Mathematics B.S.

Bachelor of Science in Mathematics

Core Curriculum Courses		
See the Core Curriculum Courses		42
Required Courses, 31 credit hours:		
MATH 2305	Discrete Mathematics	3
MATH 2318	Linear Algebra	3
MATH 2320	Differential Equations	3
MATH 2413	Calculus I *	
MATH 2414	Calculus II	4
MATH 2415	Calculus III	4
MATH 402	Mathematical Probability	3
MATH 403	Mathematical Statistics	3
COSC 1436	Introduction to Computer Science and Programming	4
COSC 1437	Programming Fundamentals II	4
or PHYS 2425	University Physics I	
or PHYS 2426	University Physics II	
Required Concentration Courses, 9 credit hours:		
MATH 332	Methods of Mathematical Proofs	3
MATH 334	Abstract Algebra	3
MATH 436	Real Analysis	3
or MATH 438	Complex Analysis	
or MATH 440	Topology	
Required Math Electives, 6 credit hours:		
In addition to the required courses, 6 hours of Math courses at 300/400 level except MATH 301, 361, 362, 371, 372, 380, 460		6
Additional Electives Required, 32 credit hours:		
A minor or second major is strongly suggested to meet the academic and career interests. Meet a math faculty member to choose a minor or a second major.		32
Total Hours		**120**

Bachelor of Science in Mathematics - Emphasis in Data Science

Core Curriculum Courses		
See the Core Curriculum Requirements (http://coursecatalog.tamuc.edu/undergrad/core-curriculum-requirements/)		42
Required courses in the major, 31 credit hours:		
MATH 2305	Discrete Mathematics	3
MATH 2318	Linear Algebra	3
MATH 2320	Differential Equations	3
MATH 2413	Calculus I *	
MATH 2414	Calculus II	4
MATH 2415	Calculus III	4
MATH 402	Mathematical Probability	3
MATH 403	Mathematical Statistics	3
COSC 1436	Introduction to Computer Science and Programming	4
COSC 1437	Programming Fundamentals II	4
or PHYS 2425	University Physics I	
Required Concentration Courses, 24 credit hours:		
COSC 2336	Data Structures and Algorithms	3
CSCI 333	Applied Data Analytics with Python	3
CSCI 340	Database	3
CSCI 380	Web Programming and Interface Design	3

BUSA 421	Data Mining	3
MATH 341	Linear Regression Models	3
MATH 342	Mathematics for Machine Learning	3
MATH 486	Image Processing with Applications	3
Required Math Electives, 6 credit hours:		
6 hours of Math courses at 300/400 level except MATH 301, 361, 362, 371, 372, 380 and 460		6
Additional Electives Required, 17 credit hours:		
Meet a math faculty member for taking electives.		17
Total Hours		**120**

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This courses will satisfy the Core Curriculum Requirements