Biology, Genetics and Genomics (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
First-Year Signature Course (090)		3
	Hours	**13**
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
RHE 306	Rhetoric and Writing	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		
INB 370	Evolution	3
American and Texas Government (070)		3
Visual and Performing Arts (050)		3
Hours chosen from: Upper-division BCH/BIO/CH/C S/M/NEU/SDS		3
Hours chosen from: Upper-divison MBS		3
	Hours	**15**
Year 3		
Semester 1		
PHY 302K	General Physics Technical Course: Mechanics, Heat, and Sound	3
PHY 105M	Laboratory For Physics 302K, 303K, and 317K	1
BCH 369	Fundamentals of Biochemistry	3
Humanities (040)		3
Hours chosen from: Upper-division MBS		3
Free Elective		3
	Hours	**16**
Semester 2		
PHY 302L	General Physics Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics	3
PHY 105N	Laboratory For Physics 302L, 303L, and 317L	1
Social and Behavioral Sciences (080)		3
Hours chosen from: Upper-division MBS		3
Hours chosen from: Upper-division MBS		3
Free Elective		3
	Hours	**16**
Year 4		
Semester 1		
BIO 325L	Laboratory Experience in Genetics	3
Free Elective		1
U.S. History (060)		3
Capstone (MBS 368R, BIO 377 or 379H)		3
Hours chosen from: Upper-division MBS		3
MBS 377	Undergraduate Research (capstone experience)	3
	Hours	**16**
Semester 2		
U.S. History (060)		3
Hours chosen from: Upper-division MBS		3
Hours chosen from: Upper-division MBS		3
Hours chosen from: Upper-division BCH/INB/SDS		3
Hours chosen from: Upper-division BCH/BIO/CH/C S/M/NEU/SDS		3
	Hours	**15**
	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		
BCH 369	Fundamentals of Biochemistry	3
or BCH 339F	Foundations of Biochemistry	
CH 320M	Organic Chemistry I	3
MBS 320	Cell Biology	3
MBS 325T	Human Genetics	3
MBS 344	Molecular Biology	3
MBS 350	Developmental, Stem Cell, and Regenerative Biology	3
BIO 325L	Laboratory Experience in Genetics	3
INB 321G	Principles of Computational Biology	3
or SDS 322E	Elements of Data Science	
Hours chosen from:		6
MBS 326R	General Microbiology	
MBS 356E	Epigenetics and Epitranscriptomics	
MBS 327G	Genomics	
MBS 366	Microbial Genetics	
MBS 366R	Molecular Genetics and Medicine	
Hours chosen from: Capstone experience		3
MBS 320L	Cell Biology Laboratory	
MBS 349L	Experiments in Developmental Biology	
MBS 377	Undergraduate Research	
Hours chosen from: Upper-division biochemistry, biology, chemistry, computer science, mathematics, neuroscience, and statistics and data sciences		6
Subtotal		*39*
Degree (see details below)		**34**
Free electives: Additional coursework to reach total hours required.		11
Subtotal		*45*
General Education		
Remaining Core Curriculum (42 hours total)		36
Foreign Language other than English, Beginning Proficiency		
Subtotal		*36*

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	Introductory Laboratory Experiments in Biology	2
or INB 208L	Field Biology	
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.