

# Chemistry (B.S.) – Science 7-12 Cert.

2024-2025 Academic Catalog, Bachelor of Science – Chemistry, Science 7-12 Cert.

## Academic Core for B.S.

50 Hours

<b>CHRISTIAN STUDIES</b>		<b>6</b>
CSBS 1311	Engaging the Old Testament	3
CSBS 1312	Engaging the New Testament	3
<b>ENGLISH</b>		<b>9</b>
ENGL 1321	Rhetoric & Composition I	3
ENGL 1322	Rhetoric & Composition II	3
ENGL	Literature	3
<i>A grade of a "C" or higher is required in ENGL 1321 and ENGL 1322.</i>		
<b>EXERCISE &amp; SPORT SCIENCE – SELECT TWO DIFFERENT COURSES</b>		<b>2</b>
EXAC	Activity Course	1
EXAC	Activity Course	1
<b>FINE ARTS – SELECT ONE</b>		<b>3</b>
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
<b>WORLD CULTURES – SELECT ONE</b>		<b>3</b>
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
<b>LAB SCIENCE</b>		<b>8</b>
PHYS 2411	General Physics I	4
PHYS 2412	General Physics II	4
<b>PUBLIC SPEAKING</b>		<b>3</b>
COMM 1320	Public Speaking	3
<b>MATHEMATICS</b>		<b>4</b>
MATH 1430	Calculus I	4
<b>RESEARCH METHODS OR INTERNSHIP</b>		<b>2</b>
CHEM 2181	Introduction to Chemical Research-Capstone I	1
CHEM 4181	Chemical Research-Capstone II	1
<b>SOCIAL SCIENCE – SELECT ONE</b>		<b>3</b>
PSYC 1301	General Psychology	3
PSYC 2399	Child and Adolescent Development	3
<b>US HISTORY OR US GOVERNMENT – SELECT ONE</b>		<b>3</b>
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
<b>CLASSROOM TECHNOLOGY</b>		<b>3</b>
EDUC 2311	Classroom Technology	3
<b>FRESHMAN SEMINAR</b>		<b>1</b>
UMHB 1101	Freshman Seminar	1
<b>CHAPEL – 1 to 4 credits</b>		
UMHB 1002	Chapel	
<b>Fine Arts Experience – 2 to 8 credits</b>		
UMHB 1005	Fine Arts Experience	

## Chemistry – Science 7-12 Cert

<b>B.S. CHEMISTRY MAJOR REQUIRED COURSES</b>		<b>33</b>
CHEM 1410	General Chemistry I	4
CHEM 1420	General Chemistry II	4
CHEM 2181	Introduction to Chemical Research-Capstone I	-
CHEM 3001	Lab Assistantship	0
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 4300	Safety in the Academic Laboratory	3

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

### 1 – 3 hours from the following:

CHEM 3480	Environmental Chemistry	4
CHEM 4350	Advanced Inorganic Chemistry	3
CHEM 4430	Biochemistry	4
CHEM 4440	Instrumental Analysis	4
CHEM 4190-4490		
CHEM 4193-4493		

*A grade of "C" or higher is required in all Chemistry courses counting toward the major*

<b>BIOLOGY MINOR REQUIRED COURSES</b>		<b>27</b>
BIOL 1350/1150	Biology for Science Majors I with Lab	4
BIOL 1360/1160	Biology for Science Majors II with Lab	4
BIOL 3310	Genetics	3
BIOL	BIOL Upper Level Elective	3
BIOL	BIOL Elective	5
GEOL 1401	Physical Geology	4
GEOL 1402	Historical Geology	4

<b>MINOR IN PEDAGOGY (SECONDARY LEVEL CERTIFICATION)</b>		<b>27</b>
EDUC 3315	Students and Learning	3
EDUC 4324	Classroom Management	3
EDUC 4328	Curriculum Design	3
EDUC 4385	Educational Internship	3
READ 4326	Disciplinary Literacy	3
EDUC 4250	Certification Preparation Seminar	2
EDUC 4501	Student Teaching I	5
EDUC 4502	Student Teaching II	5

### Total Hours

Academic Core for B.S.	50
B.S. Chemistry Major Required Courses	33
Biology Minor Required Courses	27
Minor in Pedagogy (Secondary Level Certification)	27
<b>Total hours required for graduation</b>	<b>137</b>

### 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	2.75