

Chemistry (B.S.) – Pre-Health Professions

2025-2026 Academic Catalog, Bachelor of Science – Chemistry, Pre-Health Professions

Academic Core for B.S.

47 Hours

CHRISTIAN STUDIES 6

CSBS 1311	Engaging the Old Testament	3
CSBS 1312	Engaging the New Testament	3

ENGLISH 9

ENGL 1321	Rhetoric & Composition I	3
ENGL 1322	Rhetoric & Composition II	3
ENGL	Literature	3

A grade of a "C" or higher is required in ENGL 1321 and ENGL 1322.

EXERCISE & SPORT SCIENCE – SELECT TWO DIFFERENT COURSES 2

EXAC	Activity Course	1
EXAC	Activity Course	1

FINE ARTS – SELECT ONE 3

ARTS 1350	Art Appreciation	3
COMM 2335	Film Appreciation	3
FINA 2330	Exploring the Fine Arts	3
MUSI 1340	Music Appreciation	3
THEA 2350	Theatre Appreciation	3

WORLD CULTURES – SELECT ONE 3

ARTS 2354	World Art	3
EXSS 2353	Lifespan Nutrition	3
GLBL 2310	Cultural Immersion	3
HIST 1311	History of World Civilizations to 1500	3
HIST 1312	History of World Civilizations since 1500	3
HUMA 2355	Foundations of the Humanities	3
MUSI 2358	World Music	3
PHIL 2315	Introduction to Philosophy	3

LAB SCIENCE 8

PHYS 2411	General Physics I	4
PHYS 2412	General Physics II	4

PUBLIC SPEAKING 3

COMM 1320	Public Speaking	3
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MATHEMATICS 4

MATH 1430	Calculus I	4
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RESEARCH METHODS OR INTERNSHIP 2

CHEM 2181	Introduction to Chemical Research-Capstone I	1
CHEM 4181	Chemical Research-Capstone II	1

SOCIAL SCIENCE 3

PSYC 1301	General Psychology	3
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US HISTORY OR US GOVERNMENT – SELECT ONE 3

HIST 2311	American History to 1877	3
HIST 2312	American History since 1877	3
POLS 2305	United States Government	3
POLS 2306	Texas State and Local Government	3

FRESHMAN SEMINAR 1

UMHB 1101	Freshman Seminar	1
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CHAPEL – 1 to 4 credits

UMHB 1002	Chapel	
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Fine Arts Experience – 2 to 8 credits

UMHB 1005	Fine Arts Experience	
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Chemistry

B.S. CHEMISTRY MAJOR REQUIRED COURSES – PRE-HEALTH 33

CHEM 1410	General Chemistry I	4
CHEM 1420	General Chemistry II	4
CHEM 2181	Introduction to Chemical Research-Capstone I	-
CHEM 3400	Quantitative Analysis	4
CHEM 3410	Organic Chemistry I	4
CHEM 3420	Organic Chemistry II	4
CHEM 3440	Physical Chemistry I	4
CHEM 3450	Physical Chemistry II	4
CHEM 4090	Senior Evaluation	0
CHEM 4181	Chemical Research-Capstone II	-
CHEM 4183	Seminar - Capstone III	1
CHEM 4430	Biochemistry	4

The hrs. for CHEM2181 and CHEM4181 are already accounted for in the Academic Core

Electives – As Needed to reach 120 overall hrs & 36 UL hrs

CHEM 3480	Environmental Chemistry	4
CHEM 4350	Advanced Inorganic Chemistry	3
CHEM 4440	Instrumental Analysis	4
CHEM 4190-4490		
CHEM 4193-4493		

A grade of "C" or better must be made in all Chem courses counting toward the major.

REQUIRED COURSES FOR PRE-HEALTH PROFESIONS 25

BIOL 1350/1150	Biology for Science Majors I with Lab	4
BIOL 1360/1160	Biology for Science Majors II with Lab	4
BIOL 2340/2140	Human Anatomy & Physiology I with Lab	4
BIOL 2341/2141	Human Anatomy & Physiology II with Lab	4
MATH 1306	College Algebra	3
MATH 1320	Pre Calculus	3
SOCI 1311	Introduction to Sociology	3

Total Hours

Academic Core for B.S.	47
B.S. Chemistry Major Required Courses	33
Electives – As needed to reach 120 overall Hrs. and 36 UL Hrs.	
Required Courses for Pre-Health Professions	25
Total hours required for graduation	120

Additional Graduation Requirements

Minimum Upper Level hours	36
Minimum hours taken at UMHB	30
Minimum Upper Level hours taken at UMHB	24
Minimum cumulative GPA	2.0

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FRESHMAN FALL 15 Hours

BIOL 1350	Biology for Science Majors I	3
BIOL 1150	Biology for Science Majors I Lab	1
CHEM 1410	General Chemistry I	4
ENGL 1321	Rhetoric & Composition I	3
MATH 1306	College Algebra	3
UMHB 1101	First Year Seminar	1
UMHB 1002	Chapel	0
UMHB 1005	Fine Arts Experience	0

FRESHMAN SPRING 15 Hours

BIOL 1360	Biology for Science Majors II	3
BIOL 1160	Biology for Science Majors II Lab	1
CHEM 1420	General Chemistry II	4
ENGL 1322	Rhetoric & Composition II	3
EXAC	Activity Course	1
MATH 1320	Pre-calculus	3
UMHB 1002	Chapel	0
UMHB 1005	Fine Arts Experience	0

SOPHOMORE FALL 16 Hours

BIOL 2340	Human Anatomy & Physiology I	3
BIOL 2140	Human Anatomy & Physiology I Lab	1
PSYC 1301	General Psychology	3
CHEM 3410	Organic Chemistry I	4
EXAC	Activity Course	1
PHYS 2411	General Physics I	4
UMHB 1002	Chapel	0
UMHB 1005	Fine Arts Experience	0

SOPHOMORE SPRING 17 Hours

BIOL 2341	Human Anatomy & Physiology II	3
BIOL 214	1 Human Anatomy & Physiology II Lab	1
CHEM 2181	Introduction to Chemical Research-Capstone	1
CHEM 3420	Organic Chemistry II	4
MATH 1430	Calculus I	4
PHYS 2412	General Physics II	4
UMHB 1002	Chapel	0
UMHB 1005	Fine Arts Experience	0

JUNIOR FALL 13 Hours

CHEM 3440	Physical Chemistry I	4
ENGL	Literature	3
SOCI 1311	Introduction to Sociology	3
	Upper Level Elective	3
UMHB 1005	Fine Arts Experience	0

JUNIOR SPRING 14 Hours

CHEM 3450	Physical Chemistry II	4
CHEM 4181	Chemical Research-Capstone II	1
	US History or US Government	3
COMM 1320	Public Speaking	3
	Upper Level Elective	3
UMHB 1005	Fine Arts Experience	0

SENIOR FALL 15 Hours

CHEM 4430	Biochemistry	4
CHEM 3400	Quantitative Analysis	4
CHEM 4183	Seminar-Capstone III	1
	Fine Arts	3
CSBS 1311	Engaging the Old Testament	3
UMHB 1005	Fine Arts Experience	0

SENIOR SPRING 15 Hours

	Elective (CHEM 4345 recommended)	3
	Elective (CHEM 4440 recommended)	4
CHEM 4090	Senior Evaluation	0
	World Cultures	3
CSBS 1312	Engaging the New Testament	3
	Elective	2
UMHB 1005	Fine Arts Experience	0

Total Credit Hours: 120