FLORIDA ATLANTIC UNIVERSITY – INTELLECTUAL FOUNDATION PROGRAM 2017 – 2018

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

BIOLOGY MAJOR (2017 - 2018)

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

FOUNDATIONS OF WRITTEN COMMUNICATION

(6 credit hours required – Writing Across the Curriculum - WAC)
Grade of "C" or higher is required in each course

____ ENC 1101.....College Writing I **(Required)**
____ ENC 1102.....College Writing II **+**

THE FOLLOWING COURSES BELOW MAY BE SUBSTITUTED FOR ENC 1102:

English Department
____ ENC 1930+.....University Honors Seminar in Writing **(Permit Only)**
____ ENC 1939+.....Special Topic: College Writing
____ ENC 2452+.....Honors Composition for Science

Anthropology Department
____ ANT 1471+.....Cultural Difference in a Globalized Society

History Department
____ HIS 2050+ .....Writing History

Note: *Students must take four Writing-Across-the-Curriculum (WAC) courses, two of which must be taken from Foundations of Written Communication.*

FOUNDATIONS OF SCIENCE & THE NATURAL WORLD

(6 credit hours required - **One of the courses must have a lab**)
Student must take 2 of the following courses; 1 must be from group A.
The second course may be from group A or group B.

Group A

Biology Department (Required)
____ BSC 1010 & L & D
Biological Principles
(4 cr. Incl. Lab & Dis)

Chemistry Department (Required)
____ CHM 2045 & L
General Chemistry 1
(4 cr. Incl. Lab) **‡**

Physics Department
(Required: select one below)
____ PHY 2048 & L General Physics 1
(5 credits incl. Lab) ******
____ PHY 2053 College Physics 1
(5 credits incl. Lab)

Group B

Biology Department (Required)
____ BSC 1011 & L & D
Biodiversity (4 cr. incl Lab & Dis)

(D) = Discussion, (L) = Lab

Courses indicating a (D) or (L) are linked with a lecture, a lab, and/or a discussion. If you select one of these courses, you must register for the lecture, lab, and/or discussion. You **must** attend the lecture, lab, and/or discussion.

FOUNDATIONS OF MATHEMATICS & QUANTITATIVE REASONING

(6 credit hours required – Grade of "C" or higher is required)
Student must take 2 of the following courses; 1 must be from group A.
The second course may be from group A or group B.
PRETEST IS REQUIRED BEFORE TAKING YOUR FIRST MATH COURSE

Group A

____ MAC 1105..... College Algebra
____ MAC 2311..... Calculus with Analytic Geometry 1 (4 credits)
or any mathematics course for which one of the above courses is the direct prerequisite

Group B

____ MAC 1140..... Precalculus Algebra
____ MAC 1114..... Trigonometry
____ MAC 1147..... Precalculus Algebra & Trigonometry (5 credits)
____ MAC 2233..... Methods of Calculus **(Required or higher math)**
____ MAC 2312..... Calculus with Analytic Geometry 2 (4 credits)

FOUNDATIONS OF SOCIETY & HUMAN BEHAVIOR

(6 credit hours required)
Student must take 2 of the following courses; 1 must be from group A.
The second course may be from group A or group B.

Group A

History Department
____ AMH 2020 & D.....United States History Since 1877 **(P/F)**

Anthropology Department
____ ANT 2000 & D .....Introduction to Anthropology

Economics Department
____ ECO 2013 .....Macroeconomic Principles **§**

Political Science Department
____ POS 2041 .....Government of the United States

Psychology Department
____ PSY 1012.....Introduction to Psychology **- see note below**

Sociology Department
____ SYG 1000 .....Sociological Perspective
(recommended for pre-health-related majors)

Group B

History Department
____ AMH 2010 & D.....United States History to 1877 **(P/F)**

Economics Department
____ 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

Public Administration Department
____ PAD 2258.....Changing Environment of Soc., Bus., & Gov't

Sociology Department
____ SYD 2790 .....Race, Class, Gender, and Sexuality
____ SYG 2010 .....Social Problems

Urban & Regional Planning Department
____ URP 2051.....Designing the City

Note: A required course to take PSY 3234 per the University catalog.

FOUNDATIONS IN GLOBAL CITIZENSHIP

(6 credit hours required)

Student must choose two (2) courses from among the following:

Anthropology Department

____ ANT 2410 .....Culture and Society

Curriculum, Culture & Education Department

____ EDF 2854 .....Educated Citizen in Global Context

Geosciences Department

____ GEA 2000 .....World Geography

Political Science Department

____ INR 2002.....Introduction to World Politics

Languages, Linguistics, & Comparative Literature Department

____ LAS 2000 .....Intro to Caribbean & Latin American Studies

____ LIN 2607 .....Global Perspectives on Language **(online course)**

Sociology Department

____ SYP 2450 .....Global Society

Social Work Department

____ SOW 1005 .....Global Perspectives of Social Services

History Department

____ WOH 2012 & D.....History of Civilization 1 **(WAC) ++**

____ WOH 2022.....History of Civilization 2

STUDENTS ASSUME RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS

Course selections should be made in consultation with an academic advisor.

FOUNDATIONS OF HUMANITIES

(6 credit hours required)

Student must take 2 of the following courses; 1 must be from group A. The second course may be from group A or group B.

Group A

Visual Art & Art History Department

____ ARH 2000..... Art Appreciation **(P/F)**

Music Department

____ MUL 2010..... Music Appreciation

Philosophy Department

____ PHI 2010 & D ..... Introduction to Philosophy **(WAC) ++**

Theatre & Dance Department

____ THE 2000 ..... Theatre Appreciation

Group B

Architecture Department

____ ARC 2208 ..... Culture & Architecture

Theatre & Dance Department

____ DAN 2100 ..... Appreciation of Dance

School of Communication & Multimedia Studies

____ FIL 2000 & D ..... Film Appreciation

Languages, Linguistics, & Comparative Literature Department

____ LIT 2100..... Introduction to World Literature

English Department

____ LIT 2010..... Interpretation of Fiction **(WAC) ++**

____ LIT 2030..... Interpretation of Poetry **(WAC) ++**

____ LIT 2040..... Interpretation of Drama **(WAC) ++**

____ LIT 2070..... Interpretation of Creative Nonfiction **(WAC) ++**

Legend

+	- ENC 1101 is a prerequisite.
++	- Two Foundations of Written Communications classes are required before taking this course.
§	- Sophomore standing (30 credits earned) is a requirement to take this course.
*****	- Nursing majors are required to take this course in their first semester.
****	- MAC 2311 is a prerequisite for this course. If a lab is needed, then take General Physics 1 Lab (PHY 2048 Lab).
*****	- MAC 1105 and MAC 1114 are prerequisites for this course. If a lab is needed, then take General Physics 1 Lab (PHY 2048 Lab).
‡	- Co-requisite of College Algebra (MAC 1105) or a prerequisite of Introductory Chemistry (CHM 1025).
WAC	- (WAC) Writing across the curriculum course.

§ Writing Across the Curriculum (WAC)

Students must attain grades of "C" or higher. 12 credits of writing (WAC) and 6 credits of mathematics are required.

Please note:

Students must take four (4) WAC courses. Two (2) courses are to be taken from Foundations of Written Communication. We strongly recommend the two additional WAC courses come from these courses: PHI 2010, WOH 2012, LIT 2010, LIT 2030, LIT 2040 and LIT 2070. See advisor for additional details.

P/F

Certain designated undergraduate courses may be taken for a letter grade of pass (P) or fail (F). Students must indicate the grade option preferred when registering; otherwise, a letter grade will be given. The maximum credit available to any student on the P/F option is one course per term with a maximum of 12 credits during a student's entire course of study. This option is not available for courses in the student's major, for students on probation, or for **Engineering** majors.

(D) = Discussion, (L) = Lab

Courses indicating a (D) or (L) are linked with a lecture, a lab, and/or a discussion. If you select one of these courses, you must register for the lecture, lab, and/or discussion. You **must** attend the lecture, lab, and/or discussion.

Elective Credits

The number of elective credits allowed varies by major. Please consult with an academic advisor to determine the number of elective credits required for your major. ***Certain majors do not allow any electives.***

http://myfau.fau.edu

Go to MyFAU to:

Check e-mail

See FAU Announcements

FAU Self-Service:

Course schedules

Registration (drop/add classes) and withdrawals

Student records and financial aid

Tuition payments

The University Course Catalog

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 WAC/GRW REQUIREMENT. See the University Advising Services Office for details.*

NOTE: See catalog for specific requirements, course descriptions, and additional information. The requirements for some Intellectual Foundations Program (IFP) 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 Biology department has the following requirements (per the University catalog):

(1) A student must earn a "C-" or better in all biology AND cognate courses taken as part of the requirements for an undergraduate degree in Biological Sciences. However, students must earn a "C" 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 & D	Biodiversity and Lab & Discussion	4 cr – **as indicated on first page**
BSC 1010 & L & D	Biological Principles and Lab & Discussion	4 cr
CHM 2045 & L[1]	General Chemistry I and Lab	4 cr – **as indicated on first page**
CHM 2046 & L[1]	General Chemistry II and Lab	4 cr
CHM 2210 & D[1]	Organic Chemistry I	3 cr
CHM 2211[1]	Organic Chemistry II	3 cr

[1]Chemistry courses require a "C" or better.

PSC 2121	Physical Science	3 cr
MAC 2233	Methods of Calculus	3 cr
OR MAC 2311	Calculus w/Analytic Geometry	4 cr
STA 3173	Introduction to Biostatistics	3 cr (**prerequisite: MAC 2233**)
OR PSY 3234	Exp. Design & Stat. Inference	3 cr (**prerequisite: PSY 1012**)

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

PCB 3063	Genetics	4 cr
PCB 3023	Cell Biology	3 cr
PCB 4043	Principles of Ecology	3 cr
PCB 3674	Evolution	3 cr

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

Biochemistry I (BCH 3033) 3 credits
Vascular Plant Anatomy & Lab (BOT 3223 & 3223L) 4 credits
Marine Botany & Lab (BOT 4404 & 4404L) 4 credits
Principles of Plant Physiology & Lab (BOT 4503 4503L) 4 credits
Plant Biotechnology (BOT 4734C) 3 credits
Life of a Biologist (BSC 2844) 1 credit
Conservation Biology (BSC 3052) 3 credits
Introduction to Biological Research (BSC 3453) 1 credit
Biological Research (BSC 3481) 2 credits
Molecular Genetics of Aging (BSC 4022) 3 credits
Biotechnology Laboratory 1 (BSC 4403L) 2 credits
Biotechnology Laboratory 2 (BSC 4448L) 2 credits
Concepts in Bioinformatics (BSC 4434C) 3 credits
Biology of Cancer (BSC 4806) 3 credits
Directed Independent Study (BSC 4905) 1-3 credits
Honors Research (BSC 4917) 3 credits
Honors Thesis (BSC 4918) 3 credits
Special Topics (BSC 4930) 1-3 credits
Comparative Animal Behavior (CBH 4024) 3 credits
Organic Chemistry II Lab (CHM 2211L) 2 credits
Critical Thinking in Environmental Science (EVS 4021) 3 credits
General Microbiology & Lab (MCB 3020 & 3020L) 4 credits
Medical Bacteriology (MCB 4203) 3 credits
Virology (MCB 4503) 3 credits
Microbial Ecology (MCB 4603) 3 credits
Marine Biodiversity & Lab (OCB 4032 & 4032L) 4 credits
Marine Biology & Lab (OCB 4043 & 4043L) 4 credits
Marine Microbiology and Molecular Biology & Lab (OCB 4525 & 4525L) 6 credits
Marine Ecology & Lab (OCB 4633 & 4633L) 4 credits
Marine Science (OCE 4006) 4 credits
Human Morphology and Function 1 & Lab (PCB 3703 & 3703L) 4 credits
Human Morphology and Function 2 & Lab (PCB 3704 & 3704L) 4 credits
Issues in Human Ecology (PCB3352) 3 credits
Genetics Lab (PCB 4067L) 3 credits
Immunology (PCB 4233) 3 credits
Freshwater Ecology & Lab (PCB 4301 & 4301L) 3 credits
Molecular Genetics (PCB 4522) 3 credits
Genes and Development (PCB 4594) 3 credits
Comparative Animal Physiology & Lab (PCB 4723 & 4723L) 4 credits
Cellular Neuroscience and Disease (PCB 4842) 3 credits
Practical Cell Neuroscience (PCB 4843C) 3 credits
Biological Bases of Behavior (PSB 3002) 3 credits
Invertebrate Zoology & Lab (ZOO 2203 & 2203L) 5 credits
Vertebrate Zoology & Lab (ZOO 2303 & 2303L) 4 credits
Functional Biology of Marine Animals & Lab (ZOO 4402 & 4402L) 4 credits
Ornithology & Lab (ZOO 4472 & 4472L) 2 credits
Comparative Vertebrate Morphogenesis & Lab (ZOO 4690 & 4690L) 3 credits
Comparative Vertebrate Morphogenesis Lab (ZOO 4690L) 2 credits
Principles of Human Neuroanatomy (ZOO 4742) 3 credits

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

B.S. DEGREE

Required Courses (Biology Core): 47 - 48 credits

BSC 1011 & L & D	Biodiversity and Lab & Disc	4 cr – **as indicated on first page**
BSC 1010 & L & D	Biological Principles and Lab & Disc	4 cr
CHM 2045 & L	General Chemistry I and Lab	4 cr – **as indicated on first page - (Chemistry courses require a "C" or better)**
CHM 2046 & L	General Chemistry II and Lab	4 cr - **(Requires a "C" or better)**
CHM 2210 & D	Organic Chemistry I	3 cr - **(Requires a "C" or better)**
CHM 2211	Organic Chemistry II	3 cr - **(Requires a "C" or better)**
OR MAC 2233	Methods of Calculus	3 cr
MAC 2311	Calculus w/Analytic Geometry	4 cr
PHY 2053	College Physics I	4 cr - **Prerequisite of a "C" in one of these courses: MAC 1114/1147/2233/2311**
PHY 2048L	General Physics I Lab	1 cr
OR PHY 2048	General Physics I	4 cr - **Prerequisite of a "C" in MAC 2311 per University catalog**
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 per University catalog**
PSY 3234	Exp. Design & Stat. Inference	3 cr - **prerequisite: PSY 1012 per University catalog**

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

PCB 3063	Genetics	4 cr
PCB 3023	Cell Biology	3 cr
PCB 4043	Principles of Ecology	3 cr
PCB 3674	Evolution	3 cr

Electives: (select at least 21 credits from the list below): BS Biology majors may also choose electives from BS Neuroscience & Behavior elective list

- Biochemistry I (BCH 3033) 3 credits
- Vascular Plant Anatomy & Lab (BOT 3223 & 3223L) 4 credits
- Marine Botany & Lab (BOT 4404 & 4404L) 4 credits
- Principles of Plant Physiology & Lab (BOT 4503 4503L) 4 credits
- Plant Biotechnology (BOT 4734C) 3 credits
- Life of a Biologist (BSC 2844) 1 credit
- Conservation Biology (BSC 3052) 3 credits
- Introduction to Biological Research (BSC 3453) 1 credit
- Biological Research (BSC 3481) 2 credits
- Molecular Genetics of Aging (BSC 4022) 3 credits
- Biotechnology Laboratory 1 (BSC 4403L) 2 credits
- Biotechnology Laboratory 2 (BSC 4448L) 2 credits
- Concepts in Bioinformatics (BSC 4434C) 3 credits
- Biology of Cancer (BSC 4806) 3 credits
- Directed Independent Study (BSC 4905) 1-3 credits
- Honors Research (BSC 4917) 3 credits
- Honors Thesis (BSC 4918) 3 credits
- Special Topics (BSC 4930) 1-3 credits
- Comparative Animal Behavior (CBH 4024) 3 credits
- Organic Chemistry II Lab (CHM 2211L) 2 credits
- Critical Thinking in Environmental Science (EVS 4021) 3 credits
- General Microbiology & Lab (MCB 3020 & 3020L) 4 credits
- Medical Bacteriology (MCB 4203) 3 credits
- Virology (MCB 4503) 3 credits
- Microbial Ecology (MCB 4603) 3 credits
- Marine Biodiversity & Lab (OCB 4032 & 4032L) 4 credits
- Marine Biology & Lab (OCB 4043 & 4043L) 4 credits
- Marine Microbiology and Molecular Biology & Lab (OCB 4525 & 4525L) 6 credits
- Marine Ecology & Lab (OCB 4633 & 4633L) 4 credits
- Marine Science (OCE 4006) 4 credits
- Human Morphology and Function 1 & Lab (PCB 3703 & 3703L) 4 credits
- Human Morphology and Function 2 & Lab (PCB 3704 & 3704L) 4 credits
- Issues in Human Ecology (PCB3352) 3 credits
- Genetics Lab (PCB 4067L) 3 credits
- Immunology (PCB 4233) 3 credits
- Freshwater Ecology & Lab (PCB 4301 & 4301L) 3 credits
- Molecular Genetics (PCB 4522) 3 credits
- Genes and Development (PCB 4594) 3 credits
- Comparative Animal Physiology & Lab (PCB 4723 & 4723L) 4 credits
- Cellular Neuroscience and Disease (PCB 4842) 3 credits
- Practical Cell Neuroscience (PCB 4843C) 3 credits
- Biological Bases of Behavior (PSB 3002) 3 credits
- Invertebrate Zoology & Lab (ZOO 2203 & 2203L) 5 credits
- Vertebrate Zoology & Lab (ZOO 2303 & 2303L) 4 credits
- Functional Biology of Marine Animals & Lab (ZOO 4402 & 4402L) 4 credits
- Ornithology & Lab (ZOO 4472 & 4472L) 2 credits
- Comparative Vertebrate Morphogenesis & Lab (ZOO 4690 & 4690L) 3 credits
- Comparative Vertebrate Morphogenesis Lab (ZOO 4690L) 2 credits
- Principles of Human Neuroanatomy (ZOO 4742) 3 credits

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