

Biology (B.S.) – Pre-Optometry

2022-2023 Academic Catalog, Bachelor of Science – Biology, Pre-Optometry

Academic Core for B.S.

46 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 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
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 SPEAKING 3

COMM 1320	Public Speaking	3
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MATHEMATICS 3

MATH 2303	Statistics	3
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RESEARCH METHODS OR INTERNSHIP 2

BIOL 2170	Research Methods	1
BIOL 2171	Research Methods	1

SOCIAL SCIENCE 3

PSYC 1301	General Psychology	3
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US HISTORY OR US GOVERNMENT – SELECT ONE 3

HIST 2311	American History to 1877	3
HIST 2312	American History since 1877	3
POLS 2310	State and Federal Government I	3
POLS 2311	State and Federal Government II	3

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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Biology – Pre-Optometry

B.S. BIOLOGY MAJOR REQUIRED COURSES – PRE-OPTOMETRY 36

BIOL 1090	Freshman Evaluation (<i>Freshman Only</i>)	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 Electives

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

Biology Electives

BIOL	Biology Electives	1
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No grade lower than a "C" will count toward fulfillment of Biology major requirements

REQUIRED COURSES FOR PRE-OPTOMETRY 28

CHEM 1420	General Chemistry II	4
CHEM 3410	Organic Chemistry I	4
CHEM 4430	Biochemistry	4
MATH 1306	College Algebra	3
MATH 1320	Pre Calculus	3
MATH 1330	Calculus	3
PHYS 2412	General Physics II	4
WRIT 3344	Scientific Writing	3

Upper Level Electives 10

Total Hours

Academic Core for B.S.	46
B.S. Biology Major Required Courses	36
Required Courses for Pre-Optometry	28
Upper Level Electives	10
Total hours required for graduation	120

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	2.0