

**Bachelor of Science (BS)  
 Chemistry**

*7-12, Teacher Certification*

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										
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
1	Fall	3	B/E	Choose 1	Communication	C	010	Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301.	See General Education Core for more details Options: ENGL 1301	
1	Fall	3	B/E/O	CHEM 1311	General Chemistry I		030	MATH 1314, MATH 1414, MATH 1342, MATH 1343, MATH 2412, MATH 2413 with a grade of "C" or higher.		
1	Fall	1	B/E	CHEM 1111	General Chemistry I Lab		090	Credit/registration in CHEM 1311		
1	Fall	3	B/E/O	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details.	
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.		
1	Fall	1	B/E	UTCH 1101	Inquiry Approaches to Teaching	C			Must be in a College of Sciences or BS Integrated Health Sciences majors.	
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	Spring	15	<b>Semester Total Hours</b>							
1	Spring	3	B/E/O	Choose 1	Communication	C	010	Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301.	See General Education Core for more details Options: ENGL 1302 or ENGL 1305	
1	Spring	3	B/E	CHEM 1312	General Chemistry II		030	CHEM 1311.		
1	Spring	1	B/E	CHEM 1112	General Chemistry II Lab		090	Credit/registration in CHEM 1312.		
1	Spring	4	B/E/O	MATH 2414	Calculus II			MATH 2413 with a grade of 'C' or better.		
1	Spring	3	B/E/O	POLS 2306	Texas Government & Politics		070		See General Education Core for more details.	
1	Spring	1	B/E	UTCH 1102	Inquiry-Based Lesson Design	C		UTCH 1101 with a grade of "C" or better or concurrent enrollment with UTCH 3301 and College of Sciences major.		
1	Spring	15	<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	CHEM 2323	Organic Chemistry I			CHEM 1312.		
2	Fall	1	B/E	CHEM 2123	Organic Chemistry I Lab			CHEM 1112.		
2	Fall	3	B/E	CHEM 2301	Analytical Chemistry			CHEM 1312 and CHEM 1112.		
2	Fall	1	B/E	CHEM 2101	Analytical Chemistry Lab			CHEM 2301.		
2	Fall	3	B/E/O	Choose 1	Language, Philosophy & Culture		040		See General Education Core for course options.	
2	Fall	3	B/E/O	Choose 1	Social and Behavioral Sciences		080		See General Education Core for course options.	
2	Fall	3	O	UTCH 3301	Knowing and Learning in Mathematics and Science	C		UTCH 1101 and UTCH 1102 with a grade of 'C' or better or concurrent enrollment with UTCH 1102.		
2	Fall	17	<b>Semester Total Hours</b>							
2	Spring	3	B/E	CHEM 2325	Organic Chemistry II			CHEM 2323.		
2	Spring	1	B/E	CHEM 2125	Organic Chemistry II Lab			CHEM 2325.		
2	Spring	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327	
2	Spring	3	B/E/O	Choose 1	Integrative/Experiential Learning Option		090		See General Education Core for course options.	
2	Spring	3	B/E/O	Choose 1	Social and Behavioral Sciences		080		See General Education Core for course options.	
2	Spring	13	<b>Semester Total Hours</b>							
2	Summer	4	B/E/O	PHYS 1401	General Physics I		090	MATH 1414 or MATH 1314, MATH 2412 or MATH 2413		
2	Summer	3	B/E	BIOL 4392	Research Methods in the Science and Mathematics Classroom (UTEach)			Grade C or better in the following: MATH 2413 and UTCH 1102.		
2	Summer	7	<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/O	CHEM 3303 or CHEM 3387	Biochemistry I or Biochemistry I Honors			CHEM 2323.		
3	Fall	1	B/E	CHEM 3103	Biochemistry I Lab			CHEM 3303.		
3	Fall	3	B/E	CHEM 3301	Inorganic Chemistry			12 hours of chemistry, including CHEM 2323.		
3	Fall	1	B/E	CHEM 3101	Inorganic Chemistry Lab			CHEM 3301.		
3	Fall	3	B/E	UTCH 3302	Classroom Interactions	C		(a) An institutional grade point average of at least 2.75, (b) UTCH 1102 with a grade of 'C' or better, (c) UTCH 3301 with a grade of 'C' or better, and (d) admission to the Teacher Education Program.		
3	Fall	4	B/E/O	PHYS 1402	General Physics II			PHYS 1401.		
3	Fall	15	<b>Semester Total Hours</b>							
3	Spring	3	B/E	CHEM 3304	Physical Chemistry I			PHYS 1402; MATH 2413 with a grade of "C" or better and pre or co-requisites in <u>MATH 2414</u> .		
3	Spring	1	B/E	CHEM 3104	Physical Chemistry I Lab			CHEM 3304.		
3	Spring	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328	
3	Spring	3	B/E	PHIL 3317	Perspectives on Science and Mathematics			Credit of "C" or better or registration in UTCH 3302.		
3	Spring	3	B/E	CHEM 4304	Instrumental Analysis			CHEM 2301 and CHEM 2101.		
3	Spring	1	B/E	CHEM 4104	Instrumental Analysis Lab			CHEM 4304.		
3	Spring	14	<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	CHEM 3305	Physical Chemistry II			CHEM 3304		
4	Fall	1	B/E	CHEM 3105	Physical Chemistry II Lab			CHEM 3304.		
4	Fall	3	B/E	CHEM 4305	Chemistry Capstone			Chemistry Major with senior standing or consent of instructor.		
4	Fall	3	O	READ 4305	Disciplinary Literacy in the Classroom					
4	Fall	2	B/E	CHEM 4201	Chemistry Problems I			Chemistry major with junior standing or consent of instructor.		
4	Fall	3	B/E	UTCH 3303	Project-Based Instruction			UTCH 3302 with a grade of 'C' or better. Must be officially admitted to the Educator Preparation Program.		
4	Spring	15	<b>Semester Total Hours</b>							
4	Spring	6	B/E	UTCH 4601	Apprentice Teaching			UTCH 3303 with a grade of 'C' or better.		
4	Spring	3	B/E	UTCH 4301	Apprentice Teaching Seminar	C		UTCH 3303 with a grade of 'C' or better and admission to clinical teaching.	UTeach requirement	
4	Spring	9	<b>Semester Total Hours</b>							

120 TOTAL HOURS  
(42) Advanced minimum credit hours