

# MATHEMATICS MINOR

MAT

## Mathematics Department

Buckham A238  
(716) 878-5621

### Program Requirements

Code	Title	Credit Hours
<b>Required Courses (11-14 credit hours)</b>		
Select one from the following:		4-5
MAT 126	APPLIED CALCULUS I	
MAT 161	CALCULUS I <sup>1</sup>	
Select one from the following:		4-5
MAT 127	APPLIED CALCULUS II	
MAT 162	CALCULUS II <sup>1</sup>	
Select one from the following:		3-4
MAT 202	INTRODUCTION TO LINEAR ALGEBRA	
MAT 270	DISCRETE MATHEMATICS	
MAT 263	CALCULUS III <sup>1</sup>	
<b>Electives (9 credit hours)</b>		
Select from the following:		9
MAT 300	TECHNIQUES OF PROOF (prerequisite: MAT 162 and MAT 270)	
MAT 301	FUNDAMENTALS OF ABSTRACT ALGEBRA (prerequisites: MAT 202 and MAT 300)	
MAT 302	ABSTRACT ALGEBRA II (prerequisite: MAT 301)	
MAT 309	DISCRETE MATHEMATICS II (prerequisite: MAT 270)	
MAT 311	INTRODUCTORY PROBABILITY AND STATISTICS (3 years of HS Regents mathematics)	
MAT 315	DIFFERENTIAL EQUATIONS (prerequisite: MAT 263 or permission of instructor)	
MAT 316	INTERMEDIATE DIFFERENTIAL EQUATIONS (prerequisite: MAT 315)	
MAT 318	MATHEMATICAL MODELING	
MAT 319	MATHEMATICAL BIOLOGY	

MAT 322	MODERN GEOMETRY (prerequisite: MAT 270 or MAT 300)
MAT 325	PROBABILITY AND STATISTICS (prerequisites: MAT 127 or MAT 162 and MAT 270 or permission of instructor)
MAT 351	ELEMENTARY THEORY OF NUMBERS (4 years of HS Regents mathematics)
MAT 370	APPLIED NETWORKS (prerequisites: MAT 202 and MAT 270)
MAT 381	PROBABILITY THEORY (prerequisites: MAT 270 and MAT 127 or MAT 162. Credit will not be awarded for both MAT 325 and MAT 381)
MAT 382	MATHEMATICAL STATISTICS (prerequisites: MAT 263 and MAT 381)
MAT 383	APPLIED STATISTICS I (prerequisites: MAT 382 or MAT 325 or MAT 311 and MAT 381)
MAT 390	INTRODUCTION TO OPERATIONS RESEARCH (prerequisite: MAT 202 and MAT 270)
MAT 401	INTRODUCTION TO COMPUTABILITY (prerequisites: MAT 270 and either MAT 301 or MAT 351)
MAT 404	APPLICATIONS OF LINEAR ALGEBRA (prerequisites: MAT 263 and MAT 264 and MAT 202)
MAT 411	COMPLEX VARIABLES (prerequisite: MAT 263)
MAT 417	INTRODUCTION TO REAL ANALYSIS I (prerequisite: MAT 263)
MAT 418	INTRODUCTION TO REAL ANALYSIS II (prerequisite: MAT 417)
MAT 430	SET THEORY (prerequisites: MAT 300 with at least a C or PHI 307 with at least a C)

MAT 431	MATHEMATICAL LOGIC (prerequisite: MAT 300 with at least a C or PHI 307 with at least a C)	
MAT 461	NUMERICAL ANALYSIS (prerequisites: MAT 263 and MAT 264 and MAT 202)	
MAT 471	INTRODUCTION TO TOPOLOGY (prerequisite: MAT 300 and MAT 301 or MAT 417)	
MAT 490	SEMINAR (Permission of Instructor)	
MAT 491	CAPSTONE RESEARCH IN MATHEMATICS (prerequisite: MAT 301 or MAT 417 and senior status or permission of instructor)	
MAT 495	SPECIAL PROJECT (Permission of Instructor)	
MAT 499	INDEPENDENT STUDY (Permission of Instructor)	
<hr/> Total Credit Hours		20-23

<sup>1</sup> MAT 161, MAT 162, and MAT 263 have one-hour co-requisites, MAT 163, MAT 164, MAT 264, respectively.