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

Academic Core for B.S.

46 Hours

Academic		nours
CHRISTIAN STU	DIES	6
CSBS 1311	Engaging the Old Testament	3
CSBS 1312	Engaging the New Testament	3
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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 & SPC	RT SCIENCE	2
EXAC	Activity Course	1
EXAC	Activity Course	1
FINE ARTS - SE	IECT ONE	3
ARTS 1350		3
	Art Appreciation	-
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 CULT	URES – SELECT ONE	3
ARTS 2354	World Art	3
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	3
LAB SCIENCE		8
CHEM 1410	General Chemistry I	4
PHYS 2411	, General Physics I	4
PUBLIC SPEAKIN	IG.	3
COMM 1320	Public Speaking	3
		-
MATHEMATICS		3
MATH 2303	Statistics	3
RESEARCH MET	HODS OR INTERNSHIP	2
BIOL 2170	Research Methods	1
BIOL 2171	Research Methods	1
SOCIAL SCIEN	CF.	3
PSYC 1301	General Psychology	3
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HIST 2311	Arerican History to 1877	3
HIST 2311 HIST 2312	American History since 1877	3
POLS 2310	State and Federal Government I	3
POLS 2310	State and Federal Government I	3
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FRESHMAN SEN		1
UMHB 1101	Freshman Seminar	1
GLOBAL EMPI	HASIS – STUDY ABROAD	3
	Study Abroad	3
CHAPEL-1 to 4	credits	
UMHB 1002	Chapel	
	ence – 2 to 8 credits	
UMHB 1005	Fine 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	2
BIOL 4370 BIOL 4170	Applied Ecology Lab	1
BIOL 4170	Applied Ecology Lab	1
Physiology Elect	ives	
BIOL 2380	Microbiology	3
BIOL 2180	Microbiology Lab	1
BIOL 2180 BIOL 2340		3
	Human Anatomy & Physiology I	
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
Biology Elective		
BIOL	Biology Electives	1
No grade lower th	an a "C" will count toward fulfillment of Biology major requir	rements
REQUIRED COU	RSES FOR PRF-OPTOMETRY	28
	RSES FOR PRE-OPTOMETRY General Chemistry II	28
CHEM 1420	General Chemistry II	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 4
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	4 4 3 3
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	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 WRIT 3344	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	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	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	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	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 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elevent Total Hours Academic Core	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives	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 Emphasis	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives	4 4 3 3 4 3 4 3 10 46 3
CHEM 1420 CHEM 3410 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elevent Total Hours Academic Core Global Emphasis B.S. Biology Maj	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. s – Study Abroad or Required Courses	4 4 3 3 4 3 4 3 10 46 3 36
CHEM 1420 CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1320 PHYS 2412 WRIT 3344 Upper Level Ele Total Hours Academic Core Global Emphasis B.S. Biology Maj Required Course	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. s – Study Abroad or Required Courses es for Pre-Optometry	4 4 3 3 4 3 4 3 10 46 3 36 28
CHEM 1420 CHEM 1420 CHEM 3410 CHEM 4430 MATH 1306 MATH 1320 MATH 1330 PHYS 2412 WRIT 3344 Upper Level Elev Total Hours Academic Core Global Emphasis B.S. Biology Maj Required Courss Upper Level Elev	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. 5 – Study Abroad for Required Courses es for Pre-Optometry ctives	4 4 3 3 4 3 4 3 10
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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 Academic Core Global Emphasi: B.S. Biology Maj Required Cours Upper Level Ele Total hours requ	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. s – Study Abroad or Required Courses es for Pre-Optometry ctives uired for graduation uation Requirements r Level hours	4 4 3 3 4 3 4 3 4 3 4 3 4 3 6 28 10 123 36
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 requ Additional Grad Minimum Uppe Minimum hours	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. s – Study Abroad or Required Courses es for Pre-Optometry ctives uired for graduation uation Requirements r Level hours taken at UMHB	4 4 3 3 4 3 4 3 4 3 4 3 6 28 10 123 36 30
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 requ Additional Grad Minimum Uppe Minimum hours	General Chemistry II Organic Chemistry I Biochemistry College Algebra Pre Calculus Calculus General Physics II Scientific Writing ctives for B.S. s – Study Abroad or Required Courses es for Pre-Optometry ctives uired for graduation uation Requirements r Level hours taken at UMHB r Level hours taken at UMHB	4 4 3 3 4 3 4 3 4 3 4 3 4 3 6 28 10 123 36