



FLORIDA
ATLANTIC
UNIVERSITY

NEW/CHANGE PROGRAM REQUEST Undergraduate Programs

UUPC Approval 11/7/2022
 UFS Approval _____
 Banner _____
 Catalog _____

Department Biological Sciences
College Charles E Schmidt College of Science

Program Name

Bachelor of Science

New Program*

Change Program*

Effective Date
(TERM & YEAR)

Fall 2023

Please explain the requested change(s) and offer rationale below or on an attachment.

The Department of Biological Sciences seeks to update the Bachelor of Science by adding the following course options to the core requirement list:

Introduction to Biology at FAU (BSC 1013) or First-Year Interest Group Experience (SLS 1411)
 or Honors Intro to Academic Life (SLS 1501)

Any option will provide students who are seeking a Bachelor of Science in Biological Sciences with knowledge and tools necessary for success in the program as well as the discipline of biology generally.

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

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Consult and list departments that may be affected by the change(s) and attach documentation

none

Approved by

Department Chair

SL Matton

College Curriculum Chair

[Signature]

College Dean

UUPC Chair

Ethlyn Williams

Undergraduate Studies Dean

Dan Meeroff

UFS President

Provost

Date

11/7/22

11/8/22

11/8/22

11/9/22

11/9/22

Biological Sciences

Bachelor of Science (B.S.)

(Minimum of 120 credits required)

The Bachelor of Science (B.S.) degree is recommended for students planning to be professional biologists in industry or governmental service, for graduate work in the biological sciences and for students planning careers in medicine, dentistry or veterinary medicine. In addition to the University and College degree requirements, students seeking a Bachelor of Science degree in Biological Sciences must complete the following degree requirements.

Prerequisite Coursework for Transfer Students

Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the [Transition Guides](#).

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Core Requirements (47-51 credits)		
Introduction to Biology at FAU	BSC 1013	0 or
First-Year Interest Group Experience	SLS 1411	1 or
Honors Intro to Academic Life	SLS 1501	2
Biological Principles and Lab	BSC 1010, 1010L	4
Biodiversity and Lab	BSC 1011, 1011L	4
General Chemistry 1 and Lab	CHM 2045, 2045L	4
General Chemistry 2 and Lab	CHM 2046, 2046L	4
Organic Chemistry 1	CHM 2210	3
Organic Chemistry 2	CHM 2211	3
Methods of Calculus	MAC 2233	3 or
Calculus with Analytic Geometry 1	MAC 2311	4
College Physics 1	PHY 2053	4 or
General Physics 1	PHY 2048	4
College Physics 2	PHY 2054	4 or
General Physics 2	PHY 2049	4
General Physics 1 Lab	PHY 2048L	1
General Physics 2 Lab	PHY 2049L	1
Experimental Design and Statistical Inference	PSY 3234	3 or
Introduction to Biostatistics	STA 3173	3
Select four of the courses below (Additional courses selected from this category beyond the four courses may be applied toward the elective requirement.)		
One course in Physiology***		4-5
Genetics	PCB 3063	4

Cell Biology	PCB 3023	3
Principles of Ecology	PCB 4043	3
Evolution	PCB 3674	3
***Students who select the "One course in Physiology" option above may fulfill this option by choosing one of the below course/lab combinations		
Principles of Plant Physiology and Lab	BOT 4503, 4503L	4
Comparative Animal Physiology and Lab	PCB 4723, 4723L	4
Vertebrate Structure Development and Evolution and Lab	ZOO 4690, 4690L	5
Human Morphology and Function 1 and Lab	PCB 3703, 3703L	4
Human Morphology and Function 2 and Lab	PCB 3704, 3704L	4

Electives		
Select a minimum of 18 upper-division credits from the list below		
Biochemistry 1	BCH 3033	3
Biochemistry 2 or Biochemistry Lab	BCH 3034 or BCH 3103L	3
Vascular Plant Anatomy and Lab	BOT 3223, 3223L	4
Marine Botany and Lab	BOT 4404, 4404L	4
Plant Cell Biology	BOT 4542	3
Principles of Plant Physiology and Lab	BOT 4503, 4503L	4
Plant Biotechnology	BOT 4734C	3
Life of a Biologist*	BSC 2844	1
Conservation Biology	BSC 3052	3
Introduction to Biological Research	BSC 3453	1
Biological Research Writing	BSC 3481	2
Molecular Genetics of Aging	BSC 4022	3
Climate Change Biology: Ecosystems to Human Health	BSC 4307	3
Laboratory Methods in Biotechnology	BSC 4403L	3
Concepts in Bioinformatics	BSC 4434C	3
Biology of Cancer	BSC 4806	3
Directed Independent Study**	BSC 4905	1-3
Directed Independent Research in Biological Sciences**	BSC 4910	0-3
Honors Research	BSC 4917	3
Honors Thesis	BSC 4918	3
Special Topics	BSC 4930	1-3
Comparative Animal Behavior	CBH 4024	3

Organic Chemistry Lab	CHM 2211L	2
Critical Thinking in Environmental Science	EVS 4021	3
Artificial Intelligence Applications in Biology	IDS 4139	3
General Microbiology and Lab	MCB 3020, 3020L	4
Medical Bacteriology	MCB 4203	3
Virology	MCB 4503	3
Microbial Ecology	MCB 4603	3
Marine Biodiversity and Lab	OCB 4032, 4032L	4
Marine Biology and Lab	OCB 4043, 4043L	4
Marine Microbiology and Molecular Biology and Lab	OCB 4525, 4525L	4
Marine Ecology and Lab	OCB 4633, 4633L	4
Marine Science	OCE 4006	3
Issues in Human Ecology	PCB 3352	3
Genetics Lab	PCB 4067L	3
Immunology	PCB 4233	3
Freshwater Ecology and Lab	PCB 4301, 4301L	4
Molecular Genetics	PCB 4522	3
Genes and Development	PCB 4594	3
Cellular Neuroscience and Disease	PCB 4842	3
Practical Cell Neuroscience	PCB 4843C	3
Biological Bases of Behavior	PSB 3002	3
Invertebrate Zoology and Lab*	ZOO 3205, 3205L	5
Introduction to Animal Locomotion	ZOO 4373	3
Ornithology and Lab	ZOO 4472, 4472L	4
Principles of Human Neuroanatomy	ZOO 4742	3

* Although it is a biology elective, Life of a Biologist (BSC 2844) is not an upper-division course and, as such, does not fulfill the minimum biology upper-division elective requirement of 12 credits.

** Students may enroll in a maximum of 3 research credits within a single semester.

Note: No more than a total of 5 non-graded (S/U) credits may be used to fulfill biology degree program requirements. Approved non-graded biology electives include:

Directed Independent Study	BSC 4905	1-3
Directed Independent Research in Biological Sciences	BSC 4910	0-3

Seminar	BSC 4932	1
Directed Independent Research in Environmental Science	EVS 4916	0-3
Science Internship	IDS 3941	1-3

Note: No more than 2 credits of a seminar course (BSC 4932) may be used to fulfill biology degree program requirements.

Note: Biology department approval is required for students wishing to complete the Science Internship for credit. After a student's Science Internship registration request has been processed by the FAU Career Center, the Career Center will communicate directly with the department to request approval on the student's behalf.

Note: Students wishing to participate in Medical Shadowing Internship should not enroll in the Science Internship. They should instead enroll in Medical Shadowing Internship (IDS 3940). The Medical Shadowing Internship course cannot be used to fulfill biology degree program requirements.

Students can find detailed flight plan information and Intellectual Foundations Program checklists for biology majors through [University Advising Services](#).

Honors in the Major—Biological Sciences

Eligible undergraduate students may apply to participate in the Department of Biological Sciences' Honors in the Major program. There are two paths to attaining Honors in the Major. Students who fulfill all requirements associated with one of the biology honors pathways successfully and have an overall GPA of 3.2 or greater at the time of degree conferral will receive a designation of Honors in the Major on their transcripts. The transcript designations, "Honors in Biological Sciences—Research Thesis" or "Honors in Biological Sciences—Research," will mark participation in the one of the two paths.

Honors in Biological Sciences—Research Thesis

The Department of Biological Sciences offers an Honors Thesis Program that recognizes research accomplishments of talented undergraduates. Eligible students must have a minimum of 20 credits in biology and an overall GPA of 3.2. Students usually begin the program in their junior year and conduct independent, supervised research during their junior and senior years. A written paper and a seminar describing the results of their research are required in the senior year. Interested students should contact the faculty member whose research interests are closest to those the student wishes to pursue.

Honors in Biological Sciences—Research

The Department of Biological Sciences offers an Honors Research Program that recognizes research accomplishments of talented undergraduates. Eligible students must have a minimum of 20 credits in biology and an overall GPA of 3.2. Students usually begin the program in their junior year and conduct independent, supervised research during their junior and senior years. Submission of a grant proposal is required no later than the second semester of the junior year. Presentation of a poster or seminar at a local, regional, national or international research conference/symposium describing the results of the research is required in the senior year. Interested students should contact a faculty member whose research interests are closest to those the student wishes to pursue. Visit the [website](#) for more information.

The FAU Max Planck Honors Program (MPHP)

Eligible College of Science majors in Biology, Psychology, and Neuroscience and Behavior may apply to participate in this Jupiter-specific honors program for undergraduates. For students pursuing the MPHP, 3 to 6 of the elective credits in their individual program must be applied toward the requirements of the MPHP. These include successful completion of a Capstone experience (1 to 3 credits) and three different MPHP Enrichment courses (1 credit each) from those listed below. A minimum grade of "B" must be achieved in graded courses ("S" in non-graded courses) among these exclusive MPHP course options for the credits to count toward the requirements of the MPHP. Visit the [MPHP website](#) to apply.