

**Bachelor of Science (BS)**

**Mathematics**

*Applied Math*

The 2026-2027 list of core courses can be found in the 2026-2027 Undergraduate Catalog; [www.utrgv.edu/catalog](http://www.utrgv.edu/catalog) > See 'Bachelors Degree Program Regulations'

Symbols Key										
Campus: B - Offered in Brownsville; E - Offered in Edinburg; O - Offered Online; T - Travel Required										
Bolted Course Number*: Program Admission Requirement										
Min Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.										
Core: 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;										
Core: 090 - Applied Communication and Literacies; Humanities; Leadership; Science Labs; Interdisciplinary; Technologies; Language Diversity & Writing										
This program is delivered in a hybrid format with courses offered through a combination of face-to-face and online instruction.										
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
1	Fall	3	B/E/O	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	
1	Fall	4	B/E/O	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.	Prerequisite for MATH 2412: MATH 1314/1414 with a grade of "C" or better or passing Exemption Test administered by Department of Mathematics	
1	Fall	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327	
1	Fall	3	B/E	CSCI 1380	Introduction to Programming in Python		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.		
1	Fall	3	B/E/O	Choose 1	Creative Arts		050		See General Education Core for course options.	
1	Fall		B/E/O	UNIV	1301 Learning Framework 1101 Academic and Career Success 1001/1300 Living and Working by Design				As required, based on a number of factors such as credit hours earned, TSI status, high school rank, major declaration, etc.	
1	Fall	16	<b>Semester Total Hours</b>							
1	Spring	3	B/E/O	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	
1	Spring	4	B/E/O	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.		
1	Spring	3	B/E/O	MATH 2318	Linear Algebra	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.		
1	Spring	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328	
1	Spring	3	B/E/O	ECON 1301 or ECON 2301	Introduction to Economics or Principles of Macroeconomics		080			
1	Spring	16	<b>Semester Total Hours</b>							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
2	Fall	3	B/E/O	MATH 3341	Differential Equations	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
2	Fall	4	B/E/O	MATH 2415	Calculus III	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
2	Fall	3	B/E/O	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details	
2	Fall	4	B/E/O	PHYS 2425	Physics for Scientists and Engineers I		030/ 090	MATH 2413		
2	Fall	3	B/E/O	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.	
2	Fall	17	<b>Semester Total Hours</b>							
2	Spring	3	B/E	MATH 3343	Introduction to Mathematical Software	C		MATH 2414 (or MATH 2488) and MATH 2318 with a grade of 'C' or better.		
2	Spring	3	B/E	STAT 3301	Applied Statistics	C		MATH 2413 with a grade of 'C' or better.		
2	Spring	3	B/E	MATH 3352	Modern Geometry I	C		MATH 2318 with a grade of 'C' or better.		
2	Spring	1	B/E/O	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.	
2	Spring	4	B/E/O	PHYS 2426	Physics for Scientists and Engineers II		030/ 090	PHYS 2425 and MATH 2414.		
2	Spring	14	<b>Semester Total Hours</b>							

Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
3	Fall	3	B/E	MATH 3363	Modern Algebra I	C		MATH 2318 and MATH 3350, each with a grade of 'C' or better.		
3	Fall	3	B/E/O	POLS 2306	Texas Government & Politics		070		See General Education Core for more details	
3	Fall	3	B/E	MATH 3350	Introduction to Mathematical Proof	C		MATH 2318 with a grade of 'C' or better.		
3	Fall	3	B/E	MATH 3345	Linear Optimization	C		MATH 2318 with a grade of 'C' or better.		
3	Fall	3	B/E/O	X3XX 43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346	
3	Fall	15	<b>Semester Total Hours</b>							
3	Spring	3	B/E	MATH 3372	Real Analysis I	C		MATH 2414 (or MATH 2488) and MATH 3350, each with a grade of 'C' or better.		
3	Spring	3	B/E	STAT 3337	Probability and Statistics	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
3	Spring	3	B/E	MATH 3349	Numerical Methods	C		MATH 2414 (or MATH 2488) and MATH 3343, each with a grade of 'C' or better.		
3	Spring	3	E/O	MATH 4344	Boundary Value Problems	C		MATH 3341 or MATH 2321 with a grade of 'C' or better.		
3	Spring	3	B/E/O	X3XX 43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346	
3	Spring	15	<b>Semester Total Hours</b>							
3	Summer	3	E/O	MATH 4346	Integral Transforms	C		MATH 2415 and either MATH 3341 or MATH 2321, both with a grade of 'C' or better.		
3	Summer	3	<b>Semester Total Hours</b>							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
4	Fall	3	B/E	MATH 4390	Mathematics Project	C		Pre- or co-requisite in MATH 2415, STAT 3337, MATH 3341, MATH 3352, MATH 3363, MATH 3372.		
4	Fall	3	B/E	MATH 3361	Applied Discrete Mathematics	C		MATH 2318 with a grade of 'C' or better.		
4	Fall	3	E/O	MATH 4342	Complex Variables	C		MATH 2415 with a grade of 'C' or better.		
4	Fall	3	B/E/O	X3XX-43XX	Free Elective				Recommended: MATH 4344, MATH 4342, or MATH 4346	
4	Fall	12	<b>Semester Total Hours</b>							
4	Spring	3	B/E	MATH 3347	Elementary Cryptology	C		MATH 2318 with a grade of 'C' or better.		
4	Spring	3	B/E/O	X3XX-43XX	Free Elective					
4	Spring	3	B/E/O	X3XX-43XX	Free Elective					
4	Spring	3	B/E/O	X3XX-43XX	Free Elective					
4	Spring	12	<b>Semester Total Hours</b>							
		120	<b>TOTAL HOURS</b>							
		(42)	<b>Advanced minimum credit hours</b>							