BIOLOGY MAJOR (2022 - 2023)

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:
___ ENC 1939 + .... Special Topic: College Writing
___ 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 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.

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
___ COP 1034C .... Computer Programming & Data Literacy for Everyone
(For Non-College Engineering & Computer Science majors)
___ MAC 1147 ..... Precalculus Algebra & Trigonometry (4 credits)
___ MAC 2210 ..... Intro Calculus w/Applications (4 credits) (Permit Only)
___ MAC 2233 ..... Methods of Calculus (REQUIRED or higher math)
___ MAC 2241 ..... Life Science Calculus 1 (4 credits)
___ MAC 2312 ..... Calculus with Analytic Geometry 2 (4 credits)
___ PHI 2102....... Logic

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
___ BSC 1010 & L & D (Required)
Biological Principles
(4 cr. Incl. Lab & Dis)
___ CHM 2045 & L (Required)
General Chemistry 1
(4 cr. Incl. Lab) $‡

(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
___ BSC 1011 & L & D (Required)
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 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
___ AMH 2020 & D ......United States History Since 1877 ◊
___ ANT 2000 & D......Introduction to Anthropology (WAC)
___ ECO 2013............Macroeconomic Principles §
___ POS 2041.............Government of the United States ◊
___ PSY 1012.............Introduction to Psychology (see note below)
___ SYG 1000.............Sociological Perspectives
(recommended for pre-health-related majors)

Group B
___ AMH 2010 & D ......United States History to 1877
___ CCI 2002..............Law, Crime & the Criminal Justice System ±
___ DIG 2202.............Digital Culture
___ ECO 2023.............Microeconomic Principles §
___ ECP 2002.............Contemporary Economic Issues
___ EEX 2091.............Disability and Society
___ EVR 1110.............Climate Change: The Human Dimensions
___ EVR 2017.............Environment and Society
___ LIN 2001.............Introduction to Language (online course)
___ PAD 2081............Risk Resilience and Rising Seas ±
___ PAD 2258.............Changing Environment of Soc., Bus., & Gov’t
___ SYG 2010.............Social Problems
___ 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:

- ANT 2410 .............. Culture and Society
- EDF 2854 ............. Educated Citizen in Global Context
- GEA 2000 .............. World Geography
- INR 2002 ............. Introduction to World Politics
- LAS 2000 ............. Intro to Caribbean & Latin American Studies
- LIN 2607 ............. Global Perspectives on Language
- POT 2000 ............. Global Political Theory ±
- SYP 2450 ............. Global Society
- SOW 1005 ............. Global Perspectives of Social Services
- WOH 2012 & D...... History of Civilization 1 (WAC) ++
- WOH 2022......... History of Civilization 2
- WST 2351 ........... Gender and Climate Change

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
- ARH 2000............. Art Appreciation
- MUL 2010............. Music Appreciation
- PHI 2010 & D...... Introduction to Philosophy (WAC) ++
- THE 2000............. Theatre Appreciation

Group B
- ARC 2208............. Culture & Architecture
- DAN 2100............. Appreciation of Dance
- FIL 2000 & D...... Film Appreciation
- HUM 2471........... Racism and Anti-Racism ±
- 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) ++
- LIT 2100............. Introduction to World Literature
- SPC 2608............. Public Speaking ±

STUDENTS ASSUME RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS

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

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.
** - MAC 2311 is a prerequisite 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).
± - Starting Spring 2022 and afterwards.
◊ - See information box below regarding Civic Literacy Requirement

WAC - (WAC) Writing across the curriculum course.

§ Writing Across the Curriculum (WAC)/Gordon Rule
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.

(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.

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

Civic Literacy Requirement

https://www.fau.edu/ugstudies/civic-literacy-requirement/

Beginning in Fall 2018, students entering a Florida public institution as a degree-seeking student for the first time needs to demonstrate civic literacy through either taking a certain course (AMH 2020 or POS 2041) or passing an assessment exam. Beginning in Summer 2021, Florida Legislature amended the statute and now requires students to complete both a civic literacy course (AMH 2020 or POS 2041) and an assessment exam.

https://myfau.fau.edu

University Advising Services March 16, 2022
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.
5. 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 sophomore or 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. Students who meet the eligibility criteria must apply and be accepted to the program. To enroll in the below Honors Program courses which can be used as biology elective courses. Interested students should contact the faculty member whose research interests are closest to those the student wishes to pursue and see [http://biology.fau.edu/academics/undergraduate/research.php](http://biology.fau.edu/academics/undergraduate/research.php) for more information. **Denoted with (H).**
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

General Chemistry I and Lab:
- CHM 2045 & L 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 3 cr
- CHM 2211 Organic Chemistry II 3 cr

Select four of the courses below (Additional courses selected from this category beyond the four courses may be applied toward the elective requirement.)

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

- One course in Physiology *** 4-5 cr

***Students who select the "One course in Physiology" option above may fulfill this option by choosing one of the below course/lab combinations

- BOT 4503, 4503L Principles of Plant Physiology and Lab 4 cr.
- PCB 4723, 4723L Comparative Animal Physiology and Lab 4 cr.
- ZOO 4690, 4690L Vertebrate Structure Dev. & Evolution w/Lab 5 cr.
- PCB 3703, 3703L Human Morphology and Function 1 and Lab 4 cr.
- PCB 3704, 3704L Human Morphology and Function 2 and Lab 4 cr.

Biology electives (select 12 credits Upper Division): Please note you must have course prerequisite(s) completed - (H) – Honors Research Program Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vascular Plant Anatomy &amp; Lab (BOT 3223 &amp; 3223L)</td>
<td>4</td>
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<tr>
<td>Marine Botany &amp; Lab (BOT 4404 &amp; 4404L)</td>
<td>4</td>
</tr>
<tr>
<td>Principles of Plant Physiology &amp; Lab (BOT 4503 4503L)</td>
<td>4</td>
</tr>
<tr>
<td>Plant Biotechnology (BOT 4734C)</td>
<td>3</td>
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<tr>
<td>Life of a Biologist (BSC 2844)</td>
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<tr>
<td>Conservation Biology (BSC 3052)</td>
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<td>Principles of Plant Physiology &amp; Lab (BOT 4503 4503L)</td>
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<tr>
<td>Marine Biodiversity &amp; Lab (OCB 4032 &amp; 4032L)</td>
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<tr>
<td>Marine Biology &amp; Lab (OCB 4043 &amp; 4043L)</td>
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<tr>
<td>Marine Microbiology and Molecular Biology &amp; Lab (OCB 4525 &amp; 4525L)</td>
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<tr>
<td>Marine Ecology &amp; Lab (OCB 4633 &amp; 4633L)</td>
<td>4</td>
</tr>
<tr>
<td>Marine Science (OCE 4006)</td>
<td>3</td>
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<tr>
<td>Issues in Human Ecology (PCB3352)</td>
<td>3</td>
</tr>
<tr>
<td>Genetics Lab (PCB 4067L)</td>
<td>3</td>
</tr>
<tr>
<td>Immunology (PCB 4233)</td>
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<tr>
<td>Microbial Ecology (MCB 4603)</td>
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<tr>
<td>Marine Microbiology and Molecular Biology &amp; Lab (OCB 4525 &amp; 4525L)</td>
<td>4</td>
</tr>
<tr>
<td>Freshwater Ecology &amp; Lab (PCB 4301 &amp; 4301L)</td>
<td>4</td>
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<tr>
<td>Molecular Genetics (PCB 4522)</td>
<td>3</td>
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<td>Genes and Development (PCB 4594)</td>
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<td>Cellular Neuroscience and Disease (PCB 4842)</td>
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<td>Biological Bases of Behavior (PSB 3002)</td>
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<td>Invertebrate Zoology &amp; Lab (ZOO 3205 &amp; 3205L)</td>
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<tr>
<td>Introduction to Animal Locomotion (ZOO 4373)</td>
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<tr>
<td>Functional Biology of Marine Animals &amp; Lab (ZOO 4402 &amp; 4402L)</td>
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<td>Ornithology &amp; Lab (ZOO 4472 &amp; 4472L)</td>
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<td>Principles of Human Neuroanatomy (ZOO 4742)</td>
<td>3</td>
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<tr>
<td>Medical Bacteriology (MCB 4203)</td>
<td>3</td>
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</table>

31 – 35 credits
45 – 47 credits
12 credits
28 – 30 credits
120 CREDITS

TOTAL (45 credits at upper division minimum)

31 – 35 credits
Intellectual Foundations Program and Foreign Language
45 – 47 credits
Biology Core
12 credits
Biology Electives
28 – 30 credits
Free Electives – (15 – 16 credits must be upper-division)

University Advising Services
March 16, 2022
### Biology Core

- **BSC 1011 & L & D: Biological Principles 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 Calculus** (3 cr)
- **MAC 2311: Calculus w/Analytic Geometry** (4 cr)

### OR

- **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)

### OR

- **PHY 2054: College 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

### Biology Electives

**Select four of the courses below (Additional courses selected from this category beyond the four courses may be applied toward the elective requirement.)**

- **PCB 3063: Genetics** (4 cr)
- **PCB 3023: Cell Biology** (3 cr)
- **PCB 4043: Principles of Ecology** (3 cr)
- **PCB 3674: Evolution** (3 cr)
- **One course in Physiology*** (4.5 cr)

***Students who select the "One course in Physiology" option above may fulfill this option by choosing one of the below course/lab combinations***

- **BOT 4503, 4503L: Principles of Plant Physiology and Lab** (4 cr)
- **PCB 4723, 4723L: Comparative Animal Physiology and Lab** (4 cr)
- **ZOO 4690, 4690L: Vertebrate Structure Dev. & Evolution w/Lab** (5 cr)
- **PCB 3703, 3703L: Human Morphology and Function 1 and Lab** (4 cr)
- **PCB 3704, 3704L: Human Morphology and Function 2 and Lab** (4 cr)

### Biology Electives (select 18 credits Upper Division): Please note you must have course prerequisite(s) completed - (H) – Honors Research Program Courses

<table>
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<tr>
<th>Course</th>
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<tr>
<td>Biochemistry I (BCH 3033)</td>
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<tr>
<td>Biochemistry II (BCH 3034)</td>
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<tr>
<td>Biochemistry Lab (BCH 3103L)</td>
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<td>Introduction to Biological Research (BSC 3453)</td>
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<td>Molecular Genetics of Aging (BSC 4022)</td>
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<td>Climate Change Biology (BSC 4307)</td>
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<td>Laboratory Methods in Biotechnology (BSC 4403L)</td>
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<td>Concepts in Bioinformatics (BSC 4434C)</td>
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<td>Biology of Cancer (BSC 4806)</td>
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<td>Directed Independent Study (BSC 4905)</td>
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<td>Special Topics (BSC 4930)</td>
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<td>Comparative Animal Behavior (CBH 4024)</td>
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<td>Organic Chemistry II Lab (CHM 2211L)</td>
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<td>Critical Thinking in Environmental Science (EVS 4021)</td>
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<td>Biology Core</td>
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<td>Biology Electives</td>
<td>15 – 18</td>
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<tr>
<td>Free Electives – (9 – 11 credits must be upper-division)</td>
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<tr>
<td>120 CREDITS TOTAL</td>
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</table>

**University Advising Services**

March 16, 2022