

Bachelor of Arts in Biology

Boston University College of Arts & Sciences
Department of Biology

REQUIREMENTS

- ✓ 9 biology courses; 6-7 chemistry, math/computer science, and physics courses; and 10 additional CAS courses towards the 128 credits needed to graduate.
- ✓ C or higher is required for credit in all biology, math/computer science, and physics courses; C- or higher is necessary for credit in all required chemistry courses.
- ✓ Excluding Introductory Biology courses: a) at least three biology courses must have a laboratory component; b) at least three biology courses must be at the 300+ level; and c) at least five biology courses must be taken in the BU Biology Department.

INTRODUCTORY BIOLOGY

BI 107
BI 108 or BI 116

BREADTH REQUIREMENTS

Choose one course from each area of biology. Courses fulfilling breadth requirements may not also fulfill elective requirements.

Cell & Molecular (CM)

BI 203 or BI 213 or (BI 218 ♦)
BI 206 or BI 216

Physiology & Neurobiology (PN)

BI 310 ♦
BI 315 ♦
BI 325 (or NE 203 ♦)

Ecology, Behavior & Evolution (EBE)

BI 225
BI 260
BI 303 ♦
BI 306 ♦
BI 309
BI 407 ♦

♦ Course will count toward the three-lab requirement.

BIOLOGY ELECTIVES

See [Biology Courses by Semester](#), [Optional Related Courses](#), and [Optional Programs](#) on SIDE II.

1

2

3

4

CHEMISTRY COURSES

See [Chemistry Requirements](#) on SIDE II.

1

2

3

(If on standard track)

MATH & COMPUTER SCIENCE COURSES

See [Math & Computer Science Requirements](#) on SIDE II.

1

2

PHYSICS COURSES

See [Physics Requirements](#) on SIDE II.

1

2

CAS REQUIREMENTS

For more details visit the [CAS Bulletin](#) page.

2nd Language: _____

Proficiency through the 4th semester: I II III IV

Writing: WR 100/120 WR 150

Humanities: 1 2

Social Sciences: 1 2

	FALL	SPRING
FIRST YEAR	1	1
	2	2
	3	3
	4	4
	SUM1	SUM2
SOPHOMORE YEAR	FALL	SPRING
	1	1
	2	2
	3	3
	4	4
	SUM1	SUM2
JUNIOR YEAR	FALL	SPRING
	1	1
	2	2
	3	3
	4	4
	SUM1	SUM2
SENIOR YEAR	FALL	SPRING
	1	1
	2	2
	3	3
	4	4
	SUM1	SUM2

Biology courses above with a lab component (excluding BI 107/108/116):

1

2

3

Biology courses above that are 300+ level:

1

2

3

Advisor Name: _____

Advisor Signature & Date: _____

Notes/Comments: _____

BIOLOGY COURSES BY SEMESTER

Note: Semester offerings may change. See the [Course Directory](#) and [StudentLink](#) for updated info. Courses cross-listed with those below are accepted.

Fall Semester Courses

BI 107 Biology 1	BI 531 Ichthyology ♦(MS)
BI 203 Cell Biology	BI 535 Trans. Research in Alzheimer's
BI 213 Intensive Cell Biology	BI 539 Coral Reef Dynamics ♦(MS)
BI 218 Cell Biology with ISE Lab ♦	BI 541 Coral Reef Restoration ♦(MS)
BI 225 Behavioral Biology	BI 545 Neurobio. of Motivated Behavior
BI 305 Plant Biology ♦	BI 546 Marine Megafaunal Ecology ♦(MS)
BI 306 Bio. of Global Change ♦	BI 548 Marine Microbial Ecology ♦(MS)
BI 309 Evolution	BI 551 Stem Cells
BI 310 Human Structure & Function ♦	BI 552 Molecular Biology 1
BI 311 General Microbiology ♦	BI 556 Drug Discovery in Neuroscience
BI 315 Systems Physiology ♦	BI 558 Coastal Biogeochemistry ♦(MS)
BI 325/(NE 203 ♦) Princ. of Neurosci.	BI 560 Systems Biology
BI 333 Human Population Genetics ❖	BI 561 Proteostasis Bio. Neuro. Disease ♦
BI 394 Topics in Biology 3 (IRR)	BI 569 Trop. Marine Invertebrates ♦(MS)
BI 407 Animal Behavior ♦	BI 572 Advanced Genetics ❖
BI 410 Developmental Biology	BI 578 Marine Geo. Info. Science ♦(MS)
BI 421 Biochemistry 1 ♦	BI 588 Proj. Design&Stat. in Bio. Anthro. ❖
BI 443 Terrestrial Biogeochemistry	BI 589 Neural Impacts on Tumorigenesis
BI 445 Cell. & Mol. Neurophysiology ♦	BI 591 Bio-Optical Oceanography ♦❖(MS)
BI 455 Developmental Neurobiology	BI 593 Marine Phys. & Clim. Change ♦(MS)
BI 510 Inst. Racism in Health&Science	BI 594 Topics in Biology (IRR)
BI 513 Genetics Lab ♦	BI 598 Neural Circuits
BI 520 Sensory Neurobiology (IRR)	
BI 523 Marine Urban Ecology ♦(MS)	
BI 525 Bio. Neurodegen. Diseases	

Spring Semester Courses

BI 108 Biology 2	BI 449 Neuroscience Design Lab ♦
BI 116 Biology 2 with ISE Lab	BI 475 Urban Ecology
BI 203 Cell Biology	BI 481 Molecular Bio. of the Neuron
BI 206 Genetics	BI 500 Shark Biology & Conservation
BI 216 Intensive Genetics	BI 504 Advanced Evol. Analysis
BI 225 Behavioral Biology	BI 506 Phenotypic Plasticity ❖
BI 230 Behavioral Endocrinology	BI 509 Metapopulation Ecology ❖
BI 260 Marine Biology	BI 510 Inst. Racism in Health&Science
BI 302 Vertebrate Zoology ♦	BI 515 Population Genetics ❖
BI 303 Ecology ♦	BI 519 Theor. Evol. Ecology ♦❖
BI 306 Bio. of Global Change ♦	BI 520 Sensory Neurobiology (IRR)
BI 307 Biogeography	BB 522 Molecular Biology Lab ♦
BI 315 Systems Physiology ♦	BI 525 Bio. Neurodegen. Diseases
BI 325 Principles of Neuroscience	BI 530 Forest Ecology
BI 349 Neurotoxins	BI 542 Neuroethology
BI 385 Immunology	BI 550 Marine Genomics ♦
BI 394 Topics in Biology 3 (IRR)	BI 553 Molecular Biology 2
BI 411 Microbiome	BI 565 Functional Genomics
BI 413 Microbial Ecology (IRR)	BI 576 Carcinogenesis
BI 414 Ornithology ❖	BI 577 Quant. Approaches in Mol. Bio.
BI 422 Biochemistry 2 ♦	BI 586 Ecological Genomics ♦❖
BI 423 Marine Biogeochemistry	BI 594 Topics in Biology (IRR)
BI 448 Biodiversity and Conservation	BI 599 Physiology of the Synapse (IRR)

Note: Taking two of any of the following 2-credit courses will count as one Biology elective: BI 581/582 (different topics) and/or BI 527/528.

- ♦ Course will count toward the three-lab requirement.
- ❖ Course typically offered every other year.
- (IRR) Course offered irregularly.
- (MS) Course offered in Marine Semester (application required).

CHEMISTRY REQUIREMENTS

Choose a track.

Standard Track (Recommended)

General Chemistry: Choose one sequence.			Organic Chemistry:
Sequence I	Sequence II	Sequence III	Choose one course.
CH 101	CH 109	CH 111	CH 203/CH 218
CH 102/ CH 116	CH 110	CH 112	CH 211

Note: Pre-health students may need additional courses including CH 204 (or 212 or 214) and biochemistry BI/CH 421 or CH 373.

Alternative Track (Not acceptable for most pre-health careers)

General Chemistry: Choose one sequence.		Organic Chemistry:
Sequence I	Sequence II	Choose one course.
CH 171	General Chemistry Sequence from Standard Track (2 courses)	CH 172* CH 174

**Includes biochemistry content.*

NON-DEPARTMENTAL COURSES

Up to two courses from this list may be used as Biology electives.

CAS CH 373 Principles of Biochemistry	SAR HS 251 Human Nutrition Science
CAS PS 338 Neuropsychology	SAR HS 360 Muscle Biology ♦
GMS BT 404 Medical Virology	SAR HS 369 Gross Human Anat. ♦
GMS BT 426 Medical Microbiology ♦	SAR HS 370 Neuroanatomy & Neurophysiology ♦
GMS BT 432 Basic Pathology	
GMS BI 751 Biochem. and Cell Bio.	

♦ Course will **NOT** count toward the three-lab requirement.

OPTIONAL PROGRAMS (Application Required)

Undergraduate Research

- BI 140/141 Undergraduate Research in Biology 1 (2 cr)
- BI 240/241 Undergraduate Research in Biology 2 (2 cr)
- BI 340/341 Undergraduate Research in Biology 3 (2 cr)
- BI 350-352 Undergraduate Research in Biology 3 (4 cr ♦)
- BI 450-453 Undergraduate Research in Biology 4 (4 cr ♦)

- BI 401/402 Honors Research in Biology (4 cr ♦)
- BI 497/498 Honors Research in Biology Seminar (2 cr)

- Up to two of the above 4-credit research courses can count as electives; one of those can apply towards the three-lab requirement.
- For more info. visit www.bu.edu/biology/undergrad/research/

Science Abroad - Madrid, Spain

- Offered in the fall semester; courses taught in English.
- Targeted to sophomores in science majors/pre-med students.
- For more information, visit: www.bu.edu/abroad

Marine Semester (MS) BI Courses ♦

- For more information, visit: www.bu.edu/bump/marine-semester/

MATH & COMPUTER SCIENCE REQUIREMENTS

Choose two courses from the lists below. At least one course must be calculus or statistics.

Calculus	Statistics	Computer Science
MA 121 or 123	MA 115 or 213	CS 105
MA 122 or 124	MA 116 or 214	CS 108
MA 127 or 129	CDS DS 100	CS 111
MA 196		CDS DS 110

PHYSICS REQUIREMENTS

Choose one sequence.

PY 105 and PY 106	PY 211 and PY 212
PY 211 and PY 106	PY 241 and PY 242