FIU

Department of Biological Sciences

BACHELOR OF ARTS PROGRAM OF STUDY

(BIOL:BA)

*Students are encouraged plan their own course selections; **PLEASE READ COURSE DESCRIPTIONS** in the **UNDERGRADUATE COURSE CATALOG**. Most elective courses have prerequisites that must be taken BEFORE you take the elective course. To see your own progress, you can see and print out your own Degree Audit from you My FIU. If you need assistance or have any questions you are encouraged to see an advisor prior to each registration period. Make Advisor appointment through your Dashboard. All Biology faculty members serve as biology career advisors and have designated advising times. All Science and Math courses must be completed with a grade of "C" or better to satisfy the requirements.

LOWER DIVISION PROGRAM

- ☐ UCC –University Core Curriculum (**Note:** Transfer students with an AA degree from a Florida College System or other Florida State University are exempt from the UCC).
- ☐ GLOBAL LEARNING REQUIREMENT at Foundation Level and In-field/Discipline Specific Level (consider using upper division courses here)
- ☐ Students entering the University with fewer than 60 hours must complete 9 hours of coursework during the summer semester
- ☐ Foreign Language requirement**s** (see page 2)
- ☐ **General Science Requirements** (also called Common Prerequisites)

General Science Courses	FIU *( ) = credit hours*	BC or MDC equivalent	UM Equivalent
☐ Essentials of Biology: The Big Picture* *Not required for students w/AA degrees.	BSC 1005(3)	N/A	N/A
☐ Foundations of Biochemistry Prerequisites:BSC2010+CHM045	BCH 2020(3)	N/A	N/A
☐ Biological Organization: The Size and Scale of Life Prerequisites:BSC2010+CHM045	BSC 2300(3)	N/A	N/A
☐ General Biology I and II	BSC 2010(3)+Lab(1) BSC 2011(3)+Lab(1)	BSC 2010+Lab or BOT 1010+Lab BSC 2011+Lab ZOO 1010+Lab	BIL 150 +151Lab BIL 160 + 161Lab
☐ General Chemistry I and II	CHM 1045(3)+Lab(1) CHM 1046(3)+Lab(1)	CHM 1045+Lab or CHM 1040+Lab CHM 1046+Lab CHM 1041+Lab	CHM 111 + 113Lab CHM 112 + 114Lab
☐ General Physics I	PHY 2053(4) using algebra and trigonometry or PHY 2048(4) using Calculus 1 and 2.	PHY 2053 PHY 2048	PHY 101
☐ Mathematics - Students must complete sub-requirements (A) and (B)			
(A) Pre-Calculus Algebra and Trigonometry	MAC 1147 (4)	MAC 1147	MTH 105 or MTH 108
	or MAC 2311	or MAC 2311	MTH 111 or MTH 131
(B) Statistics I	STA 3111(3) or STA 2122(3)	 STA 2023	

UPPER DIVISION PROGRAM (≈ 34 credits)

☐ Required Courses	Prerequisites	Credits
☐ PCB 3043 Ecology (L*)	BSC 2010 + 2011	3
☐ PCB 3063 Genetics (L*)	BSC 2010	3
☐ PCB 4674 Evolution (L*)	PCB 3043 + PCB 3063	3
☐ BSC 4931 Senior Seminar	PCB 3043+3063+4023+4674	1
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☐ **7 Upper Division Elective Courses** - Distribution Requirement - One Elective lecture course in each of the following Areas**

☐ A. Ecology Area	3
☐ B. Organismal Diversity Area	3
☐ C. Physiology/biochemistry Area	3
☐ D. Structure/Development Area	3
☐ +3 upper division electives in any of these areas	9
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☐ **Laboratory Requirement** - 3 Upper Division Labs (2cr labs=1 lab) — 3 or more

Please take labs that support upper division courses needed for your career goals

☐ **Track Specific Courses-** (18) credits. Please see page **4** for track lists

Students MUST meet with Advisor to declare Track.

College of Arts, Sciences, and Education Requirements

☐ Credit hours of courses outside the major required within the last 60 hours of enrollment **Note:** Take these 9 credit hours from upper division courses to help you reach the 45 hours needed for graduation Ex. 35 + 9 = 44 upper division credit hours	9
☐ Upper Division hours required	45
☐ Total credit hours required for graduation (University Requirement)	120

Foreign Language requirement

FIU Flent/Flex requirement – 2 years of high school foreign language satisfy Flent/Flex

All students graduating from Florida International University must meet the state-mandated foreign language requirement. The FLENT/FLEX requirement can be met if students have completed two years of the same foreign language in high school prior to their admission to FIU.

Transfer students may also qualify for an exemption with ANY of the following:

- Appropriate accelerated credit mechanisms (e.g., AP, A-Level, IB, CLEP)
- Transfer credits from a post-secondary institution,
- Two consecutive semesters of one language (levels 1 & 2)
- One intermediate or advanced level language course
- A passing TOEFL score for admission to the University
- Foreign Credentials (e.g High School transcript from Non-English speaking country)
- A previously earned Bachelor's degree (regionally accredited)
- An AA degree earned at a FL public institution prior to 1989

Students that do not qualify for any of the above exemptions must complete the foreign language requirement here at FIU, using one of the following options:

- Two introductory level courses (levels 1 & 2)
- One intermediate or advanced level course
- CLEP (Spanish, French and German only)

Transfer Students

Transfer students with >60 credits, must take half of their upper division credits at FIU.

A **maximum** of 60 lower division semester hours taken at a two-year or a four-year institution may be counted toward the degree. A maximum of 30 upper division semester hours taken at a senior institution may be counted toward the degree. Lower division courses in excess of 60 semester hours may serve to meet specific course requirements for the degree, but credit hours represented by these courses **will not** reduce the number of credit hours to be completed at the University.

Pre-Medical, Dental, Optometry, Physician Assistant, Pharmacy, Podiatry and Veterinary Curricula

Students who have fulfilled the requirements for the BS in Biology will also have satisfied most of the course requirements for admission to the above mentioned professional schools. Interested students should consult a Pre-Medical Advisor (DM 331A; 305-348-0515) for arranging a curriculum to enhance their potential to gain admission to these professional schools.

Enrollment Status – for continuous enrollment in a semester, dropping courses can change enrollment status. Contact the Registrar for more details. Contact Financial Aid for various regulations.

Full time = 12 to 18 credits. Normal load = 15 credits; registration for more than 18 credits requires Dean Approval.

Half time = 6-11 credits; Less than Half time = 5 credits or less.

** See below for a list of ELECTIVE courses to choose from. TAKE ELECTIVES IN FALL and SPRING, **DO NOT COUNT on ELECTIVES being offered in the SUMMER**

**Refer to course catalog for list of courses not applicable to the upper division Major electives.

ELECTIVES COURSES - DISTRIBUTION REQUIREMENT – Spring 2020

(L*)-Indicates that lab is being offered this term along with the lecture

Courses listed may be subject to change. Please confirm course availability by searching for courses on your MyFIU.

A. ECOLOGY

		Spring 2020	Prerequisites (Grades of C or higher in)
OCB	3043	Marine Biology and Oceanography (L*) [BBC]	BSC 2010 and BSC 2011
OCB	3264	Coral Reef Biology [BBC]	BSC 2011 or Zoology. PCB3043 recommended.
OCB	4005C	Biological Oceanography at Sea II [BBC]	OCB 4004
OCB	4633	Marine Community Ecology [BBC + MMC]	PCB3043
PCB	3374	Tropical Ecology [MMC]	PCB 3043
PCB	4232	The Biology of AIDS [BBC]	BSC 2010, BSC2011, CHM1045, and CHM1046
PCB	4462C	Introduction to Landscape Ecology with GIS	BSC 2010 and BSC 2011, Corequisite: PCB3043
PCB	4932	Topics in Ecology: Disturbance Ecology (U01) [MMC]	BSC 2010+L and BSC 2011+L
PCB	4932	Topics in Ecology: Global Biology in the Anthropocene(U02) [MMC]	BSC 2010+L and BSC 2011+L
ZOO	4513	Animal Behavior (L*) [MMC]	BSC 2010 and BSC 2011

B. ORGANISMAL DIVERSITY

		Spring 2020	Prerequisites (Grades of C or higher in)
BSC	3400	Wildlife Conservation, Forensic and Crime Science [MMC]	BSC 2010 and BSC 2011
BSC	4205	Topics in Organismal Diversity: Evolutionary Medicine (U01) [MMC]	BSC 2010+L and BSC 2011+L
BSC	4205	Topics in Organismal Diversity: Medical Botany (U02) [MMC]	BSC 2010, BSC 2011, CHM 1045
ENY	4060	Entomology (L*) [MMC]	BSC 2010 and BSC 2011
MCB	3020	General Microbiology (L*) [MMC]	CHM 2210 + CHM 2211 and BSC 2010 + BSC 2011
ZOO	4234	General Parasitology (L*) [MMC]	BSC 2010, Corequisite: ZOO4234L
ZOO	4484	Primate Biology [MMC]	BSC 2010 and BSC 2011
ZOO	4454	Fish Biology [BBC + MMC]	BSC2010, BSC2011, PCB3043

C. PHYSIOLOGY/BIOCHEMISTRY

		Spring 2020	Prerequisites (Grades of C or higher in)
BCH	3033	General Biochemistry (L*) [MMC]	CHM2211, BSC2010
BSC	4443	Functional Genomics and Proteomics [MMC]	PCB 3063
CHM	4304	Biological Chemistry I (L*) [MMC]	CHM2211, CHM2211L
MCB	4503	Virology [BBC]	CHM2210
PCB	3702	Intermediate Human Physiology (L*) [MMC]	BSC2010 or BSC2011
PCB	3704	Human Physiology II (L*) [MMC]	BSC2010
PCB	4233	Immunology [MMC]	PCB3063
PCB	4717	Topics in Phys/Biochm: Urban Vector Biology and Epidemiology (U02) [MMC]	BSC 2010+L and BSC 2011+L
PCB	4723	Animal Physiology [BBC]	BSC 2010, BSC 2011, and CHM 2211
ZOO	4781	Sensory Systems in Neurobiology [MMC]	BSC 2010 and BSC 2011

D.STRUCTURE/DEVELOPMENT

		Spring 2020	Prerequisites (Grades of C or higher in)
BOT	3353	Morphology of Vascular Plants (L*) [MMC]	A course in General Biology or permission of the instructor
BSC	4422	Biotechnology: Applications in Industry, Agriculture and Medicine [MMC]	
PCB	4561	Epigenetics [MMC]	BSC2011, PCB3063
ZOO	3731	Human Anatomy (L*) [MMC]	BSC 2010 or BSC 2023 or PCB 2099 or MCB 2000 or HSC 3549 Corequisite: ZOO3731L
ZOO	3753	Histology (L*) [MMC]	BSC2010, CHM2210, CHM2211
ZOO	4733	Survey of Regional Anatomy [MMC]	BSC2011, BSC2011L, CHM1046, CHM1046L, PHY2054
ZOO	4743C	Neuroscience [MMC]	BSC 2010, BSC 2011, CHM 2211

Additional Lab being offered in Spring 2020**: BSC4993L-Make Your Mutant;** pre/co-requisites of PCB3063 or BCH3033.

BSC 4473C - Introduction to Scientific Diving Prerequisites: (OCB3043+lab or PCB3043+lab or CHS4600 or OCE3014), open water diving certification, permission of the instructor, FIU Diving Medical clearance, pass standardized swim test, at least 18 years old. **Lab fee of $1,158 applied.**

BSC 3941 - Biological Sciences Research Internship
Supervised, practical experience in a professional, laboratory or field setting in which biologists may work. Instructor permission is required. This does **NOT** fulfill any lab or elective lecture requirement for Biology Majors or Minors.

Track Specific Courses – Six courses in the specified track must be completed

Allied Health Profession Track (ALLHLTPRO)		
ANT 3462	Medical Anthropology	3
ANT4480	Anthropological Approaches to Global Health	3
APK 3110	Exercise Physiology	3
CLP 4146	Psychopathology	3
DEP 2000	Human Growth and Development: Introductory Developmental Psychology	3
ECO 4504	Intro to Public Finance	3
HIS 4492	History of U.S. Health Policy	3
PAD 3034	Policy Development and Implementation	3
PCB 3703	Human Physiology I	3
PCB 3703L	Human Physiology I Lab	1
POS 3424	The Legislative Process	3
HSC 3537	Medical Terminology	3
HSC 3549	Clinical Physiology for Health Professionals	3
HSC 4553	Fundamentals of Pathology	3
HUN 2201	Principles of Nutrition	3
PET 3310	Kinesiology	3
PSY 2012	Introductory Psychology	3
ZOO 3731	Human Anatomy	3
ZOO 3731L	Human Anatomy Demonstration	1

Science Communication Track (SCICOM)		
COM 3110	Business and Professional Communication	3
ENC 3213	Professional and Technical Writing	3
ENC 3311	Advanced Writing and Research	3
ENC 3363	Writing About the Environment	3
ENC 3416	Writing and New Media	3
ENC 4241	Scientific Writing	3
ENC 4260	Advanced Professional Writing	3
ENC 4357	How To Go Public	3
IDS 3309	How We Know What We Know – **GL**	3
MMC 3121	Writing Fundamentals for Communicators	3
MMC 3650	Media and Sustainability	3
MMC 4936	Special Topics	3
JOU 3314	Environmental Journalism: Communicating Environmental Issues in South Florida	3

Health Policy, Environmental Policy and Pre-Law Track (HLTENVLAW)		
AMH 3630	Environmental History of the United States	3
CJL 3512	The Courts	3
CJL 4064	Criminal Justice and the Constitution	3
COM 4462	Conflict Management	3
ECP 3302	Introduction to Environmental Economics	3
ENC 3311	Advanced Writing and Research	3
ENC 3354	Writing as Social Action	3
ENC 3371	Rhetorical Theory and Practice	3
ENC 4331	Writing, Rhetoric, and Community	3
ENC 4930	Special Topics in Composition	3
GEO 4354	Geography of the Global Food System - **GL**	3
INR 4350	International Environmental Politics	3
PAD 3034	Policy Development and Implementation	3
PHI 2100	Introduction to Logic	3
PHI 2103	Critical Thinking	3
PHI 4130	Symbolic Logic	3
POS 3283	The Judicial Process	3
POS 3603	Constitutional Law: Powers	3
POS 3604	Constitutional Law: Limitations	3
POS 4784	Analytic Writing in Political Science	3
REL 3492	Earth Ethics-**GL**	3
SPC 3230	Rhetorical Communication: A Theory of Civil Discourse	3
SPC 3540	Persuasion	3

Bioentrepreneur Track (BIOENTRP)		
ACG 3024	Accounting for Managers and Investors (AC)	3
FIN 3005	Introduction to Business Finance	3
ISM 3012	Introduction to Decision and Information Systems (IS)	3
MAN 3022	Introduction to Management	3
MAR 3024	Marketing Fundamentals (ME)	3
	Choose one of the following:	
COM 3110	Business and Professional Communication	3
HAS 3111	Introduction to Health Services Systems	3

*Students must meet with advisor to declare their track. All Biology BA Majors **MUST** be declared in one of the four tracks.