

Biology, Human Biology (BSBio)

Total Hours Required: 120

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
M 408C	Differential and Integral Calculus	4
CH 301	Principles of Chemistry I	3
BIO 311C	Introductory Biology I	3
RHE 306	Rhetoric and Writing	3
First-Year Signature Course (090)		3
Hours		16
Semester 2		
M 408S	Integral Calculus for Science	4
CH 302	Principles of Chemistry II	3
BIO 311D	Introductory Biology II	3
BIO 206L	Introductory Laboratory Experiments in Biology	2
Visual and Performing Arts (050)		3
Hours		15
Year 2		
Semester 1		
CH 320M	Organic Chemistry I	3
BIO 325	Genetics	3
CH 204	Introduction to Chemical Practice	2
SDS 320E	Elements of Statistics	3
American and Texas Government (070)		3
Hours		14
Semester 2		
CH 320N	Organic Chemistry II	3
CH 220C	Organic Chemistry Laboratory	2
INB 370	Evolution	3
American and Texas Government (070)		3
Free Elective		3
Hours		14
Year 3		
Semester 1		
PHY X02K & PHY X05M	General Physics Technical Course: Mechanics, Heat, and Sound and Laboratory For Physics 302K, 303K, and 317K	4
INB 346	Human Biology	3
BCH 369	Fundamentals of Biochemistry	3
Free Elective		3
Free Elective		3
Hours		16
Semester 2		
PHY X02L & PHY X05N	General Physics Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics and Laboratory For Physics 302L, 303L, and 317L	4
Humanities (040)		3
Social and Behavioral Sciences (080)		3
Hours chosen from: Upper-division INB		4
Hours		14
Year 4		
Semester 1		
U.S. History (060)		3

Hours chosen from: Upper-division BCH/MBS	3
Hours chosen from: Upper-division BCH/MBS	3
Free Elective	3
Free Elective	3
Hours	15
Semester 2	
<u>U.S. History (060)</u>	3
Hours chosen from: Upper-division BIO/INB/NTR	3
Hours chosen from: Upper-division BCH/INB/MBS	3
Hours chosen from: Upper-division BCH/INB/MBS/MNS Lab	1
Free Elective	3
Free Elective	3
Hours	16
Total Hours	120

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy [General Education](#) requirements, including [Core Curriculum](#).

Code	Title	Hours
Concentration		
CH 320M	Organic Chemistry I	3
CH 320N	Organic Chemistry II	3
CH 220C	Organic Chemistry Laboratory	2
BCH 369	Fundamentals of Biochemistry	3
or BCH 339F	Foundations of Biochemistry	
INB 346	Human Biology	3
Hours chosen from: Genetics, Genomics, and Computational Biology		3
BCH 339N	Systems Biology and Bioinformatics	
INB 321G	Principles of Computational Biology	
MBS 325T	Human Genetics	
MBS 356E	Epigenetics and Epitranscriptomics	
MBS 327G	Genomics	
MBS 366	Microbial Genetics	
MBS 366R	Molecular Genetics and Medicine	
INB 471	Introduction to Systematics	
SDS 322E	Elements of Data Science	
Hours chosen from: Cellular, Development, and Molecular Biology		6
BCH 339J	Chemical and Synthetic Biology	
BCH 339M	Structure and Function of Molecular Machines	
BCH 364F	Astrobiology	
MBS 320	Cell Biology	
MBS 326R	General Microbiology	
MBS 330	Molecular Biology of Animal Viruses	
MBS 336	Tumor Biology	
MBS 355	Microbial Biochemistry	
MBS 339M	Bacterial Behavior and Signaling Mechanisms	
MBS 344	Molecular Biology	
MBS 360K	Immunology	
MBS 350	Developmental, Stem Cell, and Regenerative Biology	
MBS 350M	Plant Molecular Biology	
MBS 361	Human Infectious Diseases	
Hours chosen from: Ecology, Environment, and Health		3
MBS 326R	General Microbiology	

MBS 327D	Emerging Infectious Diseases	
MBS 330	Molecular Biology of Animal Viruses	
MBS 361	Human Infectious Diseases	
INB 364	Microbial Ecology	
NTR 306	Fundamentals of Nutrition	
NTR 312	Introduction to Nutritional Sciences	
Hours chosen from: Physiology and Anatomy		4
INB 446L	Human Microscopic and Gross Anatomy	
INB X65S & INB X65U	Human Systems Physiology and Human Systems Physiology Laboratory	
INB 478L	Comparative Vertebrate Anatomy	
Hours chosen from: (One-hour laboratory courses may require credit for or registration in a complementary lecture course)		1
MBS 320L	Cell Biology Laboratory	
INB 122L	Structure, Physiology, and Reproduction of Seed Plants Laboratory	
INB 124L	Survey of the Plant Kingdom Laboratory	
MBS 128L	Laboratory Experiments in Plant Physiology	
INB 323	Mathematical Modeling for Biology	
BIO 325L	Laboratory Experience in Genetics	
MBS 328D	Discovery Laboratory in Plant Biology	
MBS 230L	Virology Laboratory	
MBS 331L	Laboratory Studies in Molecular Biology	
INB 440L	Biology of Birds	
INB 446L	Human Microscopic and Gross Anatomy	
INB 448L	Invertebrate Biology	
MBS 349L	Experiments in Developmental Biology	
INB 353F	Field Entomology	
INB 453L	Entomology	
INB 354L	Ichthyology	
INB 455L	Vertebrate Natural History	
BIO 456L	Limnology and Oceanography	
MBS 260L	Immunology Laboratory	
MBS 361L	Clinical Bacteriology Laboratory	
INB 463L	Plant Systematics	
INB 165U	Human Systems Physiology Laboratory	
INB 369F	Field Herpetology	
INB 369L	Herpetology	
INB 371L	Experimental Physiology	
INB 373L	Ecology Laboratory	
INB 174L	Laboratory in Plant Anatomy and Histological Techniques	
INB 478L	Comparative Vertebrate Anatomy	
INB 359L	Animal Behavior Laboratory	
INB 470L	Evolution Laboratory	
MNS 120L	Laboratory Studies in Marine Ecology	
MNS 152L	Topics in Principles of Marine Science: Laboratory Studies	
<i>Subtotal</i>		37
Degree (see details below)		34
Free electives: Additional coursework to reach total hours required.		13
<i>Subtotal</i>		47
General Education		
<u>Core Curriculum</u>		42
<u>Foreign Language other than English, Beginning Proficiency</u>		
<i>Subtotal</i>		42

College Requirements - Natural Sciences

General University Requirements

Total Hours **120**

Degree-Bachelor of Science Biology (BSBio)

Code	Title	Hours
Hours chosen from:		4
M 408C	Differential and Integral Calculus	
M 408R	Differential and Integral Calculus for the Sciences	
M X08S & M X08N	Integral Calculus for Science and Differential Calculus for Science	
SDS 320E	Elements of Statistics	3
Hours chosen from:		3
CH 301	Principles of Chemistry I	
CH 301C	Foundations of Chemistry I	
CH 401	Principles of Chemistry I	
Hours chosen from:		3
CH 302	Principles of Chemistry II	
CH 302C	Foundations of Chemistry II	
CH 402	Principles of Chemistry II	
CH 204	Introduction to Chemical Practice	2
Hours chosen from a single sequence below:		8
Sequence 1		
PHY 317K	General Physics I	
PHY 117M	Laboratory for Physics 317K	
PHY 317L	General Physics II	
PHY 117N	Laboratory for Physics 317L	
Sequence 2		
PHY 301	Mechanics	
PHY 101L	Laboratory for Physics 301	
PHY 316	Electricity and Magnetism	
PHY 116L	Laboratory for Physics 316	
Sequence 3		
PHY 303K	Engineering Physics I	
PHY 103M	Laboratory for Physics 303K	
PHY 303L	Engineering Physics II	
PHY 103N	Laboratory for Physics 303L	
Sequence 4		
PHY 302K	General Physics Technical Course: Mechanics, Heat, and Sound	
PHY 102M	Laboratory for Physics 302K	
PHY 302L	General Physics Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics	
PHY 102N	Laboratory for Physics 302L	
Hours chosen from a single sequence below:		6
Sequence 1		
BIO 311C	Introductory Biology I	
BIO 311D	Introductory Biology II	
BIO 325	Genetics	
Sequence 2		
BIO 315H	Advanced Introduction to Genetics: Honors	
BIO 325H	Genetics: Honors	
BIO 206L or INB 208L	Introductory Laboratory Experiments in Biology Field Biology	2

or MBS 226L	General Microbiology Laboratory	
INB 370	Evolution	3
All students must complete at least 36 semester hours of upper-division coursework; at least 21 semester hours of upper-division coursework in biology must be completed in residence at the University.		
Total Hours		34

Additional Requirements and Policy

Students in all Options must fulfill both the University's [General Requirements](#) for graduation and the [college requirements](#). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in the *General Information Catalog*.

To graduate under Biology Honors, students must remain in good standing in the [Dean's Scholars, Health Science Scholars, or Polymathic Scholars Honors Program](#), must submit an honors thesis, and present their research in an approved public forum, such as the college's annual Undergraduate Research Forum. More information about the Undergraduate Research Forum is available at <https://cns.utexas.edu/>.

Order and Choice of Work

Students begin the Bachelor of Science in Biology degree program with six hours of introductory biology for science majors (BIO 311C and BIO 311D), as well as CH 301 or CH 301C and CH 302 or CH 302C and M 408C, M 408N, or M 408R. Students should consult with academic advisors about specific concentrations within biology, about appropriate courses in mathematics and physical sciences, and about course load and the balance between laboratory and nonlaboratory work. Most students select a concentration by the end of the second year and take at least 21 hours of upper-division coursework in the major in the third and fourth years.