

Mathematics (Minor)

Plan Requirements

Master's Minor

Code	Title	Hours	Counts towards
Required Courses		9	
Select at least three Graduate-level MA courses approved in conjunction with the academic committee ^{1, 2}			
Total Hours		9	

PhD Minor

Code	Title	Hours	Counts towards
Required Courses		12	
Select any 500- or 700-level MA course approved in conjunction with the academic committee ¹			
Total Hours		12	

¹ Student must maintain an average 3.0 GPA for courses to count toward a Mathematics minor.

² At least six credit hours must be taken at the letter graded 500- or 700-level.

Graduate Mathematics Courses

Code	Title	Hours	Counts towards
MA 501	Advanced Mathematics for Engineers and Scientists I	3	
MA 502	Advanced Mathematics for Engineers and Scientists II	3	
MA 504	Introduction to Mathematical Programming	3	
MA 505	Linear Programming	3	
MA 507	Survey of Real Analysis	3	
MA 508	Survey of Geometry	3	
MA 509	Survey of Abstract Algebra	3	
MA 510	Selected Topics In Mathematics For Secondary Teachers	1-6	

MA 511	Introduction to Advanced Calculus	3	
MA 512	Advanced Calculus	3	
MA 513	Introduction To Complex Variables	3	
MA 514	Foundations of Cryptography	3	
MA 515	Analysis I	3	
MA 518	Geometry of Curves and Surfaces	3	
MA 520	Linear Algebra	3	
MA 521	Abstract Algebra I	3	
MA 522	Computer Algebra	3	
MA 523	Linear Transformations and Matrix Theory	3	
MA 524	Combinatorics I	3	
MA 526	Mathematical Analysis II	3	
MA 528		3	
MA 531	Dynamic Systems and Multivariable Control I	3	
MA 532	Ordinary Differential Equations I	3	
MA 534	Introduction To Partial Differential Equations	3	
MA 537	Nonlinear Dynamics and Chaos	3	
MA 540	Uncertainty Quantification for Physical and Biological Models	3	
MA 544	Computer Experiments In Mathematical Probability	3	
MA 546	Probability and Stochastic Processes I	3	
MA 547	Stochastic Calculus for Finance	3	
MA 548	Monte Carlo Methods for Financial Math	3	

MA 549	Financial Risk Analysis	3	MA 723	Theory of Matrices and Applications	3
MA 551	Introduction to Topology	3	MA 724	Combinatorics II	3
MA 555	Introduction to Manifold Theory	3	MA 725	Lie Algebra Representation Theory	3
MA 561	Set Theory and Foundations Of Mathematics	3	MA 731	Dynamic Systems and Multivariable Control II	3
MA 565	Graph Theory	3	MA 732	Ordinary Differential Equations II	3
MA 573	Mathematical Modeling of Physical and Biological Processes I	3	MA 734	Partial Differential Equations	3
MA 574	Mathematical Modeling of Physical and Biological Processes II	3	MA 746	Introduction To Stochastic Processes	3
MA 580		3	MA 747	Probability and Stochastic Processes II	3
MA 583	Introduction to Parallel Computing	3	MA 748	Stochastic Differential Equations	3
MA 584	Numerical Solution of Partial Differential Equations--Finite Difference Methods	3	MA 753	Algebraic Topology	3
MA 587	Numerical Solution of Partial Differential Equations--Finite Element Method	3	MA 755	Introduction to Riemannian Geometry	3
MA 591	Special Topics	1-6	MA 766	Network Flows	3
MA 685	Master's Supervised Teaching	1-3	MA 771	Biomathematics I	3
MA 706	Nonlinear Programming	3	MA 772	Biomathematics II	3
MA 708	Integer Programming	3	MA 773	Stochastic Modeling	3
MA 715	Measure Theory and Integration	3	MA 774	Partial Differential Equation Modeling in Biology	3
MA 716	Advanced Functional Analysis	3	MA 780	Numerical Analysis I	3
MA 719	Vector Space Methods in System Optimization	3	MA 784	Nonlinear Equations and Unconstrained Optimization	3
MA 720	Lie Algebras	3	MA 785	Numerical Solution of Ordinary Differential Equations	3
MA 721	Abstract Algebra II	3	MA 788	Numerical Nonlinear Partial Differential Equations	3
MA 722	Computer Algebra II	3			

MA 790	Advanced Special Topics System Optimization	1-6
MA 791	Special Topics In Real Analysis	1-6
MA 792	Special Topics In Algebra	1-6
MA 793	Special Topics In Differential Equations	1-6
MA 796	Special Topics In Combinatorial Analysis	1-6
MA 797	Special Topics In Applied Mathematics	1-6
MA 798	Special Topics In Numerical Analysis	1-6
MA 810	Special Topics	1-6
MA 812	Special Topics in Mathematical Programming	1-6
MA 816	Advanced Special Topics Sys Opt	1-6

Xiao-Biao Lin
Alun L. Lloyd
Sharon R. Lubkin
Negash G. Medhin
Kailash Chandra Misra
Mette Olufsen
Tao Pang
Nathan P. Reading
Jesus Rodriguez
Michael Shearer
Ralph Conover Smith
Ernest Lester Stitzinger
Seth M. Sullivant
Agnes Szanto
Hien Trong Tran
Semyon Victor Tsynkov
Dmitry Valerievich Zenkov

Faculty

Full Professors

Bojko Nentchev Bakalov
Alina Emil Chertock
Moody Ten-Chao Chu
Jo-Ann D. Cohen
Patrick Louis Combettes
Pierre Alain Gremaud
Mansoor Abbas Haider
Hoon Hong
Ilse Ipsen
Kazufumi Ito
Naihuan Jing
Erich L. Kaltofen
Carl Timothy Kelley
Arkady Kheyfets
Irina Aleksandrovna Kogan
Zhilin Li

Associate Professors

Lorena Viorica Bociu
Mikhail Gilman
Min Jeong Kang
Ricky Ini Liu
Arvind Krishna Saibaba
David Papp
Cynthia Leslie Vinzant

Assistant Professors

Martin Helmer
Alen Alexanderian
Erik Walter Bates
Chao Chen
Mohammad Mehdi Farazmand
Kevin Bryant Flores
P. Ivanisvili

C. Jones
Yerkin Kitapbayev
Zane Kun Li
Tye Lidman
Jacob Paul Matherne
P. McGrath
Ryan William Murray
Tien Khai Nguyen
Dominykas Norgilas
A. Papanicolaou
Yairon Cid Ruiz
T. Saksala
Radmila Sazdanovic
Yeonjong Shin

Practice/Research/Teaching Professors

Elisabeth M. M. Brown
L. Castle
Alina Nicoleta Duca
Molly A. Fenn
Bevin Laurel Maultsby
S. Paul
Brenda B. Williams

Emeritus Faculty

John William Bishir
Stephen LaVern Campbell
Richard E. Chandler
H. Charlton
Ethelbert N. Chukwu
Lung-ock Chung
Joseph C. Dunn
Gary Doyle Faulkner
John E. Franke
Ronald O. Fulp

Dennis E. Garoutte
Robert E. Hartwig
Aloysius G. Helminck
Robert H. Martin Jr.
Thomas J. Lada
Joe A. Marlin
Carl Meyer Jr.
Larry Keith Norris
Sandra Paur
Lavon Barry Page
E. Peterson
Mohan Sastri Putcha
N. Rose
Stephen Schecter
Jeffrey Scott Scroggs
James Francis Selgrade
C. Siewert
Robert Silber
Jack William Silverstein
Michael F. Singer
R. White

Adjunct Faculty

Scott Christopher Batson
Jonathan David Hauenstein
Patricia L. Hersh
John Lavery
Sarah Katherine Mason
Jordan E. Massad
Jessica Loock Matthews
J. Ottesen