

Math of Life Sciences

MAT 5133 Mathematical Biology MAT 5323 Mathematical Modeling MAT 5643 Optimal Control and Calculus of Variations

Analysis

MAT 5213 Real Analysis II MAT 5223 Complex Analysis I MAT 5233 Complex Analysis II MAT 5553 Harmonic Analysis MAT 5403 Functional Analysis I

Differential Equations

MAT 5663 Differential Equations II MAT 5673 Partial Differential Equations I MAT 5683 Partial Differential Equations II

Information / Data / Communications

MAT 5123 Introduction to Cryptography
MAT 5143 Cryptography II
MAT 5433 Discrete Mathematics II (Graph Theory)
MAT 5153 Data Analytics
MAT XXXX Mathematics of AI
MAT XXXX Quantum Information

Algebra-Cryptography

MAT 5173 Algebra I MAT 5183 Algebra II MAT 5123 Introduction to Cryptography MAT 5143 Cryptography II

Scientific Computing

MAT 5613 Numerical Solutions of Diff. Eq. MAT 5163 Probability Theory and Computing

Mathematical Physics

MAT 5863 Mathematical Physics MAT XXXX Mathematical Physics II MAT XXXX Differential Geometry MAT XXXX Quantum Information MAT 5453 Quantum Logic

Foundations of Mathematics

MAT 5243 Discrete Math I MAT 5433 Discrete Math II (Graph Theory) MAT 5243 General Topology I MAT 5443 Logic and Computability MAT 5453 Quantum Logic

Geometry-Topology

MAT 5243 General Topology I MAT 5253 General Topology II MAT XXXX Differential Geometry

Discrete Math & Logic

MAT 5423 Discrete Mathematics I MAT 5433 Discrete Mathematics II (Graph theory) MAT 5443 Logic and Computability MAT 5453 Quantum Logic

Choose 1 of the following options:

Two qualifying examinations in two distinct tracks
OR
One qualifying examination plus an Industry Internship
(Applied Mathematics Track)
OR
One qualifying examination plus synthesis paper
(Mathematics Education Track)

Graduation

Preparing and defending a Master's Thesis.

Candidates who choose this option must be enrolled for at least six hours of Master's Thesis (MAT 6983). The thesis must be on a research project and must be finalized by a public defense.

Graduation