

BIOLOGY (B.A.)

Students majoring in Biology (B.A.) may not pursue the Biology (B.S.) or Biotechnology (B.S.) as Dual Major / Dual Degree, Second Baccalaureate degree.

The Bachelor of Arts (B.A.) in Biology offers students the opportunity to study and engage in academic research on living systems across several levels from molecular to ecological systems. Students will gain an understanding of interactions between organisms and their environments (including biomedical and evolutionary perspectives). Ethical complexities of biological research are integrated throughout the curriculum. Pedagogically, emphasis is on lab-centered, hands-on learning. This degree program integrates a biological science disciplinary course of study with an issues-based interdisciplinary approach. Graduates will be prepared for entry-level positions and for graduate study in biological sciences, including the various biomedical fields (medical, dental, veterinary, optometry, biochemistry, physiology, microbiology, anatomy, etc.).

Program Progression and Additional Graduation Requirements

For timely degree completion, students must complete all program milestones. The following actions occur when milestones are missed: first occurrence—advising hold and counseling regarding progression requirements; second occurrence—counseling and change to a major outside of the Department of Biology or Department of Chemistry and Physics that is more appropriate to student goals and academic performance. Appeals are handled through the relevant department. The decision of the appeal committee is final. Program milestones include the following:

- BSC 1010C General Biology with Lab I or BSC 1011 General Biology II/BSC 1011L General Biology II Laboratory minimum grade of C completed one calendar year from admission as first time in college (FTIC) or 30 credits earned, whichever is earlier.
- BSC 1010C General Biology with Lab I and BSC 1011 General Biology II/BSC 1011L General Biology II Laboratory minimum grade of C completed by end of fourth semester (including summers) from admission as FTIC or 45 credits earned, whichever is earlier.
- PCB 3023C Cell Biology, PCB 3043C General Ecology or PCB 3063C Genetics minimum grade of C completed by end of sixth semester (including summers) from admission as FTIC or 60 credits earned, whichever is earlier.

Transfer students may declare the major after they have completed BSC 1010C General Biology with Lab I, BSC 1011 General Biology II, and BSC 1011L General Biology II Laboratory with grades of C or better in each course. Transfer students must complete PCB 3023C Cell Biology, PCB 3043C General Ecology or PCB 3063C Genetics with a grade of C or better within three semesters (including summer) of declaring the major. In addition to the program requirements, students must:

- Complete a minimum of 120 credits.
- Complete a minimum of 48 of the 120 credits at the upper division (3000 - 4999 level).
- Earn a cumulative GPA of 2.0 for all coursework attempted at FGCU.
- Satisfy the College-Level Skills and foreign language entrance requirements.
- Satisfy the Service-Learning requirement.

- Satisfy the Civic Literacy requirement.
- Satisfy the residency requirement: 30 of the last 60 credits must be completed at FGCU.
- Complete the summer course enrollment requirement.
- Submit an Application for Graduation by the deadline listed in the FGCU Academic Calendar.

Program Requirements

Code	Title	Credits
FGCU General Education Program (https://www.fgcu.edu/academics/undergraduatestudies/generaleducation/)		
To prevent or minimize excess hours, select general education courses that satisfy common prerequisite requirements for your intended major.		
Common Prerequisites		
For this major, common prerequisite courses with an asterisk (*) require prior knowledge and skills demonstrated through degree acceleration programs (e.g., the College Board's Advanced Placement Program [AP], International Baccalaureate Program [IB], College-Level Examination Program [CLEP], Advanced International Certificate of Education Program [AICE]); dual enrollment; placement exam; or college coursework.		
A minimum grade of C is required in each course		
BSC 1010C	General Biology with Lab I (Acceptable Substitute: (BSCX010 and BSCX010L) or BSCX010C or BSCX040C)	4
BSC 1011 & 1011L	General Biology II and General Biology II Laboratory (Acceptable Substitute: (BSCX011 and BSCX011L) or BSCX011C or BSCX041C)	4
CHM 1045 & 1045L	General Chemistry I and General Chemistry I Laboratory (Acceptable Substitute: (CHMX045 and CHMX045L) or CHM045C or (CHMX040 and CHMX041)) ^{*, 1}	4
CHM 1046 & 1046L	General Chemistry II and General Chemistry II Lab (Acceptable Substitute: (CHMX046 and CHMX046L) or CHMX046C)	4
CHM 2210 & 2210L	Organic Chemistry I and Organic Chemistry I Laboratory (Acceptable Substitute: (CHMX210 and CHMX210L) or CHMX210C or (PHYX053 and PHYX053L) or (PHYX048 and PHYX048L))	4
CHM 2211 & 2211L	Organic Chemistry II and Organic Chemistry II Laborator (Acceptable Substitute: (CHMX211 and CHMX211L) or CHMX211C or (PHYX054 and PHYX054L) or (PHYX049 and PHYX049L))	4
MAC 2311	Calculus I (Acceptable Substitute: MACX311 or MACX233 or MACX253 or MACX281 or MACX241) ^{*, 2}	4
MAC 2312	Calculus II (Acceptable Substitute: MACX312 or MACX282 or MACX234 or STAX023 or STAX024 or STAX321) ^{*, 3}	3-4
or STA 2023	Statistical Methods	
Required Courses in the Major		(14 credits)
A minimum grade of C is required in each course		

BSC 4910C	Senior Project I: Research (capstone)	2	MCB 3652C	Environmental Microbiology	3
or BSC 4944C	Senior Project I: Internship		MCB 4203C	Pathogenic Microbiology	3
BSC 4911	Sr Project II: Presentation (capstone)	1	MCB 4223C	Food Microbiology	3
IDS 3300	Foundations of CivicEngagement	3	MCB 4404C	Microbial Physiology	3
PCB 3023C	Cell Biology	4	MCB 4502C	Virology	3
PCB 3063C	Genetics	4	PCB 3043C	General Ecology ⁷	3
Restricted Electives in the Major		(36 credits)	PCB 3414C	Behavioral Ecology	3
A minimum grade of C is required in each course			PCB 3422C	Population Ecology	3
Complete one from the following:			PCB 3673C	Evolutionary Biology ⁷	3
IDS 3138	Cannabis and Its Impact	3	PCB 3703C	Human Physiology	4
IDS 3143	Issues in Technology	3	PCB 3723C	Comparative Animal Physiology	3
IDS 3332	Issues in Contemporary Society	3	PCB 3731	Medical Cannabis	3
IDS 3345	Drugs: Mind, Body, & Society	3	PCB 4233C	Immunology	3
IDS 3385	Issues in Science	3	PCB 4237C	Advanced Immunology	3
IDS 3622	Issues in the Humanities	3	PCB 4253C	Developmental Biology	3
Complete one from the following:			PCB 4303C	Limnology	3
PCB 3043C	General Ecology	3	PCB 4454C	Biological Statistics	3
PCB 3673C	Evolutionary Biology	3	PCB 4522C	Molecular Genetics	3
ZOO 3713C	Vertebrate Form and Function	3	PCB 4656C	Molec Tech in Behavioral Biol	3
Complete 30 credits from the following:			PCB 4671C	Evolution in the Omics Age	3
ANS 3440	Animal Nutrition	3	PCB 4674C	Reptile & Amphibian Evolution	3
ANT 3586C	Human Evolution	3	PCB 4714	Comparative Immunology	3
BCH 3023C	Biochemistry	3	PCB 4870	Sensory Biology	3
BCH 3025C	Analytical Biochemistry	3	PHY 2048	General Physics I	4
BOT 3015C	The Lives of Plants and Algae	3	& 2048L	and General Physics I Laboratory ^{6,8}	
BOT 3153C	Flora of Southwestern Florida	3	PHY 2049	General Physics II	4
BOT 3712C	Plant Systematics & Evolution	3	& 2049L	and General Physics II Laboratory ^{6,9}	
BOT 4503C	Plant Physiology	3	ZOO 3205C	Invertebrate Zoology	3
BSC 1930L	Seminar in Medicine I	1	ZOO 3234C	General Parasitology	3
BSC 2930L	Seminar in Medicine II	1	ZOO 3464C	Field Herpetology of SWFL	3
BSC 3874	Human Pharmacology	3	ZOO 3713C	Vertebrate Form and Function ⁷	3
BSC 4052	Conservation Biology	3	ZOO 3733C	Human Anatomy	4
BSC 4312	Marine Biology	3	ZOO 4233C	Medical & Vet Parasitology	3
BSC 4422C	Methods in Biotechnology	3	ZOO 4272C	Ornithology	3
BSC 4430C	Molecular Methods in Biology	3	ZOO 4405	Sea Turtle Biology	3
BSC 4434C	Bioinformatics	3	ZOO 4422C	Herpetology	3
BSC 4514	Endocrine Disruptors	1	ZOO 4454C	Ichthyology	3
BSC 4900	Dir Ind Study/Research in Bio ⁴	1-3	ZOO 4480C	Mammalogy	3
BSC 4930	Special Topics in Biology	3	ZOO 4513C	Animal Behavior	3
BSC 4933	Current Topics in Biology ⁵	1	ZOO 4743C	Neuroscience	3
BSC 4940	Internship in Biology (must be approved by dept. chair) ⁴	1	ZOO 4753C	Histology	3
CHM 2210	Organic Chemistry I	4	ZOO 4823C	General Entomology	3
& 2210L	and Organic Chemistry I Laboratory ⁶		Sustainability Course Graduation Requirement		3
CHM 2211	Organic Chemistry II	4	Select at least 3 credits in sustainability coursework (SCGR Attribute)		
& 2211L	and Organic Chemistry II Laborator ⁶		Additional Electives		
ENY 4701C	Forensic Entomology	3	As needed to reach total credits required for the degree		
EVR 4920	Current Topics Environ Studies ⁵	1	¹ Prerequisites of MAT 1033 Intermediate Algebra minimum grade of C then MAC 1105 College Algebra minimum grade of C; or relevant accelerated credit; or placement exam		
IDS 4263C	Aspects in Nanotechnology	3	² Prerequisites of MAT 1033 Intermediate Algebra minimum grade of C then MAC 1105 College Algebra minimum grade of C then MAC 1147 Precalculus minimum grade of C; or relevant accelerated credit; or placement exam		
ISC 3120C	Scientific Process	3			
MAC 2312	Calculus II ⁶	4			
MCB 3020C	General Microbiology	4			

- ³ For STA 2023 Statistical Methods Prerequisites of MAT 1033 Intermediate Algebra minimum grade of C; or relevant accelerated credit; or placement exam
- ⁴ A maximum number of 4 credits combined from these courses can be used to fulfill the elective requirement
- ⁵ A maximum number of 2 credits combined from these courses can be used to fulfill the elective requirement
- ⁶ Courses taken to satisfy common prerequisites cannot be counted as an elective
- ⁷ Courses taken in one elective category cannot be used to satisfy another elective category
- ⁸ or PHY 2053 College Physics I (3) and PHY 2053L College Physics I Laboratory (1)
- ⁹ or PHY 2054 College Physics II (3) and PHY 2054L College Physics II Laboratory (1)

Total Credits Required: 120