Biology (B.S.) – Pre-Optometry – Foreign Language 2022-2023 Academic Catalog, Bachelor of Science – Biology, Pre-Optometry, Global Emphasis: Foreign Language

Academic Core for B.S.

46 Hours

	DIES	6
CSBS 1311	Engaging the Old Testament	З
CSBS 1312	Engaging the New Testament	3
english		ç
ENGL 1321	Rhetoric & Composition I	3
ENGL 1322	Rhetoric & Composition II	11
ENGL	Literature	3
A grade of a "C" o	or higher is required in ENGL 1321 and ENGL 1322.	
EXERCISE & SPO	RT SCIENCE	2
EXAC	Activity Course	-
EXAC	Activity Course	-
FINE ARTS - SEL	ECT ONE	3
ARTS 1350	Art Appreciation	3
COMM 2335	Film Appreciation	Э
FINA 2330	Exploring the Fine Arts	3
MUSI 1340	Music Appreciation	3
THEA 2350	Introduction to the Theatre	3
WORLD CULTL	JRES – SELECT ONE	3
ARTS 2354	World Art	
EXSS 2353	Lifespan Nutrition	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	1
LAB SCIENCE		1
CHEM 1410	General Chemistry I	Z
PHYS 2411	General Physics I	Z
PUBLIC SPEAKIN	G	3
COMM 1320	Public Speaking	3
MATHEMATICS		3
MATH 2303	Statistics	10
RESEARCH METH	HODS OR INTERNSHIP	2
	HODS OR INTERNSHIP Research Methods	
BIOL 2170		-
BIOL 2170 BIOL 2171	Research Methods Research Methods	
BIOL 2170 BIOL 2171 SOCIAL SCIENC	Research Methods Research Methods	-
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301	Research Methods Research Methods CE	
BIOL 2170 BIOL 2171 Social Scienc PSYC 1301 US History O	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History since 1877	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History since 1877 State and Federal Government I	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History since 1877	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310 POLS 2311	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History to 1877 State and Federal Government I State and Federal Government II	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310 POLS 2311	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History to 1877 State and Federal Government I State and Federal Government II	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310 POLS 2311 FRESHIMAN SEIV UMHB 1101 GLOBAL EMPH	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History since 1877 State and Federal Government I State and Federal Government II INAR Freshman Seminar	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310 POLS 2311 FRESHMAN SEM UMHB 1101 GLOBAL EMPH	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History to 1877 State and Federal Government I State and Federal Government II IINAR Freshman Seminar	
BIOL 2170 BIOL 2171 SOCIAL SCIENC PSYC 1301 US HISTORY O HIST 2311 HIST 2312 POLS 2310 POLS 2311 FRESHMAN SEM UMHB 1101 GLOBAL EMPH	Research Methods Research Methods CE General Psychology R US GOVERNMENT – SELECT ONE American History to 1877 American History since 1877 State and Federal Government I State and Federal Government II State and Federal Government II HINAR Freshman Seminar HASIS – FOREIGN LANGUAGE 2 semesters or the equivalent) in one language	

Fine Arts Experience – 2 to 8 creditsUMHB 1005Fine Arts Experience

Biology – Pre-Optometry

B.S. BIOLOGY	MAJOR REQUIRED COURSES - PRE-OPTOMETRY	36
BIOL 1090	Freshman Evaluation (Freshman Only)	0
BIOL 1350	Biomolecules, Genes, and Cells	3
BIOL 1150	Biomolecules, Genes, and Cells Lab	1
BIOL 1360	Organisms, Populations, and Ecosystems	3
BIOL 1160	Organisms, Populations, and Ecosystems Lab	1
BIOL 3310	Genetics	3
BIOL 3110	Genetics Lab	1
BIOL 4090	Senior Evaluation	0
BIOL 4194	Capstone Writing	1
BIOL 4295	Capstone Seminar	2
BIOL 4370	Applied Ecology	3
BIOL 4170	Applied Ecology Lab	1
Physiology Elec	tives	
BIOL 2380	Microbiology	3
BIOL 2180	Microbiology Lab	1
BIOL 2340	Human Anatomy & Physiology I	3
BIOL 2140	Human Anatomy & Physiology I Lab	1
BIOL 2341	Human Anatomy & Physiology II	3
BIOL 2141	Human Anatomy & Physiology II Lab	1
BIOL 3375	Human Physiology	3
BIOL 3175	Human Physiology Lab	1
Dialogy Floating		
Biology Elective		1
BIOL	Biology Electives	1
No grade lower ti	han a "C" will count toward fulfillment of Biology major requir	ements
REQUIRED COU	JRSES FOR PRE-OPTOMETRY	28
CHEM 1420	General Chemistry II	4
CHEM 1420 CHEM 3410	General Chemistry II Organic Chemistry I	4 4
CHEM 1420	General Chemistry II Organic Chemistry I Biochemistry	4 4 4
CHEM 1420 CHEM 3410	General Chemistry II Organic Chemistry I	4 4
CHEM 1420 CHEM 3410 CHEM 4430	General Chemistry II Organic Chemistry I Biochemistry	4 4 3 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306	General Chemistry II Organic Chemistry I Biochemistry College Algebra	4 4 4 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II	4 4 3 3 3 4
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus	4 4 3 3 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II	4 4 3 3 3 4
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing	4 4 3 3 3 4
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing	4 4 3 3 4 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elector	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing	4 4 3 3 4 3 4 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elector Academic Core	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives	4 4 3 3 4 3 4 3 10
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elector Academic Core Global Emphas	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives	4 4 3 3 4 3 4 3
CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elector Academic Core Global Emphas	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives	4 4 3 3 4 3 4 3 10
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphas B.S. Biology Ma Required Cours	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives of B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry	4 4 3 3 4 3 4 3 10 46 8
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphas B.S. Biology Ma	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives of B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry	4 4 3 3 4 3 4 3 10 46 8 36
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Global Emphas B.S. Biology Ma Required Cours Upper Level Ele	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives of B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry	4 4 3 3 4 3 4 3 10 46 8 36 28
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphas B.S. Biology Ma Required Cours Upper Level Ele Total hours req	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives	4 4 3 3 4 3 4 3 10 46 8 36 28 10
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Required Cours Upper Level Ele Total hours req	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives for B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry ectives guired for graduation duation Requirements	4 4 3 3 4 3 4 3 10 46 8 36 28 10
CHEM 1420 CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Required Cours Upper Level Ele Total hours req Additional Grad Minimum Upper	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives for B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry ectives guired for graduation duation Requirements	4 4 3 3 4 3 4 3 10 46 8 36 28 10 128
CHEM 1420 CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphas B.S. Biology Ma Required Cours Upper Level Ele Total hours req Additional Grad Minimum Uppe Minimum hour	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives for B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry ectives puired for graduation duation Requirements er Level hours is taken at UMHB	4 4 3 3 3 4 3 4 3 10 10 46 8 36 28 10 128 36
CHEM 1420 CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphas B.S. Biology Ma Required Cours Upper Level Ele Total hours req Additional Grad Minimum Uppe Minimum hour	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ectives for B.S. is – Foreign Language ajor Required Courses ses for Pre-Optometry ectives puired for graduation duation Requirements er Level hours is taken at UMHB er Level hours taken at UMHB	4 4 4 3 3 3 4 3 4 3 4 3 4 3 10 10 46 8 36 28 10 128 36 30