

MATHEMATICS, BS

Course Sequencing

Secondary Mathematics Teaching Track (<https://catalog.tamucc.edu/undergraduate/science/teaching-certificates/mathematics-bs-grades-7-12-education-concentration/#coursesequencingtext>)

Applied/Industrial Track

First Year

Fall		Hours
ENGL 1301	Writing and Rhetoric I	3
USSE 1201	University Seminar	2
MATH 2413	Calculus I	4
POLS 2305	U.S. Government and Politics	3
American History Core Requirement		3
Hours		15

Spring

ENGL 1302	Writing and Rhetoric II	3
	or COMM 1311 or Foundation of Communication	
MATH 2414	Calculus II	4
POLS 2306	State and Local Government	3
American History Core Requirement		3
Minor Course		3
Hours		16

Second Year

Fall		Hours
COSC 1330	Programming for Scientists, Engineers, and Mathematicians	3
MATH 2415	Calculus III	4
PHYS 2425	University Physics I	4
MATH 3313	Foundations of Number Theory	3
Language, Philosophy & Culture Core Requirement		3
Hours		17

Spring

PHYS 2426	University Physics II	4
MATH 3315	Differential Equations	3
MATH 3314	Foundations of Real Numbers	3
Minor Course		3
Creative Arts Core Requirement		3
Hours		16

Third Year

Fall		Hours
MATH 3311	Linear Algebra	3
COSC 3385	Numerical Methods	3
MATH Upper Elective		3
Minor Course		3
Elective (to meet 120 hrs)		3
Hours		15

Spring

MATH 3345	Statistical Modeling and Data Analysis	3
MATH Upper Elective		3

Minor Course		3
Social and Behavioral Sciences Core Requirement		3
Elective (to meet 120 hrs)		3
Hours		15

Fourth Year

Fall		Hours
MATH 4301	Introduction to Analysis	3
MATH Upper Elective		3
Minor Course		3
Elective (to meet 120 hrs)		3
Hours		12

Spring

MATH 4385	Applied Modeling	3
Minor Course		3
Elective (to meet 120 hrs)		3
Elective (to meet 120 hrs)		3
Elective (to meet 120 hrs)		3
Hours		15

Total Hours		121
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Data Science and Statistics Track

First Year

Fall		Hours
ENGL 1301	Writing and Rhetoric I	3
USSE 1201	University Seminar	2
MATH 2413	Calculus I	4
POLS 2305	U.S. Government and Politics	3
American History Core Requirement		3
Hours		15

Spring

ENGL 1302	Writing and Rhetoric II	3
	or COMM 1311 or Foundation of Communication	
MATH 2414	Calculus II	4
POLS 2306	State and Local Government	3
American History Core Requirement		3
Minor Course		3
Hours		16

Second Year

Fall		Hours
COSC 1330	Programming for Scientists, Engineers, and Mathematicians	3
MATH 2415	Calculus III	4
PHYS 2425	University Physics I	4
MATH 3313	Foundations of Number Theory	3
Language, Philosophy & Culture Core Requirement		3
Hours		17

Spring

PHYS 2426	University Physics II	4
MATH 3315	Differential Equations	3
MATH 3311	Linear Algebra	3
Minor Course		3

Creative Arts Core Requirement		3
Hours		16
Third Year		
Fall		
MATH 3345	Statistical Modeling and Data Analysis	3
	or MATH 3342 or Applied Probability and Statistics	
MATH 3347	Introduction to Probability	3
MATH Upper Elective		3
Minor Course		3
Elective (to meet 120 hrs)		3
Hours		15
Spring		
MATH 3349	Principles of Data Science	3
MATH 4321	Applied Regression Analysis	3
MATH Upper Elective		3
Minor Course		3
Social and Behavioral Sciences Core Requirement		3
Hours		15
Fourth Year		
Fall		
MATH 4342	Introduction to Mathematical Statistics	3
COSC 4345	Introduction to Machine Learning	3
MATH Upper Elective		3
Minor Course		3
Elective (to meet 120 hrs)		3
Hours		15
Spring		
MATH 4385	Applied Modeling	3
Minor Course		3
Elective (to meet 120 hrs)		3
Elective (to meet 120 hrs)		3
Hours		12
Total Hours		121