Bachelor of Science (BS) The University of Texas 2022-2023 **RioGrande Valley** Mathematics Concentration: Pure Mathematics Course # Course Title Additional Notes For all 010 courses: Satisfactory scores on English portion of ACT test See General Education Core for more details 3 Choose 1 Communication (Core) С 010 and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or Options: ENGL 1301 better in ENGL 1301. Prerequiste for MATH 2412: MATH 1314/1414 with a grade of "C" or MATH 2412 with a grade of 'C' or better; or passing the Precalculus MATH 2413 С 020 Calculus I better or passing Exemption Test administered by Department of Δ Exemption Test administered by the Department of Mathematics. Mathematics See General Education Core for more details. 3 American History (Core) 060 Choose 1 Options: HIST 1301 or HIST 2327 Concurrent enrollment or credit for MATH 1314 or higher level 3 CSCI 1380 Computer Science I 090 mathematics course. 3 Choose 1 Creative Arts (Core) 050 See General Education Core for course options. 1301 Learning Framework As required, based on credit hours earned, TSI status, High school rank, UNIV 1101 Academic and Career Success maior declaration 1001 Living and Working by Design 16 Semester Total Hours For all 010 courses: Satisfactory scores on English portion of ACT test See General Education Core for more details 3 Choose 1 Communication (Core) С 010 and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or Options: ENGL 1302 or ENGL 1305 better in ENGL 1301. 4 MATH 2414 Calculus II С MATH 2413 with a grade of 'C' or better. С 3 MATH 2318 Linear Algebra MATH 2413 with a grade of 'C' or better. See General Education Core for more details. 3 Choose 1 American History (Core) 060 Options: HIST 1302 or HIST 2328 Introduction to Economics or ECON 1301 or ECON 2301 3 080 Principles of Macroeconomics 16 Semester Total Hours GEC Prerequisite Additional Notes 4 MATH 2415 Calculus III С MATH 2414 with a grade of 'C' or better. 3 MATH 3341 **Differential Equations** С MATH 2414 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 and concurrent enrollment in MATH 2414. 3 Choose 1 Language, Philosophy & Culture (Core) 040 See General Education Core for course options. 17 Semester Total Hours 3 MATH 3352 С Modern Geometry I MATH 2318 with a grade of 'C' or better. 3 MATH 3350 Introduction to Mathematical Proof С 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 (Core) 090 See General Education Core for course options. PHYS 2426 030/090 PHYS 2425. Physics for Scientists and Engineers II Δ 14 Semester Total Hours

CORE: The 2022-2023 list of core courses can be found in the 2022-2023 Undergraduate Catalog: www.utrgv.edu/smartcatalog > Bachelors Degree Regulations and Graduation Policies > 'Core Curriculum'

Symbols Key

Critical (1'): sequence sensitive course. Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S -Satisfactory.

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; 050 - Social and Behavioral Sciences; 050 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary; 090 - Technologies; 090 - Language Diversity & Writing.

• Н	Course #	Course Title	Min. GEC Grade	Prerequiste	Additional Notes
3	MATH 3363	Modern Algebra I	с	MATH 2318 and MATH 3350, each with a grade of 'C' or better.	
3	MATH 3365	Number Theory	С	MATH 2318 and MATH 3350, each with a grade of 'C' or better.	
EALL 3	MATH 4342	Complex Variables	С	MATH 2415 with a grade of 'C' or better.	
3	MATH 3345 or MATH 3361	Advanced Mathematics Electives	С	MATH 2318 with a grade of 'C' or better.	
<u>۲</u> 3	X3XX X3XX	Free Elective			
t 2	Semester Total Hours				
₹	MATH 3372	Real Analysis I	С	MATH 2414 and MATH 3350, each with a grade of 'C' or better.	
3	STAT 3337	Probability and Statistics	с	MATH 2414 with a grade of 'C' or better.	
S 3	MATH 3349	Numerical Methods	с	MATH 2414 and MATH 3343, each with a grade of 'C' or better.	
3	MATH 43XX	Advanced Mathematics Elective	С		See Degree Plan for course options. Choose one: MATH 4359, MATH 4364, MATH 4367, MATH 4373
3	X3XX 43XX	Free Elective			
15	Semester Total Hours				
• н	Course #	Course Title	Min. GEC Grade	Prerequisite	Additional Notes
3	MATH 4390	Mathematics Project	С	MATH 2318, MATH 3350, and 9 additional advanced hours of MATH, all with grades of 'C' or better.	
3	MATH 4355	Topology	С	MATH 2414 and MATH 3350, each with a grade of 'C' or better.	
5 FALL	MATH 43XX	Advanced Mathematics Elective	С		See Degree Plan for course options. Choose one: MATH 4359, MATH 4364, MATH 4367, MATH 4373
3	X3XX-43XX	Free Elective			
ОКТН УЕА	X3XX 43XX	Free Elective			
<mark>운</mark> 15	5 Semester Total Hours				
3	MATH 43XX	Major Advanced Elective	С		See Degree Plan for course options. (MATH or STAT) courses not used to fulfill other requirements.
<u>ع</u>	MATH 43XX	Major Advanced Elective	С		See Degree Plan for course options. (MATH or STAT) courses not used to fulfill other requirements.
SPRIN 3	X3XX-43XX	Free Elective			
<i>"</i>	N3/// 45///				
3	X3XX 43XX	Free Elective			

Major Graduation Requirements:

Major requirements must be completed with a minimum grade of "C" and a minimum GPA of 2.5.

120 TOTAL HOURS

(42) Advanced minimum credit hours

Approved: Friday, December 9, 2022 Revised: Sunday, November 13, 2022