannot be used to satisfy multiple tracks.
2. Consultation with advisor is recommended prior to selecting Approved Electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
3. Maximum of 8 units combined between MATH 475 and MATH 476.