## Chemistry (B.S.) — Biochemistry & Molecular Biology Emphasis 2025-2025 Academic Catalog, Bachelor of Science — Chemistry, Biochemistry and Molecular Biology Emphasis

Academic C	ore for B.S. 47	'Hours	Chemistry	57 H	ours
CHRISTIAN STUD	DIES	6	B.S. CHFMIST	RY MAJOR REQUIRED COURSES - BIOCHEMISTRY	35
CSBS 1311	Engaging the Old Testament	3	CHEM 1410	General Chemistry I	
CSBS 1311 CSBS 1312	Engaging the New Testament	3	CHEM 1420	General Chemistry II	_
C3D3 1312	Engaging the New Testament	3	CHEM 2181	Introduction to Chemical Research-Capstone I	
ENGLISH		9	CHEM 3400	Quantitative Analysis	4
ENGL 1321	Rhetoric & Composition I	3	CHEM 3410	Organic Chemistry I	4
ENGL 1322	Rhetoric & Composition II	3	CHEM 3420	Organic Chemistry II	4
ENGL	Literature	3	CHEM 3440	Physical Chemistry I	4
	or higher is required in ENGL 1321 and ENGL 1322.	_	CHEM 4090	Senior Evaluation	0
			CHEM 4181	Chemical Research-Capstone II	-
EXERCISE & SPO	RT SCIENCE - SELECT TWO DIFFERENT COURSES	2	CHEM 4183	Seminar - Capstone III	1
EXAC	Activity Course	1	CHEM 4345	Advanced Biochemistry	3
EXAC	Activity Course	1	CHEM 4430	Biochemistry	4
	,		CHEM	Chemistry Upper Level Electives	3-4
FINE ARTS — SEL	LECT ONE	3	The hrs. for CHEN	Л2181 and CHEM4181 are already accounted for in the Acad	emic C
ARTS 1350	Art Appreciation	3	DECLUBED CO	NUDGEG FOR RIGGUESA & AAOL RIG FAARUAGIG	
COMM 2335	Film Appreciation	3		DURSES FOR BIOCHEM & MOL BIO EMPHASIS	22
FINA 2330	Exploring the Fine Arts	3	BIOL 1350	Biology for Science Majors I	3
MUSI 1340	Music Appreciation	3	BIOL 1150	Biology for Science Majors I Lab	1
	**		BIOL 1360	Biology for Science Majors II	3
THEA 2350	Theatre Appreciation	3	BIOL 1160	Biology for Science Majors II Lab	1
WORLD CITE	JRES – SELECT ONE	3	BIOL 2380	Microbiology	3
ARTS 2354	World Art	<b>3</b>	BIOL 2180	Microbiology Lab	1
EXSS 2353	Lifespan Nutrition	3	BIOL 3310	Genetics	3
GLBL 2310	Cultural Immersion	3	BIOL 3340	Immunology	3
HIST 1311	History of World Civilizations to 1500	3	BIOL 4305	Cell Biology	3 1
HIST 1311	History of World Civilizations to 1500  History of World Civilizations since 1500	3	BIOL 4105	Cell Biology Lab	_
HUMA 2355	Foundations of the Humanities	3	A grade of "C" or	higher is required in all Chemistry courses counting toward t	ne maji
MUSI 2358	World Music	3			
PHIL 2315	Introduction to Philosophy	3	Electives	16 H	OI IFC
11112313	introduction to miosophy	3	Liectives	1011	oui s
LAB SCIENCE		8	ELECTIVES		16
PHYS 2411	General Physics I	4	You need 16 ac	dditional hours to reach your minimum 120 required	hrs.
PHYS 2412	General Physics II	4			
			Total Hours		
PUBLIC SPEAKIN	G	3	Academic Core		47
COMM 1320	Public Speaking	3	,	Major Required Courses	35
		_		ses for Biochemistry & Molecular Biology Emphasis	22
MATHEMATICS		<b>4</b>	<u>Electives</u>	: 16 1 ::	16
MATH 1430	Calculus I	4	lotal nours red	quired for graduation	120
RESEARCH METH	HODS OR INTERNSHIP	2	Additional Gra	duation Requirements	
CHEM 2181	Introduction to Chemical Research-Capstone	1	Minimum Upp	·	36
CHEM 4181	Chemical Research-Capstone II	1		rs taken at UMHB	30
0.12.11 1101	enembar Research Capatone II	-	Minimum Upp	er Level hours taken at UMHB	24
SOCIAL SCIENC	CE – SELECT ONE	3	Minimum cum		2.0
BECO 2311	Principles of Macroeconomics	3			
PSYC 1301	General Psychology	3			
PSYC 2399	Child and Adolescent Development	3			
SOCI 1311	Introduction to Sociology	3			
SOCW 2311	Introduction to Social Work	3			
	R US GOVERNMENT – SELECT ONE	<u>3</u>			
HIST 2311	American History to 1877	3			
HIST 2312	American History since 1877	3			
POLS 2305	United States Government Texas State and Local Government	3			
POLS 2306	revas state and focal government	3			
FRESHMAN SEIV	IINAR	1			
UMHB 1101	Freshman Seminar	1			
CHAPEL-1 to 4 o	credits				
UMHB 1002	Chapel				
Fine Arts F	anno. 3 to 9 quadite				
UMHB 1005	ence – 2 to 8 credits Fine Arts Experience				
5.711 ID ±000					

## Chemistry (B.S.) — Biochemistry & Molecular Biology Emphasis 2025-2026 Academic Catalog, Bachelor of Science – Chemistry, Biochemistry & Molecular Biology Emphasis – DEGREE SEQUENCE

FRESHMAN FALL		FRESHMAN SPRING		15 Hours
Biology for Science Majors I	3	BIOL 1360	Biology for Science Majors II	3
Biology for Science Majors I Lab	1	BIOL 1160	Biology for Science Majors II Lab	1
General Chemistry I	4	CHEM 1420	General Chemistry II	4
Rhetoric & Composition I	3	ENGL 1322	Rhetoric & Composition II	3
Elective (MATH 1306 recommended)	3	EXAC	Activity Course	1
First Year Seminar	1		Elective (MATH 1320 recommended)	3
Chapel	0	UMHB 1002	Chapel	C
Fine Arts Experience	0	UMHB 1005	Fine Arts Experience	C
FALL	16 Hours	SOPHOMORE	SPRING	16 Hours
Microbiology	3	CHEM 2181	Introduction to Chemical Research-Capsto	nel 1
Microbiology Lab	1	CHEM 3420	Organic Chemistry II	4
Organic Chemistry I	4	CSBS 1312	Engaging the New Testament	3
Activity Course	1	MATH 1430	Calculus I	4
Engaging the Old Testament	3	PHYS 2412	General Physics II	4
General Physics I	4	UMHB 1002	Chapel	C
Chapel	0	UMHB 1005	Fine Arts Experience	C
•	0		'	
	17 Hours	JUNIOR SPRIN	G	15 Hours
Genetics	<b>17 Hours</b>	JUNIOR SPRIN BIOL 3340	I <b>G</b> Immunology	<b>15 Hours</b>
Genetics Biochemistry				
	3	BIOL 3340	Immunology	3
Biochemistry	3 4	BIOL 3340 CHEM 4345	Immunology Advanced Biochemistry	3 3 1
Biochemistry Physical Chemistry I	3 4 4	BIOL 3340 CHEM 4345	Immunology Advanced Biochemistry Chemical Research-Capstone II	3 3 1 3
Biochemistry Physical Chemistry I Literature	3 4 4 3	BIOL 3340 CHEM 4345 CHEM 4181	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government	3
Biochemistry Physical Chemistry I Literature Social Science	3 4 4 3 3 0	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience	3 3 1 3 3
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience	3 4 4 3 3	BIOL 3340 CHEM 4345 CHEM 4181	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience	3 3 1 3
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience  Cell Biology	3 4 4 3 3 0	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience	3 3 1 3 0
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience  Cell Biology Cell Biology Lab	3 4 4 3 3 0	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience	3 3 3 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience  Cell Biology Cell Biology Lab Quantitative Analysis	3 4 4 3 3 0 0 15 Hours 3 1	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience  G Senior Evaluation World Cultures	13 Hour
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience  Cell Biology Cell Biology Lab	3 4 4 3 3 0 0 15 Hours 3 1 4	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience  G Senior Evaluation World Cultures Elective	13 Hour
Biochemistry Physical Chemistry I Literature Social Science Fine Arts Experience  Cell Biology Cell Biology Lab Quantitative Analysis Seminar-Capstone III	3 4 4 3 3 0 0 15 Hours 3 1 4 1	BIOL 3340 CHEM 4345 CHEM 4181 COMM 1320 UMHB 1005	Immunology Advanced Biochemistry Chemical Research-Capstone II US History or US Government Public Speaking Fine Arts Experience  G Senior Evaluation World Cultures Elective Elective	3 3 3 3 6 C
	Biology for Science Majors I Lab General Chemistry I Rhetoric & Composition I Elective (MATH 1306 recommended) First Year Seminar Chapel Fine Arts Experience  FALL Microbiology Microbiology Lab Organic Chemistry I Activity Course Engaging the Old Testament	Biology for Science Majors I Lab General Chemistry I Rhetoric & Composition I Elective (MATH 1306 recommended) First Year Seminar Chapel OFine Arts Experience  Microbiology Microbiology Microbiology Lab Organic Chemistry I Activity Course Engaging the Old Testament General Physics I Chapel O Chapel	Biology for Science Majors I Lab General Chemistry I Rhetoric & Composition I Elective (MATH 1306 recommended) First Year Seminar Chapel O Fine Arts Experience O  FALL  Microbiology Microbiology Activity Course Engaging the Old Testament General Physics I Chapel O CHEM 1420 CHEM 1420 CHEM 1420 CHEM 1420 CHEM 200 CHEM 2181 CHEM 3420 CSBS 1312 CSBS 1312 CHEM 2181 CHEM 3420 CMATH 1430	Biology for Science Majors I Lab  General Chemistry I  Rhetoric & Composition I  Elective (MATH 1306 recommended)  The first Year Seminar  Chapel  Fine Arts Experience  1  Microbiology  Microbiology Lab  Microbiology Lab  Organic Chemistry I  Activity Course  1  CHEM 1420  General Chemistry II  ENGL 1322  Rhetoric & Composition II  EXAC  Activity Course  Elective (MATH 1306 recommended)  UMHB 1002  Chapel  The Arts Experience  Chapel  Microbiology  Microbiology  Microbiology  Activity Course  The Arts Experience  SOPHOMORE SPRING  CHEM 2181  CHEM 3420  Organic Chemistry II  Organic Chemistry I  Activity Course  The Math 1430  Calculus I  Engaging the Old Testament  Activity Course  The Math 1430  Calculus I  Engaging the Old Testament  Activity Course  The Math 1430  Calculus I  Chapel  Chapel  Chapel  The Arts Experience

Total Credit Hours: 120