Bioinformatics (B.S.) 2024-2025 Academic Catalog, Bachelor of Science – Bioinformatics

Academic (Core for B.S.	49 Hours	CHAPEL-1 to 4	credits	
CHRISTIAN STUDIES		6	UMHB 1002	Chapel	
CSBS 1311	Engaging the Old Testament	3	Eino Arts Evroor	ience – 2 to 8 credits	
CSBS 1312	Engaging the New Testament	3	UMHB 1005	Fine Arts Experience	
ENGLISH		9			
ENGL 1321	Rhetoric & Composition I	3	Bioinforma	atics 62 Ho	ours
ENGL 1322	Rhetoric & Composition II	3	2121221		
ENGL	Literature	3	BIOLOGY	Dialam for Cairman Mariana I	19
A grade of a "C"	or higher is required in ENGL 1321 and ENGL 132	22.	BIOL 1350	Biology for Science Majors I Biology for Science Majors I Lab	3 1
EVEDOICE & CDO	OPT SCIENCE SELECT TIMO DIEEEDENT COLIDSE		BIOL 1150 BIOL 1360	Biology for Science Majors II	3
	ORT SCIENCE – SELECT TWO DIFFERENT COURSES	S 2 1	BIOL 1160	Biology for Science Majors II Lab	1
EXAC	Activity Course		BIOL 3310	Genetics	3
EXAC	Activity Course	1	BIOL 3110	Genetics Lab	1
FINE ARTS - SE	LECT ONE	3	BIOL 4305	Cell Biology	3
ARTS 1310	Drawing I	3	BIOL 4105	Cell Biology Lab	1
ARTS 1320	Design	3	BIOL 4375	Bioinformatics	3
ARTS 1350	Art Appreciation	3	MATHEMATI	rs	17
ARTS 2360	Ceramics I	3	MATH 1430	Calculus I	4
COMM 2335	Film Appreciation	3	MATH 2303	Statistics	3
COMM 2335	Film Appreciation	3	MATH 2320	Linear Algebra	3
FINA 2330	* *	3	MATH 2430	Calculus II	4
	Exploring the Fine Arts	3	MATH	Mathematics Elective (upper level)	3
MUSI 1340	Music Appreciation		COMPLITED	CIENCE	10
THEA 2350	Theatre Appreciation	3	CISC 1305	Introduction to Computing	18
WORLD CULT	URES – SELECT ONE	3	CISC 2315	Discrete Structures of Computer & Eng. Sciences	3
ARTS 2354	World Art	3	CISC 2330	Introduction to Object-Oriented Programming	3
EXSS 2353	Lifespan Nutrition	3	CISC 3323	Algorithms & Data Structures	3
GLBL 2310	Cultural Immersion	3	CISC 4327	Database Theory and Application	3
HIST 1311	History of World Civilizations to 1500	3	CISC	Computer Science Elective (upper level)	3
HIST 1312	History of World Civilizations since 1500	3			_
HIST 2350	An Introduction to the Politics and Culture	of Ancient	CHEMISTRY		8
HUMA 2355	Greece and Rome Foundations of the Humanities	3	CHEM 3410	Organic Chemistry I	4
MUSI 2358	World Music	3	CHEM 4430	Biochemistry	4
PHIL 2315	Introduction to Philosophy	3	Electives	12 Ho	ours
LAB SCIENCE		8	UPPER LEVEL	ELECTIVES	3
CHEM 1410	General Chemistry I	4		ditional hours to reach your minimum 36 UL required	hrs.
CHEM 1420	General Chemistry II	4		·	
CITEIVI 1420	General Chemistry II	4	ELECTIVES		9
PUBLIC SPEAKIN	NG	3	You need 9 add	ditional hours to reach your minimum 120 required h	rs.
COMM 1320	Public Speaking	3			
		_	Total Hours		
MATHEMATICS	College Algebra <i>or higher</i>	3	Academic Core	e for B.S.	46
MATH 1306	College Algebra or nigher	3	Biology		19
SOCIAL SCIENCE – SELECT ONE		3	Mathematics	Mathematics	
BECO 2311	Principles of Macroeconomics	3	Computer Scie	nce	18
EDUC 2399	Child and Adolescent Development	3	Chemistry		8
PSYC 1301	General Psychology	3	Upper Level Ele	ectives	3
SOCI 1311	Introduction to Sociology	3	Electives	unional for and direction	120
SOCW 2311	Introduction to Social Work	3	lotal nours red	quired for graduation	120
US HISTORY C	OR US GOVERNMENT – SELECT ONE	3	Additional Gra	duation Requirements	
HIST 2311	American History to 1877	3	Minimum Upp	er Level hours	36
HIST 2312	American History since 1877	3		rs taken at UMHB	30
POLS 2305	United States Government	3		er Level hours taken at UMHB	24
POLS 2306	Texas State and Local Government	3	Minimum cum	ulative GPA	2.0
	ETHODS OR INTERNSHIP	2			
BIOL 4185 BIOL 4185	Bioinformatics Research Capstone Bioinformatics Research Capstone	1 1			
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FRESHMAN SEN UMHB 1101	MINAR Freshman Seminar	1			
S D 1101	co. in lan octimia	_			

Bioinformatics (B.S.) 2025-2026 Academic Catalog, Bachelor of Science – Bioinformatics – DEGREE SEQUENCE

FRESHMAN FALL		15 Hours	FRESHMAN SPRING		15 Hours
BIOL 1350/1150 Biology for Science Majors I		4	BIOL 1360/116	0 Biology for Science Majors II	4
CHEM 1410	General Chemistry I	4	CHEM 1420	General Chemistry II	4
MATH 1306	College Algebra	3	CISC 1305	Intro to Computing	3
ENGL 1321	Rhetoric & Composition I	3	ENGL 1322	Rhetoric & Composition II	3
UMHB 1101	Freshman Seminar	1	EXAC	Activity Course	1
UMHB 1002	Chapel	0	UMHB 1002	Chapel	0
UMHB 1005	Fine Arts Experience	0	UMHB 1005	Fine Arts Experience	0
SOPHOMORE FALL		15 Hours	SOPHOMORE SPRING		15 Hours
BIOL 3310/313	10 Genetics	4	COMM 1320	Public Speaking	3
MATH 1430	Calculus I	4	CISC 2315	Discrete Structures of Comp. & Eng. Sci.	3
CHEM 3410	Organic Chemistry I	4	MATH 2320	Linear Algebra	3
CISC 2330	Intro to Object-Oriented Programming	3		Fine Arts	3
	Chapel	0		Social Science	3
UMHB 1002	Chapei			el I	0
UMHB 1002 UMHB 1005	Fine Arts Experience	0	UMHB 1002	Chapel	0
	·	0	UMHB 1002 UMHB 1005	Chapel Fine Arts Experience	0
	·	0 15 Hours		Fine Arts Experience	
UMHB 1005	·		UMHB 1005	Fine Arts Experience	O
UMHB 1005	Fine Arts Experience	15 Hours	UMHB 1005	Fine Arts Experience G Database Theory & Application	16 Hours
JUNIOR FALL MATH 2430	Fine Arts Experience Calculus II	15 Hours 4	JUNIOR SPRIN CISC 4327	Fine Arts Experience G Database Theory & Application	16 Hours
JUNIOR FALL MATH 2430 CHEM 4430	Fine Arts Experience Calculus II Biochemistry	15 Hours 4 4	JUNIOR SPRIN CISC 4327 BIOL 4305/410	G Database Theory & Application 05 Cell Biology	16 Hours
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper	Fine Arts Experience Calculus II Biochemistry Level Computer Science Elective	15 Hours 4 4 3	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL	G Database Theory & Application 05 Cell Biology Literature	16 Hours 3 4
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303	Calculus II Biochemistry Level Computer Science Elective Statistics	15 Hours 4 4 3 3	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323	G Database Theory & Application 5 Cell Biology Literature Algorithms & Data Structures	16 Hours 3 4 3 3
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course	15 Hours 4 4 3 3 1	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH	G Database Theory & Application D5 Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience	16 Hours 3 4 3 3 3
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC UMHB 1005	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course	15 Hours 4 4 3 3 1 0	JUNIOR SPRIM CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH UMHB 1005	G Database Theory & Application D5 Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience	16 Hours 3 4 3 3 0
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC UMHB 1005	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course Fine Arts Experience	15 Hours 4 4 3 3 1 0	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH UMHB 1005	G Database Theory & Application Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience	16 Hours 3 4 3 3 0
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC UMHB 1005	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course Fine Arts Experience	15 Hours 4 4 3 3 1 0	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH UMHB 1005	Fine Arts Experience Database Theory & Application S Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience	16 Hours 3 4 3 3 3 0 14 Hours
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC UMHB 1005 SENIOR FALL BIOL 4185	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course Fine Arts Experience Bioinformatics Research Capstone World Cultures	15 Hours 4 4 3 3 1 0 15 Hours 1 3	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH UMHB 1005 SENIOR SPRIN BIOL 4185	Fine Arts Experience G Database Theory & Application S Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience G Bioinformatics Research Capstone Upper Level Elective	16 Hours 3 4 3 3 0 14 Hours
JUNIOR FALL MATH 2430 CHEM 4430 CISC Upper MATH 2303 EXAC UMHB 1005 SENIOR FALL BIOL 4185	Calculus II Biochemistry Level Computer Science Elective Statistics Activity Course Fine Arts Experience Bioinformatics Research Capstone World Cultures Bioinformatics	15 Hours 4 4 3 3 1 0 15 Hours 1 3 3 3	JUNIOR SPRIN CISC 4327 BIOL 4305/410 ENGL CISC 3323 MATH UMHB 1005 SENIOR SPRIN BIOL 4185	Fine Arts Experience Database Theory & Application Cell Biology Literature Algorithms & Data Structures Upper Level Mathematics Elective Fine Arts Experience G Bioinformatics Research Capstone Upper Level Elective Engaging the New Testament	16 Hours 3 4 3 3 0 14 Hours

Total Credit Hours: 120