Biology – The Science of Life

Our program is designed to prepare students for a broad spectrum of careers in the life sciences, including completion of all requirements for admission to professional schools (e.g., medical, dental, pharmacy and veterinary schools) and graduate programs.

**Biology Major Requirements** (66-69 units):

- General Biology I and II
- Cell Physiology
- Genetics
- Evolution
- Biology Seminar (1 unit)
- One field/ecology course (e.g., Oceanography, Conservation Biology (SL), Herpetology, Invertebrate Zoology, Field Botany, etc.)
- Four upper division (UD) biology electives, at least two with lab (e.g., Microbiology, Human Anatomy, Human Physiology, Parasitology, Histology, Immunology, Development, Endocrinology, Female Biology (SL), Animal Toxicology, Comparative Animal Physiology, Biology of Cancer (SL), Molecular Biology, Virology, Neurobiology, etc.; can include additional field/ecology courses)

**SL:** Course applies to USF Core Service Learning requirement

**Supporting Courses**
- General Chemistry I and II
- Organic Chemistry (1 or 2 semester option) plus Organic Chemistry Lab I
- Biostatistics
- Introductory Physics I and II

**Sample Curriculum** (depends on Core and language placement)

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>General Biology I</td>
<td>General Chemistry I</td>
<td>General Biology II</td>
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<tr>
<td>General Chemistry I</td>
<td>Core: Writing Requirement</td>
<td>Core: Writing Requirement</td>
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<td>Core: Public Speaking</td>
<td>Core: Biostatistics</td>
<td>Core: Biostatistics</td>
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<tr>
<td>Sophomore Year</td>
<td>Cell Physiology</td>
<td>Genetics</td>
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<tr>
<td>Organic Chemistry I* + Lab</td>
<td>Organic Chemistry II</td>
<td>Core/General Elective/Minor/UD Biology</td>
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<td>Core: or Language Requirement</td>
<td>Core or Language Requirement</td>
<td>Core or Language Requirement</td>
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<tr>
<td>Junior Year</td>
<td>UD Biology Elective</td>
<td>UD Biology Elective</td>
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<tr>
<td>Introductory Physics I</td>
<td>UD Biology Elective</td>
<td>UD Biology Elective</td>
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<tr>
<td>Core: or Language Requirement</td>
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<tr>
<td>Senior Year</td>
<td>UD Biology Elective</td>
<td>Evolution</td>
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<tr>
<td>UD Biology Elective</td>
<td>UD Biology Elective</td>
<td>General Elective/Minor</td>
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<tr>
<td>Biology Seminar (1 unit)</td>
<td>Core/General Elective/Minor</td>
<td>General Elective/Minor</td>
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**Undergraduate Research:** Students have the opportunity to undertake research projects under faculty direction for upper-division Biology elective credit.

**Biology Honors Program:** Designed to provide superior undergraduate students with advanced opportunities to carry out original research.

**Molecular Biology Emphasis:** Preparation for positions in academic, medical or industrial biotechnology laboratories, or graduate study in genetics, molecular and cell biology.

**Ecology Emphasis:** Preparation for careers in academic, governmental, non-profit and private sector research, consulting or outreach programs related to ecology and the environment

**Neuroscience Minor:** An interdisciplinary program for students interested in neurobiology and behavior.

**USF Pre-professional Health Committee (PPHC):** Assists students with preparation and the application process for professional and graduate schools.

*curriculum will be slightly modified if one-semester Organic Chemistry option is chosen (see your advisor)*

1 October 2015
BIOLOGY CURRICULUM CHECKLIST

Name ______________________________________
Advisor ______________________________________

CORE CURRICULUM

___ Area A. Foundations of Communication
Freshman Year
1 ___ Public Speaking (RHET 103)
2 ___ Written Comm. II (RHET 120)
   or Writing in the Sciences (RHET 206)
   ___ Written Comm. I (RHET 110 or RHET 110N)
or 2 ___ First Year Seminar (RHET 195)
or 2 ___ Transfer Students:
   Academic Writing (RHET 250)
   or Writing in the Sciences (RHET 206)
   or Transfer Seminar (RHET 295)
or 1 ___ Written/Oral Comm. I (RHET 130)
   2 ___ Written/Oral Comm. II (RHET 131)

___ Area B. Mathematics and Science
1 ___ Biostatistics (MATH 102)
2 ___ General Biology I (BIOL 105)

___ Area C. Humanities
1 ___ Literature _____________________________
2 ___ History _______________________________

___ Area D. Mission
1 ___ Philosophy ____________________________
2 ___ Theology ______________________________
3 ___ Ethics _________________________________

___ Area E. Social Sciences _____________________________

___ Area F. Fine and Performing Arts ____________________________

___ Service Learning ____________________________

___ Cultural Diversity ____________________________

Total Core Units __________

___ Foreign Language Requirement
Language ____________________________
   ___ 101 _____ 102 (or waiver _____)

BIOLOGY MAJOR REQUIREMENTS

Lower Division (12 units)
___ General Biology I/II ___ 105 ___ 106
___ 212 Cell Physiology

Upper Division (8 units)
___ 310 Genetics ___ 414 Evolution
___ 490 Seminar (1 unit)
(Note: Evolution is to be taken in one of your last two semesters at USF, not junior year. Should have at least two upper division electives before taking Evolution).

Upper Division Field Course (4 units)
Field Course (from approved list)
1 ____________________________

Upper Division Electives (16 units, must include at least two lab courses)
Lab courses (can include more field courses) units
1 ____________________________
2 ____________________________

Additional upper division courses (lecture, lab or field)
3 ____________________________
4 ____________________________

___ Math (4 units) Biostatistics (MATH 102)

___ Chemistry (13-16 units)
___ 1 General Chemistry
   Chem I ___ 111 Lab I _____ 112
   Chem II ___ 113 Lab II _____ 114
___ 2 Organic Chemistry
   ___ Organic Chem I/II ___ 230 ___ 231
   or ___ 236 Fundamentals of Organic Chem
   ___ 3 Organic Chemistry Lab 232

___ Physics (8 units)
___ Introductory Physics ___ 100 ___ 101
   or ___ General Physics ___ 110 ___ 210

Important Notes:
Apply for grad check after completing 90 units. For graduation, total units including electives must be ≥128, and science GPA and overall GPA must be > 2.0

8 March 2016