

MATHEMATICS MAJOR

Pure Math Emphasis (BA/BS) (38 units)

Effective beginning Fall 2019
 An approved minor is required for this major

For students interested in graduate work in mathematics or in combining their mathematics with concentrations in, for example, music, art, computer science, or language. For additional information, visit www.ams.org and www.maa.org.

COURSES			OFFERED*	PRE-REQUISITE
<i>Major Requirements:</i>				
MATH 200	1 unit	Mathematics: Form and Function	E	CoReq: Math 253
MATH 253	5 units	Calculus and Analytic Geometry I (GM)	E	Math 152 or (Math 150 and 151) each with C or better
MATH 254	4 units	Calculus and Analytic Geometry II	E	Math 253 or (Math 250 and 151) or (Math 250 and 152) each with C or better
MATH 255	4 units	Calculus and Analytic Geometry III	E	Math 254 with C or better
MATH 280	3 units	Discrete Mathematics	E	Math 250 with B or better or Math 253 with C or better
MATH 301	3 units	Introduction to Analysis	E	Math 254 with C or better and Math 280
MATH 355	3 units	Matrices and Linear Algebra	E	Math 250 with B or better or Math 253 with C or better
MATH 452	3 units	Introduction to Abstract Algebra	F	Math 280 or consent of instructor UnReq: 415
<i>Select four courses from the following list (12 units in total):</i>				
MATH 361	3 units	Differential Equations	F	Math 254 with C or better
MATH 417	3 units	Number Theory	SOY	Math 280 or Math 415 or consent of instructor
MATH 431	3 units	Topology	FOY	Math 255 and either Math 280 or consent of instructor
MATH 450	3 units	Graph Theory	FEY	Math 280 or consent of instructor
MATH 453	3 units	Abstract Algebra	SEY	Math 355 and Math 452
MATH 463	3 units	Complex Variables	FOY	Math 255
MATH 464	3 units	Advanced Calculus	FEY	Math 301 or consent of instructor
<i>Unique Computer Science Requirement (3 units) – select one of the following:</i>				
COMPSCI 170	3 units	Introduction to Python Programming		
COMPSCI 171	3 units	Introduction to Visual Basic Programming		
COMPSCI 172	3 units	Introduction to JAVA (GM)		
COMPSCI 174	3 units	Introduction to C++ (GM)		
COMPSCI 220	3 units	Intermediate JAVA		
COMPSCI 222	3 units	Intermediate C++		
COMPSCI 347	3 units	Scientific Computing		
<i>Unique Writing Requirement (3 units) – select one of the following:</i>				
ENG 370	3 units	Advanced Composition		
ENG 372	3 units	Technical and Scientific Writing		

MILESTONES
 Math Exit Interview
 GPA Requirement of 2.0

* E = Every Semester
 S = Every Spring
 F = Every Fall
 SOY = Every Odd Spring
 SEY = Every Even Spring
 FOY = Every Odd Fall
 FEY = Every Even Fall