

# Biology (B.S.) – Pre-Optometry

2024-2025 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 – SELECT TWO DIFFERENT COURSES 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	Theatre Appreciation	3

### **WORLD CULTURES – SELECT ONE 3**

ARTS 2354	World Art	3
EXSS 2353	Lifespan Nutrition	3
GLBL 2310	Cultural Immersion	3
HIST 1311	History of World Civilizations to 1500	3
HIST 1312	History of World Civilizations since 1500	3
HUMA 2355	Foundations of the Humanities	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 2305	United States Government	3
POLS 2306	Texas State and Local Government	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 62 Hours

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

BIOL 1350	Biology for Science Majors I	3
BIOL 1150	Biology for Science Majors I Lab	1
BIOL 1360	Biology for Science Majors II	3
BIOL 1160	Biology for Science Majors II 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 26**

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 1430	Calculus	4
PHYS 2412	General Physics II	4

## Electives 13 Hours

### **UPPER LEVEL ELECTIVES 13**

You need 13 additional hours to reach your minimum 36 UL required hrs.

### **Total Hours**

Academic Core for B.S.	46
B.S. Biology Major Required Courses	36
Required Courses for Pre-Optometry	26
Upper Level Electives	13
<b>Total hours required for graduation</b>	<b>121</b>

### **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