

**FLORIDA ATLANTIC UNIVERSITY**

*All courses are three (3) credits unless otherwise indicated. Course selections should be made in consultation with an academic advisor.*

**BIOLOGY MAJOR  
(2014 – 2015)**

The Charles E. Schmidt College of Science  
Bachelor of Arts (BA) and Bachelor of Science (BS)

**FOUNDATIONS OF WRITTEN COMMUNICATION  
(Gordon Rule Writing (GRW), 6 credits required)  
(A grade of "C" or higher is required in each course)**

- \_\_\_ ENC 1101 ..... College Writing I (**REQUIRED**)
- \_\_\_ ENC 1102+ ..... College Writing II

**THE FOLLOWING COURSES CAN BE SUBSTITUTED FOR ENC 1102:**

- \_\_\_ ANT 1471+ ..... Cultural Difference in a Globalized Society
- \_\_\_ ENC 1930+ ..... University Honors Seminar in Writing (**Permit Only**)
- \_\_\_ ENC 1939+ ..... Special Topic: College Writing II
- \_\_\_ HIS 2934+ ..... Writing History
- \_\_\_ NSP 1195+ ..... Being Cared For: Reflections from Other Side of Bed

*Students must take four (4) GRW Courses.  
Two (2) must be taken from Foundations of Written Communications.  
§Two additional courses are REQUIRED.*

**FOUNDATIONS OF SOCIETY & HUMAN BEHAVIOR  
(6 credits required, select 2 courses from 2 different departments)**

**Anthropology Department**

- \_\_\_ ANT 2000 & D ..... Introduction to Anthropology

**Economics Department**

- \_\_\_ ECO 2013# ..... Macroeconomic Principles
- \_\_\_ ECO 2023# ..... Microeconomic Principles
- \_\_\_ ECP 2002 ..... Contemporary Economic Issues

**Exceptional Student Education Department**

- \_\_\_ EEX 2091 ..... Disability and Society

**Geosciences Department**

- \_\_\_ EVR 2017 ..... Environment and Society

**Political Science Department**

- \_\_\_ POS 2041 ..... Government of the United States

**Psychology Department**

- \_\_\_ PSY 1012 ..... General Psychology (**REQUIRED**)

**Public Administration Department**

- \_\_\_ PAD 2258 ..... Changing Env. of Soc., Bus., & Government

**Sociology Department**

- \_\_\_ SYG 1000 ..... Sociological Perspectives
- \_\_\_ SYG 2010 ..... Social Problems

**Urban & Regional Planning Department**

- \_\_\_ URP 2051 ..... Designing the City

**FOUNDATIONS OF MATHEMATICS & QUANTITATIVE REASONING  
(Grade of "C" or higher required. 6 credits required)  
PRETEST IS REQUIRED BEFORE TAKING YOUR FIRST MATH CLASS  
NOTE: Students must take at least one course with the prefix  
MAC from the list below**

- \_\_\_ MAC 1105 ..... College Algebra
- \_\_\_ MAC 2233 ..... Methods of Calculus (or higher)
- \_\_\_ MAC 2311 ..... Calculus with Analytic Geometry I (4 cr)

**Calculus with Analytic Geometry 1 requires a solid background in Algebra and Trigonometry. If you are not ready to take this course the following courses will provide the necessary background:**

- \_\_\_ MAC 1114 ..... Trigonometry
- \_\_\_ MAC 1140 ..... Precalculus Algebra
- \_\_\_ MAC 1147 ..... Precalculus Algebra & Trigonometry (5 cr)

**FOUNDATIONS IN GLOBAL CITIZENSHIP  
(Select 2 courses from 2 different departments) (6 cr. req.)  
At least 1 course must be Global Perspectives - (GP)**

**Anthropology Department**

- \_\_\_ ANT 2410 ..... Culture and Society (GP)

**Curriculum, Culture, & Educational Inquiry Department**

- \_\_\_ EDF 2854 ..... Educated Citizen in Global Context (GP)

**Geography Department**

- \_\_\_ GEA 2000 ..... World Geography (GP)

**History Department**

- \_\_\_ AMH 2010 (P/F) ..... United States History to 1877
- \_\_\_ AMH 2020 (P/F) ..... United States History Since 1877
- \_\_\_ WOH 2012 & D++ ..... History of Civilization I (GRW) (GP)
- \_\_\_ WOH 2022 ..... History of Civilization II (GP)

**Languages, Linguistics, & Comparative Literature Department**

- \_\_\_ LAS 2000 ..... Intro to Caribbean & Latin American Studies
- \_\_\_ LIN 2607 ..... Global Perspectives on Language (GP)

**Philosophy Department**

- \_\_\_ PHI 2010 & D++ ..... Introduction to Philosophy (GRW)

**Political Science Department**

- \_\_\_ INR 2002 ..... Introduction to World Politics (GP)

**Sociology Department**

- \_\_\_ SYD 2790 ..... Race, Class, Gender, and Sexuality
- \_\_\_ SYP 2450 ..... Global Society (GP)

**Social Work Department**

- \_\_\_ SOW 1005 ..... Global Perspectives of Social Services (GP)

**FOUNDATIONS OF CREATIVE EXPRESSION  
(6 credits req., select 2 courses from 2 different departments)**

**Architecture Department**

- \_\_\_ ARC 2208 ..... Culture & Architecture

**Visual Art & Art History Department**

- \_\_\_ ARH 2000 (P/F) ..... Art Appreciation

**School of Communication & Multimedia Studies**

- \_\_\_ FIL 2000 & D ..... Film Appreciation

**English Department**

- \_\_\_ LIT 2010++ ..... Interpretation of Fiction (GRW)
- \_\_\_ LIT 2030++ ..... Interpretation of Poetry (GRW)
- \_\_\_ LIT 2040++ ..... Interpretation of Drama (GRW)
- \_\_\_ LIT 2070++ ..... Interpretation of Creative Nonfiction (GRW)

**Languages, Linguistics, & Comparative Literature Department**

- \_\_\_ LIT 2100 ..... Intro to World Literature

**Music Department**

- \_\_\_ MUL 2010 ..... History & Appreciation of Music

**Theatre & Dance Department**

- \_\_\_ DAN 2100 ..... Appreciation of Dance
- \_\_\_ THE 2000 ..... Appreciation of Theatre

**FOUNDATIONS OF SCIENCE & THE NATURAL WORLD  
(8 credits req., select 2 courses from 2 different departments)  
(All labs and discussions are required)  
A grade of "C" or better is required in each class.**

**Biology Department**

- \_\_\_ BSC 1011 & L & D ..... Biodiversity (4 cr. incl. Lab and Discussion)

**Chemistry Department**

- \_\_\_ CHM 2045 & L† ..... General Chemistry I (4 credits. Incl. Lab)

**Additional Biology and Chemistry classes are needed.  
Refer to the B.A. and B.S. sections of this curriculum sheet.**

## STUDENTS ASSUME RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS

*Course selections should be made in consultation with an advisor*

### Legend

- +** - ENC 1101 is a prerequisite.
- ++** - Two Foundations of Written Communications classes are required before taking this class.
- #** - Sophomore standing (30 credits earned) is required.
- \*\*** - MAC 2311 is a prerequisite for this class. If a lab is needed take General Physics 1 Lab (PHY 2048 Lab).
- \*\*\*** - MAC 1105 and MAC 1114 are prerequisites for this class. If a lab is needed take General Physics 1 Lab (PHY 2048 Lab).
- ‡** - A corequisite of College Algebra (MAC 1105) or a prerequisite of Introductory Chemistry (CHM 1025).
- GRW** - (WAC) Writing across the curriculum class.
- D** - A discussion may be linked to the lecture. Students must register for the discussion in addition to the lecture.
- L** - A lab is linked to the lecture. Students must register for the lab in addition to the lecture.
- P/F** - Course may be taken pass (P) or fail (F) or for a letter grade. Indicate your preferred grading option during registration.
- \$** - We strongly recommend the two additional GRW courses come from Foundations of Global Citizenship and/or Foundations of Creative Expressions. Courses include: PHI 2010, WOH 2012, LIT 2010, LIT 2030, LIT 2040, & LIT 2070. See advisor for additional details.

### **FOREIGN LANGUAGE** (4 - 8 credits, 1 or more courses in the same language) - **REQUIRED FOR MAJOR**

Students with more than one year of a foreign language in high school should enroll in the second half of the beginners foreign language class (ARA/CHI/FRE/GER/HBR/ITA/JPN/LAT/SPN 1121) or a higher level course. Proficiency for a first-level course can be earned by successfully completing a second-level course. For questions related to this requirement, consult an academic advisor. CLEP exam credits meet this requirement: see the catalog.

□ **NOTE:** *Native Speakers of a foreign language must consult the Languages, Linguistics, and Comparative Literature Department regarding this requirement.*

□ **NOTE:** *Honors Seminars SHALL BE ACCEPTED AS MEETING THE GORDON RULE WRITING REQUIREMENT. See the University Advising Services Office for details.*

□ **HONORS NOTE:** *Students can apply for the PSYCHOLOGY HONORS PROGRAM after completion of 60 credits, and before completion of 105 credits. Students must have a 3.2 overall & Psychology GPA to be admitted and retained in the Honors track.*

**NOTE:** See catalog for specific requirements, course descriptions, and additional information. The requirements for some Intellectual Foundations Program (I.F.P.) courses & other courses may be satisfied by passing the appropriate AP or CLEP exam. Check with your advisor and college.

### **The Charles E. Schmidt College of Science has the following requirements:**

- (1) A student must maintain a "**C-**" average or better in all biology AND cognate courses taken as part of the requirements for an undergraduate degree in Biological Sciences. However, students must maintain a "**C**" average in chemistry courses.
- (2) Any course work in the major field transferred from another institution must be approved by the major dept.
- (3) No major course may be taken pass/fail.
- (4) The maximum amount of credit which may be earned through co-op is 10 credits; some departments allow some of these credits to substitute for major courses, check with department for specifics.

## MAJOR COURSES, COLLEGE REQUIREMENTS and ELECTIVES B.A. DEGREE

### Required Courses (Biology Core): 40 - 41 credits:

BSC 1011 & L	Biodiversity and Lab	4 cr – as indicated on first page
BSC 1010 & L	Biological Principles and Lab	4 cr
(BSC 1011 & BSC 1010 also require a discussion)		
CHM 2045 & L <sup>1</sup>	General Chemistry I and Lab	4 cr – as indicated on first page
CHM 2046 & L <sup>1</sup>	General Chemistry II and Lab	4 cr
CHM 2210 & D <sup>1</sup>	Organic Chemistry I	3 cr
CHM 2211 <sup>1</sup>	Organic Chemistry II	3 cr
PSC 2121	Physical Science	3 cr

<sup>1</sup>Chemistry courses require a "C" or better

OR {	MAC 2233	Methods of Calculus	3 cr	
	MAC 2311	Calculus w/Analytic Geometry	4 cr	
OR {	STA 3173	Introduction to Biostatistics	3 cr	(prerequisite MAC 2233)
	PSY 3234	Exp. Design & Stat. Inference	3 cr	

### Select at least three (3) of the courses below (the other course may be used as an elective): 9 – 10 credits

PCB 3063	Genetics	4 cr
PCB 4023	Molecular and Cell Biology	3 cr (prerequisite BCH 3033)
PCB 4043	Principles of Ecology	3 cr
PCB 4674	Evolution	3 cr

\*\*\* BCH 3033 (Biochemistry I) is a prerequisite and can serve as an elective.

### Biology electives (select 15 credits): Please note you must have course prerequisite(s) completed

BCH 3033 Biochemistry 1	3 cr	OCB 4032 & 4032L Marine Biodiversity and Lab	4 cr
BOT 3223 & 3223L Vascular Plant Anatomy & Lab	4 cr	OCB 4043 & 4043L Marine Biology and Lab	4 cr
BOT 4404 & 4404L Marine Botany & Lab	4 cr	OCB 4525 & 4525L Marine Microbiology & Molecular Bio & Lab	4 cr
BOT 4503 & 4503L Principles of Plant Physiology & Lab	4 cr	OCB 4633 & 4633L Marine Ecology & Lab	4 cr
BOT 4713 & 4713L Plant Taxonomy & Lab	4 cr	OCE 4006 Marine Science	4 cr
BOT 4734C Plant Biotechnology	3 cr	PCB 3352 Issues in Human Ecology	3 cr
BSC 4403L Biotechnology 1 Lab	2 cr	PCB 3703 & 3703L Human Morph. & Function 1 & Lab	4 cr
BSC 4427L Biotechnology 2 Lab	2 cr	PCB 3704 & 3704L Human Morph. & Function 2 & Lab	4 cr
BSC 4806 Biology of Cancer	3 cr	PCB 4233 Immunology	3 cr
BSC 4905 Directed Independent Study	1-3 cr	PCB 4522 Molecular Genetics	4 cr
BSC 4917 Honors Thesis Research 1	3 cr	PCB 4723 & 4723L Comparative Animal Physiology & Lab	4 cr
BSC 4918 Honors Thesis Research 2	3 cr	PCB 4803 Reproductive Endocrinology	3 cr
BSC 4930 Special Topics: (Model Systems Genetics Lab)	3 cr	PCB 4842 Cellular Neuroscience & Disease	3 cr
CHM 2211L Organic Chemistry Lab	2 cr	PCB 4843C Practical Cell Neuroscience	3 cr
MCB 3020 & 3020L General Microbiology & Lab	3 cr	ZOO 2203 & 2203L Invertebrate Zoology & Lab	5 cr
MCB 4203 Medical Bacteriology	3 cr	ZOO 4472 & 4472L Ornithology & Lab	4 cr
MCB 4603 Microbial Ecology	3 cr	ZOO 4402 & 4402L Functional Bio of Marine Animals & Lab	4 cr
		ZOO 4690 & 4690L Comparative Vertebrate Morph & Lab	5 cr

31 – 35 credits	Intellectual Foundations Program and Foreign Language
40 – 41 credits	Biology Core
15 credits	Biology Electives
<u>29 – 34 credits</u>	Free Electives – (17 – 20 credits must be upper-division)
<b>120 CREDITS</b>	<b>TOTAL (45 credits at upper division minimum)</b>

## B.S. DEGREE

### Required Courses (Biology Core): 47 - 48 credits

	BSC 1011 & L	Biodiversity and Lab	4 cr – as indicated on first page
	BSC 1010 & L	Biological Principles and Lab	4 cr
	(BSC 1011 & BSC 1010 also require a discussion)		
	CHM 2045 & L <sup>1</sup>	General Chemistry I and Lab	4 cr – as indicated on first page
	CHM 2046 & L	General Chemistry II and Lab	4 cr
	CHM 2210 & D	Organic Chemistry I <sup>1</sup>	3 cr
	CHM 2211	Organic Chemistry II <sup>1</sup>	3 cr
OR {	MAC 2233	Methods of Calculus	3 cr
	MAC 2311	Calculus w/Analytic Geometry	4 cr
	PHY 2053	College Physics I <sup>2</sup>	4 cr (prerequisite MAC 2233)
	PHY 2048L	General Physics I Lab	1 cr
OR	PHY 2048	General Physics I <sup>3</sup>	4 cr (prerequisite MAC 2311)
	PHY 2048L	General Physics I Lab	1 cr
	PHY 2054	College Physics II	4 cr
	PHY 2049L	General Physics II Lab	1 cr
OR	PHY 2049	General Physics II	4 cr
	PHY 2049L	General Physics II Lab	1 cr
OR {	STA 3173	Introduction to Biostatistics	3 cr (prerequisite MAC 2233)
	PSY 3234	Exp. Design & Stat. Inference	3 cr

<sup>1</sup>Chemistry courses require a "C" or better

<sup>2</sup>Prerequisite of a "C" in one these math courses: MAC 1114 / 1147 / 2233 / 2311

<sup>3</sup>Prerequisite of a "C" in MAC 2311

### Select at least three (3) of the courses below (the other course may be used as an elective): 9 – 10 credits

PCB 3063	Genetics	4 credits
PCB 4023	Molecular and Cell Biology	3 credits
PCB 4043	Principles of Ecology	3 credits
PCB 4674	Evolution	3 credits

### Electives: (select at least 21 credits from the list below): Please note you must have course prerequisite(s) completed

BCH 3033	Biochemistry 1	3 cr	OCB 4032 & 4032L	Marine Biodiversity and Lab	4 cr
BOT 3223 & 3223L	Vascular Plant Anatomy & Lab	4 cr	OCB 4043 & 4043L	Marine Biology and Lab	4 cr
BOT 4404 & 4404L	Marine Botany & Lab	4 cr	OCB 4525 & 4525L	Marine Microbiology & Molecular Bio & Lab	4 cr
BOT 4503 & 4503L	Principles of Plant Physiology & Lab	4 cr	OCB 4633 & 4633L	Marine Ecology & Lab	4 cr
BOT 4713 & 4713L	Plant Taxonomy & Lab	4 cr	OCE 4006	Marine Science	4 cr
BOT 4734C	Plant Biotechnology	3 cr	PCB 3352	Issues in Human Ecology	3 cr
BSC 4403L	Biotechnology 1 Lab	2 cr	PCB 3703 & 3703L	Human Morph. & Function 1 & Lab	4 cr
BSC 4427L	Biotechnology 2 Lab	2 cr	PCB 3704 & 3704L	Human Morph. & Function 2 & Lab	4 cr
BSC 4806	Biology of Cancer	3 cr	PCB 4233	Immunology	3 cr
BSC 4905	Directed Independent Study	1-3 cr	PCB 4522	Molecular Genetics	4 cr
BSC 4917	Honors Thesis Research 1	3 cr	PCB 4723 & 4723L	Comparative Animal Physiology & Lab	4 cr
BSC 4918	Honors Thesis Research 2	3 cr	PCB 4803	Reproductive Endocrinology	3 cr
BSC 4930	Special Topics: (Model Systems Genetics Lab)	3 cr	PCB 4842	Cellular Neuroscience & Disease	3 cr
CHM 2211L	Organic Chemistry Lab	2 cr	PCB 4843C	Practical Cell Neuroscience	3 cr
MCB 3020 & 3020L	General Microbiology & Lab	3 cr	ZOO 2203 & 2203L	Invertebrate Zoology & Lab	5 cr
MCB 4203	Medical Bacteriology	3 cr	ZOO 4472 & 4472L	Ornithology & Lab	4 cr
MCB 4603	Microbial Ecology	3 cr	ZOO 4402 & 4402L	Functional Bio of Marine Animals & Lab	4 cr
			ZOO 4690 & 4690L	Comparative Vertebrate Morph & Lab	5 cr

31 – 35 credits	Intellectual Foundations Program and Foreign Language
47 – 48 credits	Biology Core
21 credits	Biology Electives
<u>17 – 20 credits</u>	<u>Free Electives – (11 – 14 credits must be upper-division)</u>
<b>120 CREDITS</b>	<b>TOTAL (45 credits at upper division minimum)</b>