Bachelor of Science (BS)
Mathematics
Applied Mathematics

2024-2026

FIRST YEAR

FALL

H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
3	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details. Options: ENGL 1301
4	MATH 2413	Calculus I	C	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	Prerequiste for MATH 2412: MATH 1314/1414 with a grade of "C" or better or passing Exemption Test administered by Department of Mathematics
3	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327
3	CSCI 1380	Introduction to Programming in Python		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
3	Choose 1	Creative Arts		050		See General Education Core for course options.
	UNIV	1301 Learning Framework 1101 Academic and Career Success 1001 Living and Working by Design				As required, based on credit hours earned, TSI status, High school rank, major declaration

16 Semester Total Hours

SPRING

H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
3	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details. Options: ENGL 1302 or ENGL 1305
4	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.	
3	MATH 2318	Linear Algebra	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.	
3	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328
3	ECON 1301 or ECON 2301	Introduction to Economics or Principles of Macroeconomics		080		

16 Semester Total Hours

SECOND YEAR

FALL

H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
3	MATH 3341	Differential Equations	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
4	MATH 2415	Calculus III	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
3	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details
4	PHYS 2425	Physics for Scientists and Engineers I		030/090	MATH 2413	
3	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.

17 Semester Total Hours

SPRING

H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
3	MATH 3343	Introduction to Mathematical Software	C		MATH 2414 (or MATH 2488) and MATH 2318 with a grade of 'C' or better.	
3	MATH 3350	Introduction to Mathematical Proof	C		MATH 2318 with a grade of 'C' or better.	
3	POLS 2306	Texas Government & Politics		070		See General Education Core for more details
1	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.
4	PHYS 2426	Physics for Scientists and Engineers II		030/090	PHYS 2425 and MATH 2414.	

14 Semester Total Hours

The 2024-2026 list of core courses can be found in the 2024-2026 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Bachelors Degree Program Regulations'

Symbols Key
Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.
Bolded Course #: Program Admission Requirement

General Education Core (GEC) Sections: 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary ; 090 - Technologies; 090 - Language Diversity & Writing.

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
THIRD YEAR / **FALL**	3	MATH 3363	Modern Algebra I	C		MATH 2318 and MATH 3350, each with a grade of 'C' or better.	
	3	MATH 3352	Modern Geometry I	C		MATH 2318 with a grade of 'C' or better.	
	3	STAT 3301	Applied Statistics	C		MATH 2413 with a grade of 'C' or better.	
	3	MATH 3345	Linear Optimization	C		MATH 2318 with a grade of 'C' or better.	
	3	X3XX 43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346
15 Semester Total Hours							
SPRING	3	MATH 3372	Real Analysis I	C		MATH 2414 (or MATH 2488) and MATH 3350, each with a grade of 'C' or better.	
	3	STAT 3337	Probability and Statistics	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
	3	MATH 3349	Numerical Methods	C		MATH 2414 (or MATH 2488) and MATH 3343, each with a grade of 'C' or better.	
	3	MATH 4344	Boundary Value Problems	C		MATH 3341 or MATH 2321 with a grade of 'C' or better.	
	3	X3XX 43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346
15 Semester Total Hours							

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FOURTH YEAR / **FALL**	3	MATH 4390	Mathematics Project	C		Pre- or co-requisite in MATH 2415, STAT 3337, MATH 3341, MATH 3352, MATH 3363, MATH 3372.	
	3	MATH 3361	Applied Discrete Mathematics	C		MATH 2318 with a grade of 'C' or better.	
	3	MATH 4342	Complex Variables	C		MATH 2415 with a grade of 'C' or better.	
	3	X3XX-43XX	Free Elective				
	3	X3XX-43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346
15 Semester Total Hours							
SPRING	3	MATH 3347	Elementary Cryptology	C		MATH 2318 with a grade of 'C' or better.	
	3	MATH 4346	Integral Transforms	C		MATH 2415 and either MATH 3341 or MATH 2321, both with a grade of 'C' or better.	
	3	X3XX-43XX	Free Elective				
	3	X3XX-43XX	Free Elective				
12 Semester Total Hours							

120 TOTAL HOURS

(42) Advanced minimum credit hours

Revised: Wednesday, October 10th, 2024