

GENERAL CURRICULUM IN MATHEMATICS

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

STAT 301 or STAT 305	Statistics I Introduction to Probability and Simulation	4
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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 24

MATH 413 & MATH 414	Introduction to Analysis II and Introduction to Analysis III
MATH 482 & MATH 483 or MATH 406	Abstract Algebra II and Abstract Algebra III Linear Algebra III
MATH 406 & MATH 413 or MATH 440	Linear Algebra III and Introduction to Analysis II Topology I
MATH 482 & MATH 413 or MATH 440	Abstract Algebra II and Introduction to Analysis II 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 or MATH 418	Linear Analysis II and Differential Equations II Partial Differential Equations
MATH 341 & MATH 437	Theory of Numbers and Game Theory
MATH 410 & MATH 411	Complex Analysis I and Complex Analysis II
MATH 442 & MATH 443	Euclidean Geometry and Modern Geometries
MATH 451 & MATH 452 or MATH 453	Numerical Analysis I and Numerical Analysis II Numerical Optimization

Approved Electives

Select from the following:² 16

CSC/CPE 202	Data Structures
CSC/CPE 203	Project-Based Object-Oriented Programming and Design
CSC 349	Design and Analysis of Algorithms
CSC 365	Introduction to Database Systems
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 410	Complex Analysis I
MATH 411	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 or MATH 460	Senior Project Seminar 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
MATH 531	Discrete Mathematics with Applications II
MATH 541	Topology II
PHYS 142 or PHYS 143	General Physics II General Physics III
PHYS 211	Modern Physics I
PHYS 301	Thermal Physics I
PHYS 305	Classical Mechanics I
PHYS 323	Optics
PHYS/CPE 345	Quantum Computing
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

2 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.