MATHEMATICS, BS

Course Sequencing

Secondary Mathematics Teaching Track (http://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
  or COMM 1311
	Writing and Rhetoric II
	  or Foundation of Communication
		3

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		
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		
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		
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**

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
  or COMM 1311
	Writing and Rhetoric II
	  or Foundation of Communication
		3

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		
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 or MATH 3342	Statistical Modeling and Data Analysis or Applied Probability and Statistics	3
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**