



## Alignment of Degree Programs

**CIP Code & Title:** 26.0101 Biology/Biological Sciences, General

**Level:** Bachelors

**Area of Strategic Emphasis:** STEM

**Additions are noted in red text and deletions are in ~~strickethrough~~ (08-11-2020).**

### PROGRAM DESCRIPTION:

The Bachelor of Science in Biology provides a broad, robust foundation in the biological sciences. It prepares students for graduate programs in biology (e.g. zoology, botany, conservation biology, microbiology, marine biology, ecology and evolution) as well as professional degrees in medicine, dentistry, veterinary medicine and pharmacology, or biology careers with industry and government agencies. The program emphasizes the development of critical thinking and communication skills, as well as competency in experimental design, data analysis and methodology for lab and field research. The concentrations allow students to focus coursework according to their interests. A wide range of skill-building opportunities are available to students through undergraduate research, internships, study abroad, service learning, and field courses.

### CURRICULUM:

#### A. Student Learning Outcomes:

##### Goal 1: Discipline Specific Content Knowledge and Skills

- 1a. Outcome: Students will be able to describe the processes by which organisms evolve and the evolutionary relationships among major groups of organisms.
- 1b. Outcome: Students will be able to explain major ecological relationships among organisms and their environments.
- 1c. Outcome: Students will be able to describe the flow of information in cells, including inheritance of information and genetic and cellular responses to the environment.
- 1d. Outcome: Students will be able to describe the diversity of organisms on Earth, including the diversity of their forms and functions.

##### Goal 2: Communication Skills

- 2a. Outcome: Students will be able to communicate the results of scientific analyses investigating problems in biology.

##### Goal 3: Critical Thinking Skills

- 3a. Outcome: Students will be able to analyze and interpret findings from the scientific literature.

- 3b. Outcome: Students will be able to apply the scientific method and utilize quantitative analysis to investigate problems in biology.

## B. Admission Standards for the Program:

Admission to the University is based on the University's Undergraduate Admission Requirements that may be found by clicking on the following urls:

- **Freshman:** <https://www.usf.edu/admissions/freshmen/admission-information/requirements-deadlines.aspx>
- **Transfer:** <https://www.usf.edu/admissions/transfer/admission-information/index.aspx>
- **International:** <https://www.usf.edu/admissions/international/admission-information/index.aspx>

## C. Graduation Requirements for the Program:

Satisfactory completion of the following requirements:

- General Education Program (36 credit hours), including State Core General Education, State Computation and State Communication;
- Minimum of 120 unduplicated credit hours;
- A minimum adjusted grade point average (GPA) of 2.0 on all coursework taken at USF and an overall 2.0 GPA average on all college-level coursework;
- Major and college requirements in a chosen degree program;
- Nine credit hours of coursework taken during the summer term(s) (if entered USF with less than 60 credit hours);
- Registration and successful completion of at least thirty (30) of the last sixty (60) credit hours;
- 42 credit hours of upper-level coursework;
- Civics Literacy;
- Foreign language admissions coursework.

## D. Curricular Framework:

### D1. State Mandated Common Prerequisites:

State Mandated	Credit Hours	USF Course	Credit Hours
BSC X010/X010L or BSC X010C or BSC X040C	4	BSC 2010 Cellular Processes (3) BSC 2010L Cellular Processes Laboratory (1)	4
BSC X011/X011L or BSC X011C or ZOO X010/X010L or BOT X010/X010L BSC X041C	4	BSC 2011 Biodiversity (3) BSC 2011L Biodiversity Laboratory (1)	4
CHM X045/X045L or CHM X045C or [CHM X040 and CHM X041]	4	CHM 2045 General Chemistry I (3) CHM 2045L General Chemistry I Laboratory (1)	4
CHM X046/X024L or CHM X046C	4	CHM 2046 General Chemistry II (3) CHM 2046L General Chemistry II Laboratory (1)	4
CHM X210/X210L or CHM X210C or [PHY	4	CHM 2210 Organic Chemistry I (3)	4-5

X053/PHY X053L or PHY X048/X048L		CHM 2210L Organic Chemistry Laboratory I (2) or PHY 2053 General Physics I (3) PHY 2053L General Physics I Laboratory (1)	
CHM X211/X211L or CHM X211C or [PHY X054/ and PHY X054L or PHY X049L] or PHY X049/X049L	4	CHM 2211 Organic Chemistry II (3) CHM 2211L Organic Chemistry Laboratory II (2) or PHY 2054 General Physics I (3) PHY 2054L General Physics I Laboratory (1)	4-5
MAC X311 or MAC X233 or MAC X253 or MAC X281 or MAC X241	4	MAC 2241 Life Sciences Calculus I (4)	4
MAC X312 or MAC X282 or MAC X234 or STA X023 or STA X024 or STA X321	3-4	MAC 2242 Life Sciences Calculus II (4) or STA 2023 Introductory Statistics I (3)	3-4
Total Credit Hours	31-32	Total Credit Hours	31-34

**D2. Required Courses:** (19-21 credit hours)

**D2a. Supporting Required Courses:** 4 Courses; 8-10 credit hours

The following courses are supporting courses for this major. They are required for the major, but are not counted in the total major hours but are counted toward the total program hours of 120 credit hours. The degree will not be awarded if these courses have not been taken by the end of the student's final semester.

Students choose one of two supporting course sequence options, based on the completed common course prerequisites. The two course sequence options are as follows:

1. Organic Chemistry I and II, with Laboratories (10 credit hours):
  - a. CHM 2210 Organic Chemistry I/CHM 2210L Organic Chemistry I Laboratory AND
  - b. CHM 2211 Organic Chemistry II/CHM 2211L Organic Chemistry II Laboratory
  
2. Physics I and II (Calculus-based or General), with Laboratories:
  - a. PHY 2053 General Physics I/PHY 2053 General Physics I Laboratory AND PHY 2054 General Physics I/PHY 2054 General Physics I Laboratory  
or
  - b. PHY 2048 General Physics I–Calculus Based/PHY 2048 General Physics I–Calculus Based Laboratory AND PHY 2049 General Physics I–Calculus Based/PHY 2049 General Physics I–Calculus Based Laboratory

A minimum grade of C- is required in each Supporting Course.

Note: The course sequence that will count toward the Supporting Courses requirement is based on

which sequence (Organic Chemistry or Physics) the student took to meet the Common Prerequisite requirement. If the Organic Chemistry sequence was taken to fulfill the Common Prerequisite requirement, the Physics sequence will meet the Supporting Courses requirement. The opposite is true if the Physics requirement was used to meet the Common Prerequisite requirement.

**D2b. Major Core Courses:** 5 Courses; 11 credit hours

- PCB 3043 Principles of Ecology (3)
- PCB 3043L Principles of Ecology Laboratory (1)
- PCB 3063 General Genetics (3)
- PCB 3063L General Genetics Laboratory (1)
- PCB 4674 Organic Evolution (3)

**D3. Major (Restricted) Electives:** (17 credit hours)

Students complete a General Biology program of study or complete one of four concentrations: Animal Biology, Medical Biology, Ecology and Evolution or Plant Biology. The concentrations are a minimum of 13 credit hours. Students who declare a concentration will take a ~~minimum~~ maximum of 4 additional credit hours to meet the total major electives requirement, which is a minimum of 17 credit hours. If students do not declare a concentration, they will take a minimum of 17 credit hours to meet the major electives requirement.

**D3a. General Biology Major Electives:** 57 courses; 17 credits

~~Structure/Function Area of Study~~ Requirement: 1 course; 3 credit hours

Select a minimum of one of the following courses:

- BOT 3015C General Botany (4)
- BOT 3373C Vascular Plants: Form and Function (4)
- BSC 2093C Human Anatomy and Physiology I (4)
- BSC 2094C Human Anatomy and Physiology II (4)
- BSC 4933 Selected Topics in Biology (3-4) \*
- MCB 4404 Microbial Physiology and Genetics (3) and MCB 4404L Microbial Physiology and Genetics Laboratory (1)
- PCB 3023 Cell Biology (3)
- PCB 3712 General Physiology (3) and PCB 3713L General Physiology Laboratory (1)
- PCB 4723 Animal Physiology (3)
- ZOO 3713C Comparative Vertebrate Anatomy (5)
- ZOO 4377 Functional Morphology (3)

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

~~Biodiversity/Ecology Area of Study~~ Requirement: 1 course; 3 credit hours

Select a minimum of one of the following courses:

- BOT 3152C Field Botany (3)
- BOT 4601 Plant Ecology (3)
- BSC 3312 Marine Biology (3)
- BSC 4052 Conservation Biology (3)
- BSC 4333 Ecology of Aquatic Vascular Plants (3)
- BSC 4933 Selected Topics in Biology (3) \*
- MCB 3020 General Microbiology (3) & MCB 3020L General Microbiology Laboratory (1)
- MCB 4202 Ecology of Infectious Diseases (3)

- MCB 4277 Insect-Borne Diseases and Global Health (3)
- MCB 4503 Virology (3)
- ZOO 3205C Advanced Invertebrate Zoology (4)
- ZOO 4233 Parasitology (3)
- ZOO 4307 Vertebrate Zoology/Biodiversity (3) and ZOO 4307L Vertebrate Zoology/Biodiversity Lab (1)
- ZOO 4454 Fish Biology (3) and ZOO 4454L Fish Biology Lab (1)
- ZOO 4513 Animal Behavior (3)

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

Biology Area of Study: 1 course; 3 credit hours

Select a minimum of one course from the above areas of study that has not been utilized to fulfill either area of study.

Associated/Integrated Laboratory Area of Study: 2 course; 8 credit hours

Select a minimum of one lecture and laboratory or combined lecture/lab course from the above areas of study that has not been utilized to fulfill either area of study.

Additional Course Requirement: 3 courses; 9 credit hours

Select a minimum of three upper-level courses with a BOT, BSC, MCB, PCB, or ZOO prefix, with the exception of those intended for non-majors.\*

Additionally, OCB 3108 Marine Field Studies (4), PHZ 4702 Applications of Physics to Biology and Medicine I (4), and BCH 3053 General Biochemistry (3) are approved by the Department.

Additional electives as approved for the major by the Department.

\*BSC 4933 Selected Topics in Biology - cannot be taken as an elective credit without prior departmental approval.

Major Laboratory Course Requirement: 2 lab courses; 2 credit hours

A minimum of two courses from the Major Structure/Function Option, Major Biodiversity/Ecology Option, and Major Electives must include a laboratory component (both "L" and "C" courses approved for the major count for this requirement).

**D3b. Animal Biology Concentration: 56 courses; 17 credit hours**

Concentration Core: 1 course; 4 credit hours

Select a minimum of one of the following courses:

- ZOO 3205C Advanced Invertebrate Zoology (4)
- ZOO 4307 and ZOO 4307L Vertebrate Zoology and Lab (4)

Restricted Electives: 43 courses; 139 credit hours

Select a minimum of 3 courses (9 credit hours) from of the following list and/or choose unused courses from the concentration core section above:

- PCB 3712 General Physiology (3)
- PCB 4723 Animal Physiology (3)
- ZOO 3407 Biology of Sharks and Rays (3)

- ZOO 3713C Comparative Vertebrate Anatomy (5)
- ZOO 4233 Parasitology (3)
- ZOO 4377 Functional Morphology (3)
- ZOO 4454 Fish Biology (3)
- ZOO 4513 Animal Behavior (3)
- BSC 4933 Selected Topics in Biology (3-4)\*
- BSC 4456C Digital Dinosaurs (4)
- BSC 4052 Conservation Biology (3)
- PCB 4744 Biomedical Physiology (3)
- ZOO 4694 Developmental Biology (3)
- BSC 3312 Marine Biology (3)
- BSC 4444 Genomics (3)
- ZOO 3205C Advanced Invertebrate Zoology (4)
- ZOO 4307 and ZOO 4307L Vertebrate Zoology and Lab (4)

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

A course used as a concentration core requirement cannot also be used to meet the restricted elective requirement.

Additional Course Requirement: 1 course; 3 credit hours

Select a minimum of three upper-level courses with a BOT, BSC, MCB, PCB, or ZOO prefix, with the exception of those intended for non-majors.\*

Additionally, OCB 3108 Marine Field Studies (4), PHZ 4702 Applications of Physics to Biology and Medicine I (4), and BCH 3053 General Biochemistry (3) are approved by the Department.

Additional electives as approved for the major by the Department.

\*BSC 4933 Selected Topics in Biology - cannot be taken as an elective credit without prior departmental approval.

Major Laboratory Course Requirement: 1 lab course; 1 credit hour

A minimum of one course from the restricted electives and additional course requirement must include a laboratory component (both "L" and "C" courses approved for the major count for this requirement).

**D3c. Ecology and Evolution Concentration:** 56 courses; 17 credit hours

Concentration Core: 2 courses; 7 credit hours

*Evolution/Biodiversity:*

Select a minimum of one course from the following list:

- BOT 3015C General Botany (4)
- MCB 3020 General Microbiology (3) & MCB 3020L General Microbiology Laboratory (1)
- ZOO 3205C Advanced Invertebrate Zoology (4)
- ZOO 4307 Vertebrate Zoology (3) ZOO & 4307L Vertebrate Zoology Lab (1)

*Ecology:*

Select a minimum of one course from the following list:

- BOT 4601 Plant Ecology (3)

- BSC 4052 Conservation Biology (3)
- BSC 4933 Selected Topics in Biology (3-4)
- PCB 3306 Stream Ecology (3)
- PCB 4315 Marine Ecology (3)

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

Restricted Electives: ~~32~~ courses, ~~106~~ credit hours

Select a minimum of ~~106~~ 32 courses (~~106~~ credit hours) from the following list and/or choose unused courses from the Evolution/Biodiversity and Ecology sections above:

- OCB 3108 Marine Field Studies (4)
- BSC 4052 Conservation Biology (3)
- BSC 4057 Environmental Issues (3)
- BSC 4333 Ecology Of Aquatic Vascular Plants (3)
- BOT 3015C General Botany (4)
- BOT 4404C Phycology (4)
- BOT 4714C Plant Taxonomy (4)
- PCB 3306 Stream Ecology (3)
- PCB 4315 Marine Ecology (3)
- PCB 4402 Disease Ecology (3)
- PCB 5307 Limnology (3)
- ZOO 4512 Sociobiology (3)
- ZOO 4513 Animal Behavior (3)
- BOT 3152C Field Botany (3)
- BOT 4601 Plant Ecology (3)
- ~~BSC 4052 Conservation Biology (3)~~
- BSC 3312 Marine Biology (3)
- BSC 4933 Selected Topics in Biology (3-4)\*
- MCB 3020 General Microbiology (3) and MCB 3020L General Microbiology Lab (1)
- MCB 4202 Ecology of Infectious Diseases (3)
- MCB 4277 Insect-Borne Diseases and Global Health (3)
- MCB 4503 Virology (3)
- ZOO 3205C Advanced Invertebrate Zoology (4)
- ZOO 4233 Parasitology (3)
- ZOO 4454 Fish Biology (3) and ZOO 4454L Fish Biology Lab (1)
- ZOO 4307 Vertebrate Zoology (3) and ZOO 4307L Vertebrate Zoology Lab (1)
- PCB 4671 Molecular Evolution (3)
- BSC 4444 Genomics (3)

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

A course used as a concentration core requirement cannot also be used to meet the restricted elective requirement.

Additional Course Requirement: 1 course; 3 credit hours

Select a minimum of three upper-level courses with a BOT, BSC, MCB, PCB, or ZOO prefix, with the exception of those intended for non-majors.\*

Additionally, OCB 3108 Marine Field Studies (4), PHZ 4702 Applications of Physics to Biology and Medicine I (4), and BCH 3053 General Biochemistry (3) are approved by the Department.

Additional electives as approved for the major by the Department.

\*BSC 4933 Selected Topics in Biology - cannot be taken as an elective credit without prior departmental approval.

Major Laboratory Course Requirement: 1 lab course; 1 credit hour

A minimum of one course from the restricted electives and additional course requirement must include a laboratory component (both "L" and "C" courses approved for the major count for this requirement).

### **D3d. Medical Biology Concentration:** 5 courses; 17 credit hours

Concentration Core: 2 courses; 8 credit hours

Select a minimum of 2 courses (8 credit hours) from the following list:

- BSC 2093C Human Anatomy and Physiology I (4)
- MCB 3020 General Microbiology (3) and MCB 3020L General Microbiology Lab (1)
- PCB 3023 Cell Biology (3) and PCB 3023L Cell Biology Laboratory (1)
- PCB 3712 General Physiology (3) and PCB 3713L General Physiology Laboratory (1)

Restricted Electives: ~~3~~2 courses, ~~9~~6 credit hours

Select a minimum of ~~3~~2 courses (~~9~~6 credit hours) from the following list and/or choose unused courses from the concentration core section above:

- BSC 2093C Human Anatomy and Physiology I (4)
- BSC 2094C Human Anatomy and Physiology II (4)
- BCH 3023 Introductory Biochemistry (3) and BCH 3023L Basic Biochemistry Lab (2)
- PCB 3023 Cell Biology (3) and PCB 3023L Cell Biology Laboratory (1)
- PCB 3712 General Physiology (3) and PCB 3713L General Physiology Laboratory (1)
- ZOO 3713C Comparative Vertebrate Anatomy (5)
- PHZ 4702 Applications of Physics to Biology and Medicine I (4)
- PCB 4234 Principles of Immunology (3)
- MCB 3020 General Microbiology (3) and MCB 3020L General Microbiology Lab (1)
- PCB 4402 Disease Ecology (3)
- BOT 4851 Plants and Human Health (3)
- BOT 3850 Medical Botany (3)
- ~~BCH 4033 Advanced Biochemistry I (3)~~
- **BCH 3053 General Biochemistry (3)**
- BSC 2932 Selected Topics in Biology (3)\*
- MCB 4503 Virology (3)
- ~~BSC 3022 Biology of Aging (3)~~
- PCB 4109 Cancer Biology (3)
- PCB 4663 Human Genetics (3)
- PCB 4744 Biomedical Physiology (3)
- BSC 4444 Genomics (3)
- BSC 4933 Selected Topics in Biology (3-4)\*

\*BSC 2932 and BSC 4933 Selected Topics in Biology - as approved for the major by the



Department.

A course used as a concentration core requirement cannot also be used to meet the restricted elective requirement.

Additional Course Requirement: 1 course; 3 credit hours

Select a minimum of three upper-level courses with a BOT, BSC, MCB, PCB, or ZOO prefix, with the exception of those intended for non-majors.\*

Additionally, OCB 3108 Marine Field Studies (4), PHZ 4702 Applications of Physics to Biology and Medicine I (4), and BCH 3053 General Biochemistry (3) are approved by the Department.

Additional electives as approved for the major by the Department.

\*BSC 4933 Selected Topics in Biology - cannot be taken as an elective credit without prior departmental approval.

**D3e. Plant Biology Concentration:** 56 courses; 17 credit hours

Concentration Core: 1 course; 4 credit hours

- BOT 3015C General Botany (4)

Restricted Electives: 43 courses, 139 credit hours

Select a minimum of 43 courses (139 credit hours) from the following list:

- BOT 4404C Phycology (4)
- BOT 4601 Plant Ecology (3)
- BOT 4851 Plants and Human Health (3)
- BOT 3850 Medical Botany (3)
- BOT 4714C Plant Taxonomy (4)
- BSC 4333 Ecology of Aquatic Vascular Plants (3)
- BOT 3152C Field Botany (3)
- BOT 3373C Vascular Plants: Form and Function (4)
- BSC 4933 Selected Topics in Biology (3-4)\*

\*BSC 4933 Selected Topics in Biology - as approved for the major by the Department.

A course used as a concentration core requirement cannot also be used to meet the restricted elective requirement.

Additional Course Requirement: 1 course; 3 credit hours

Select a minimum of three upper-level courses with a BOT, BSC, MCB, PCB, or ZOO prefix, with the exception of those intended for non-majors.\*

Additionally, OCB 3108 Marine Field Studies (4), PHZ 4702 Applications of Physics to Biology and Medicine I (4), and BCH 3053 General Biochemistry (3) are approved by the Department.

Additional electives as approved for the major by the Department.

\*BSC 4933 Selected Topics in Biology - cannot be taken as an elective credit without prior

departmental approval.

Major Laboratory Course Requirement: 1 lab course; 1 credit hour

A minimum of one course from the restricted electives and additional course requirement must include a laboratory component (both “L” and “C” courses approved for the major count for this requirement).

**Note:** A course used to fulfill one major/concentration requirement may not be used to fulfill other major/concentration requirements.

**D4. Sequenced Course of Study:**

- An exclamation mark (!) is indicated for any course and/or placeholder that must be taken in sequence and/or in the semester listed.
- Course Type refers to how the course is utilized in the degree program, e.g., Supporting, Major Core, Business Foundation, etc. It also includes “placeholder” information such as: Civics Literacy Test, Apply for Graduation.
- General Education Course Type refers to the General Education core area the course meets.

**D4a. 8-Semester Plan for FTIC Students**

Fall 1						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	BSC 2010		Yes	Yes	State Core General Education Natural Sciences	3
	BSC 2010L		Yes	No		1
	ENC 1101		No	Yes	State Core General Education Communication	3
	MAC 2241		Yes	Yes	State Computation	4
	CHM 2045		Yes	No		3
	CHM 2045L		Yes	No		1
<b>Total Semester Credit Hours:</b>						<b>15</b>

Spring 1						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	BSC 2011		Yes	No		3
	BSC 2011L		Yes	No		1
	ENC 1102		No	Yes	Enhanced General Education	3
	STA 2023 or MAC 2242		Yes	Yes	State Core General Education Mathematics	3
	CHM 2046		Yes	No		3
	CHM 2046L		Yes	No		1
<b>Total Semester Credit Hours:</b>						<b>14</b>

Summer 1						
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!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
		Placeholder: Civics Literacy Exam				
<b>Total Term Credit Hours:</b>						0

Fall 2						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	PHY 2053L	Supporting	No	No		3
	PHY 2053	Supporting	No	No		1
	XXX XXXX		No	Yes	State Core General Education Humanities	3
	CHM 2210		Yes	No		3
	CHM 2210L		Yes	No		2
	XXX XXXX		No	Yes	Enhanced General Education Creative Thinking	3
<b>Total Semester Credit Hours:</b>						15

Spring 2						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	PHY 2054	Supporting	No	No		3
	PHY 2054L	Supporting	No	No		1
	XXX XXXX		No	Yes	State Core General Education Social Sciences	3
	CHM 2211		Yes	No		3
	CHM 2211L		Yes	No		2
	XXX XXXX		No	Yes	Enhanced General Education Information and Digital Literacy	3
<b>Total Semester Credit Hours:</b>						15

Summer 2						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	XXX XXXX		No	Yes	Enhanced General Education Human and Cultural Diversity	3
<b>Total Term Credit Hours:</b>						3

Fall 3						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours

	PCB 3063	Major Core	No	No		3
	PCB 3063L	Major Core	No	No		1
	XXX XXXX	Upper Level Elective	No	No		3
	XXX XXXX		No	Yes	Enhanced General Education Ethical Reasoning and Civic Engagement	3
	XXX XXXX	Upper Level Elective	No	No		3
<b>Total Semester Credit Hours:</b>						<b>13</b>

Spring 3						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	PCB 3043	Major Core	No	No		3
	PCB 3043L	Major Core	No	No		1
	XXX XXXX	Upper Level Elective	No	No		3
	XXX XXXX	General/Unrestricted Elective	No	No		3
	XXX XXXX	General/Unrestricted Elective	No	No		3
<b>Total Semester Credit Hours:</b>						<b>13</b>

Summer 3						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	XXX XXXX	Upper Level Elective	No	No		3
	XXX XXXX	Upper-Level Elective	No	No		3
<b>Total Term Credit Hours:</b>						<b>6</b>

Fall 4						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	XXX XXXX	Upper Level Elective	No	No		3
	XXX XXXX	Major Elective/Concentration	No	No		4
	XXX XXXX	Major Elective/Concentration	No	No		4
	XXX XXXX	Major Elective/Concentration	No	No		3
<b>Total Semester Credit Hours:</b>						<b>14</b>

Spring 4						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	General Education Course Type	Total Credit Hours
	PCB 4674	Major Core	No	No		3
	XXX XXXX		No	Yes	Enhanced General Education High Impact Practice	3
	XXX XXXX	Major Elective/Concentration	No	No		3
	XXX XXXX	Major Elective/Concentration	No	No		3

	Placeholder: Apply for Graduation		
<b>Total Semester Credit Hours:</b>			12
<b>Total Degree Program Credit Hours:</b>			120

**D4b. 4-Semester Plan for FCS AA Transfer Students**

Fall 1						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	Intentionally Left Blank	Total Credit Hours
	PCB 3063	Major Core	No	No		3
	PCB 3063L	Major Core	No	No		1
	XXX XXXX	Upper Level Elective	No	No		3
	XXX XXXX	Upper Level Elective	No	No		3
	PHY 2053	Supporting	No	No		3
	PHY 2053L	Supporting	No	No		1
<b>Total Semester Credit Hours:</b>						14

Spring 1						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	Intentionally Left Blank	Total Credit Hours
	PCB 3043	Major Core	No	No		3
	PCB 3043L	Major Core	No	No		1
	PHY 2054	Supporting	No	No		3
	PHY 2054L	Supporting	No	No		1
	XXX XXXX	General/Unrestricted Elective	No	No		3
	XXX XXXX	General/Unrestricted Elective	No	No		3
<b>Total Semester Credit Hours:</b>						14

Summer 1						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	Intentionally Left Blank	Total Credit Hours
	XXX XXXX	Upper-Level Elective	No	No		3
	XXX XXXX	Upper-Level Elective	No	No		3
<b>Total Term Credit Hours:</b>						6

Fall 2						
!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	Intentionally Left Blank	Total Credit Hours
	XXX XXXX	Major Elective/Concentration	No	No		4
	XXX XXXX	Major Elective/Concentration	No	No		4
	XXX XXXX	Major Elective/Concentration	No	No		3
	XXX XXXX	Upper Level Elective	No	No		3
<b>Total Semester Credit Hours:</b>						14

Spring 2						
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!	Course Prefix and Number	Course Type	State Mandated Common Prerequisite	Enhanced General Education Requirement	Intentionally Left Blank	Total Credit Hours
	PCB 4674	Major Core	No	No		3
	XXX XXXX	Upper-Level Elective	No	No		3
	XXX XXXX	Major Elective/Concentration	No	No		3
	XXX XXXX	Major Elective/Concentration	No	No		3
		Placeholder: Apply for Graduation				
<b>Total Semester Credit Hours:</b>						12
<b>Total Credit Hours:</b>						60

#### ADDITIONAL REQUIREMENTS:

- A maximum of four credit hours of BSC 4910 Undergraduate Research and BSC 4940 Internship may be applied to the Biology major.
- A minimum grade of C- is required for all major coursework.
- Students must maintain a 2.0 GPA in all major coursework (this is the "Applied Attempts GPA" in the major block in DegreeWorks).
- A course used to fulfill one major/concentration requirement may not be used to fulfill other major/concentration requirements.

#### NOTES:

- No changes in the State Mandated Common Prerequisite courses.
- Do not anticipate any significant increase in students and the student to faculty ratio post consolidation is expected to be stable.
- Post consolidation, the undergraduate Biology program will be one major with either a General Biology program of study or a program of study that includes a concentration in: Animal Biology, Medical Biology, Ecology and Evolution or Plant Biology. The Environmental Microbiology, Environmental Biology and Integrative Animal Biology majors will be discontinued because they have been incorporated into the concentrations. New degree programs are being prepared to replace the current major in Cell and Molecular Biology and the major and concentration in Marine Biology.