

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

2023-2024 Academic Catalog, Bachelor of Science – Chemistry, Science 7-12 Cert.

## Academic Core for B.S.

50 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	Introduction to the Theatre	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
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 – SELECT ONE** **3**

PSYC 1301	General Psychology	3
PSYC 2399	Child and Adolescent Development	3

### **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

### **CLASSROOM TECHNOLOGY** **3**

EDUC 2311	Classroom Technology	3
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### **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 – Science 7-12 Cert

### **B.S. CHEMISTRY MAJOR REQUIRED COURSES** **33**

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

### **BIOLOGY MINOR REQUIRED COURSES** **27**

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

### **MINOR IN PEDAGOGY (SECONDARY LEVEL CERTIFICATION)** **27**

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