Biology (B.S.)
College of Sciences
Department of Biology, BL, Room: 301
http://www.cos.ucf.edu/biology
Email: biology@ucf.edu
Frank Logiudice
Phone: 407-823-2141

Admission Requirements
- None

Degree Requirements
- Students who change degree programs and select this major must adopt the most current catalog.
- No credit by exam (TSD, Military credit) may be used for the major.
- Co-op or internship credit cannot be used in this major
- Departmental Residency Requirement consists of at least 22 semester hours of regularly scheduled 3000-4000 level courses taken from the UCF Biology Department.
- Students seeking a double major must satisfy the requirements for both majors and must take no fewer than 40 semester hours of upper division restricted elective course work appropriate to the combined areas of specialization in the two majors.
- Courses designated in 2 (Common Program Prerequisites) and 3 (Core Requirements) are usually completed in the first 60 hours.
- Biology majors must earn a “C” (2.0) or better in all Core courses with a BSC or PCB prefix in order to satisfy the requirement.
- All prerequisites of courses taught within the College of Sciences will be enforced.
- No more than 4 hours of Independent Study, Directed Research, or the following similar types of credit, may be applied toward major requirements:
  - BSC 4422L Biology Laboratory Techniques 1 hr
  - BSC 4937 Instructional Experiences in Undergraduate 2 hrs

- Upon reaching junior standing, Biology majors are expected to have completed the following courses and associate chemistry laboratories. These classes are prerequisites for advanced science classes and students entering the major without these classes will be unable to register for most of the advanced courses.
  - BSC 2010C Biology I 4 hrs
  - BSC 2011C Biology II 4 hrs
  - CHM 2045C Chemistry Fundamentals I 4 hrs
  - CHM 2046 Chemistry Fundamentals IA 3 hrs
  - CHM 2046L Chemistry Fundamentals Laboratory 1 hr
  - CHM 2210 Organic Chemistry I 3 hrs
  - CHM 2211 Organic Chemistry II 3 hrs
  - CHM 2211L Organic Laboratory Techniques 2 hrs
  - PHY 2053C College Physics I 4 hrs
  - PHY 2054C College Physics II 4 hrs

1. UCF General Education Program (GEP) (38 hrs)
- Note: Certain courses must be selected in the GEP for this major, bringing the total GEP hours to more than 36.

A: Communication Foundations (9 hrs)
- Required ENC 1101 Composition I 3 hrs
- Required ENC 1102 Composition II 3 hrs
- Prefer SPC 1603 Fundamentals of Technical Presentations 3 hrs

B: Cultural & Historical Foundations (9 hrs)

C: Mathematical Foundations (6 hrs)

Mathematics: 3 hrs
- Note: Prior to enrolling in Math, take Math Placement Test ~ http://atc.sdes.ucf.edu/

- Suggested MAC 2333 Concepts of Calculus or 3 hrs
- Suggested MAC 2253 Applied Calculus or 3 hrs
- Prefer MAC 2311C Calculus with Analytic Geometry I 4 hrs

Statistics 3 hrs
- Required STA 2023 Statistical Methods I 3 hrs

D: Social Foundations (6 hrs)

E: Science Foundations (8 hrs)
- Required BSC 2010C Biology I 4 hrs
- Note: a minimum grade of “C” (2.0) is required for this Biology course to be used as a prerequisite.

Select the sequence identified by the Chemistry Placement exam:
- Prior to enrolling in Chemistry, take Chemistry Placement Test ~ http://chemplacement.sdes.ucf.edu
- For students with a strong chemistry background and a high Chemistry Placement score:
  - Required CHM 2040 Chemistry Fundamentals IA and 3 hrs
  - Required CHM 2041 Chemistry Fundamentals IB and 3 hrs

2. Common Program Prerequisites (CPP) (16 hrs)
- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.
- See Transfer Notes for possible substitutes for the following courses.

Biology:
- BSC 2010C Biology I GEP
- BSC 2011C Biology II GEP

Chemistry:
- CHM 2045C Chemistry Fundamentals I 4 hrs

- or - both of the following:
  - CHM 2040 Chemistry Fundamentals IA and 3 hrs
  - CHM 2041 Chemistry Fundamentals IB and 3 hrs

- and - both of the following:
  - CHM 2046 Chemistry Fundamentals II 3 hrs
  - CHM 2046L Chemistry Fundamentals Laboratory 1 hr

Math:
- Select one math course and this statistics course.
- MAC 2233 Concepts of Calculus or GEP
- MAC 2253 Applied Calculus or GEP
- MAC 2311C Calculus with Analytic Geometry I or GEP
- STA 2023 Statistical Methods I or GEP

Physics: Complete one entire sequence 8 hrs
- PHY 2053C College Physics I and 4 hrs
- PHY 2054C College Physics II and 4 hrs
- or - 8 hrs
- PHY 2048C Physics for Engineers & Scientists I and 4 hrs
- PHY 2049C Physics for Engineers and Scientists II and 4 hrs

3. Core Requirements: Basic Level (8 hrs)
- All courses specifically identified in the preceding Common Program Prerequisites section of this catalog are also required in the Basic Core;

Basic Core: Required, satisfies the CPP

Biology:
- Note: a minimum grade of “C” (2.0) is required in these Biology courses to satisfy the requirement, and to allow their use as a course prerequisite.
  - BSC 2010C Biology I and GEP/PP
  - BSC 2011C Biology II and GEP/PP

Chemistry:
- CHM 2045C Chemistry Fundamentals I GEP/PP

- or - CHM 2040 Chemistry Fundamentals IA and GEP/PP
- CHM 2041 Chemistry Fundamentals IB and GEP/PP

- and - CHM 2046 Chemistry Fundamentals II and CPP
- CHM 2046L Chemistry Fundamentals Laboratory CPP
**Math:**

- Students planning on entering professional or graduate school may wish to take additional Calculus courses.
- Students are urged to consult their departmental advisor.

**Basic Core: Additional Requirements**

- Students planning on entering professional or graduate school should take Biochemistry and will thus need a year of Organic Chemistry. Students are urged to consult their departmental advisor.

**Physics: Complete one entire sequence**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHY 2053C</td>
<td>3 hrs</td>
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<tr>
<td>PHY 2054C</td>
<td>3 hrs</td>
</tr>
</tbody>
</table>

**Chemistry:**

- Students planning on entering professional or graduate school should take Biochemistry and will thus need a year of Organic Chemistry. Students are urged to consult their departmental advisor.

**Complete one entire sequence**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHM 2210</td>
<td>3 hrs</td>
</tr>
<tr>
<td>CHM 2211</td>
<td>3 hrs</td>
</tr>
<tr>
<td>CHM 2211L</td>
<td>2 hrs</td>
</tr>
</tbody>
</table>

**Core Requirements: Advanced Level**

- Note: a minimum grade of "C" (2.0) is required in these Biology courses to satisfy the requirement, and to allow their use as a course prerequisite.

**5. Restricted Electives**

- Courses must be selected from the groupings listed below.
- Student must complete at least one course dealing exclusively with zoology and one course dealing exclusively with botany.
- At least three credit hours from each group must be completed.
- At least 10 hours of the Upper Division Restricted electives must be taken within the UCF Biology Department.

**Environmental**

- Students planning on entering professional or graduate school may wish to take additional Calculus courses.
- Students are urged to consult their departmental advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PCB 3023</td>
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</tr>
<tr>
<td>PCB 3044</td>
<td>3 hrs</td>
</tr>
<tr>
<td>PCB 3063</td>
<td>3 hrs</td>
</tr>
<tr>
<td>PCB 4683</td>
<td>4 hrs</td>
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</table>

**Systematic**

- Students planning on entering professional or graduate school may wish to take additional Calculus courses.
- Students are urged to consult their departmental advisor.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BOT 4713C</td>
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</tr>
<tr>
<td>ENV 404C</td>
<td>4 hrs</td>
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<tr>
<td>MCB 3020C</td>
<td>5 hrs</td>
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<tr>
<td>ZOO 4513</td>
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**Form/Function**

<table>
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<th>Course</th>
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<tr>
<td>ZOO 3733C</td>
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<tr>
<td>ZOO 4753C</td>
<td>4 hrs</td>
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<tr>
<td>MAC 2311C</td>
<td>3 hrs</td>
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<table>
<thead>
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<tr>
<td>BOT 4054</td>
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<tr>
<td>BOT 4053</td>
<td>3 hrs</td>
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<tr>
<td>BOT 4713C</td>
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<td>BOT 4514</td>
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<td>PCB 3233</td>
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<tr>
<td>PCB 4723</td>
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<tr>
<td>PCB 5935</td>
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<tr>
<td>ZOO 5475L</td>
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<td>ZOO 3713C</td>
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<td>ZOO 4574</td>
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<td>ZOO 5463C</td>
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**Environment**

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<tr>
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<tr>
<td>BOT 3152C</td>
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<tr>
<td>BOT 3802</td>
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<tr>
<td>BOT 4580</td>
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<tr>
<td>BSC 4312C</td>
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<tr>
<td>BSC 4330</td>
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<tr>
<td>BSC 4821</td>
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<tr>
<td>BSC 5258L</td>
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<tr>
<td>PCB 3044L</td>
<td>3 hrs</td>
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<tr>
<td>PCB 3354</td>
<td>3 hrs</td>
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<tr>
<td>PCB 5435C</td>
<td>3 hrs</td>
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<tr>
<td>PCB 5485</td>
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<td>PAZ 4234</td>
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<tr>
<td>ZOO 4513</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ANS 540C</td>
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<tr>
<td>BOT 4434C</td>
<td>4 hrs</td>
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<tr>
<td>BOT 4713C</td>
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<tr>
<td>ENV 5006C</td>
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<tr>
<td>MCB 3020C</td>
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<tr>
<td>ZOO 4513</td>
<td>3 hrs</td>
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<tr>
<td>ZOO 4460</td>
<td>4 hrs</td>
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<tr>
<td>ZOO 4480</td>
<td>4 hrs</td>
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<tr>
<td>ZOO 4563C</td>
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</tbody>
</table>
7. Foreign Language Requirements

Admissions
- Admission: Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

Graduation
- None

8. Electives
- Select primarily from upper level courses after consulting with your departmental advisor. May be outside of the department.

9. Additional Requirements
- None

10. Required Minors
- None

11. Departmental Exit Requirements
- A minimum GPA of 2.0 in all UCF courses taken in the Common Program Prerequisites, the Biology Core and the Upper Division Restricted Electives used to satisfy the requirement.
- Students will be required to take a comprehensive exam in biology during their last semester. Students must take the exam during their term of graduation.
- Biology majors are discouraged from taking courses as a transient student at a community college, except in situations where the first semester of a two semester sequence has already been taken at the community college.

12. University Minimum Exit Requirements
- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit

Total Semester Hours Required
- 120

Honors In Major
- None

Related Programs
- Environmental Engineering
- Biomedical Sciences
- Science Education - Biology
- Interdisciplinary Studies - Environmental Studies Track

Certificates
- None

Related Minors
- Biology
- Environmental Studies
- Biomedical Sciences

Advising Notes
- Students are urged to contact their departmental advisor before registering for courses.
- It is the student’s responsibility to ensure they have satisfied course prerequisites before registering for a class.

Transfer Notes
- Lower Division courses taken at community colleges do not substitute for Upper Division courses.
- Courses transferred from private and out-of-state schools must be evaluated for equivalency credit by the undergraduate program coordinator. The student must provide all supporting information.

Acceptable Substitutes for Transfer Courses
- The following substitutions are acceptable for common program prerequisites if taken as part of the AA course work:
  - BSC 2010C: May substitute the Honors version BSC X040C. Although the CPP is satisfied by PCB X011C, it will not satisfy prerequisites for subsequent Biology courses.
  - CHM 2045C: may use CHM X040 plus CHM X041.
  - Physics: although the CPP is satisfied by Organic Chemistry, both subjects are required by the degree program and both must be taken.
  - Statistics: although a number of math and statistics course will satisfy the CPP, this statistics course is required in the program.

Plan of Study
- This is one of numerous possible plans of study. See program description for all requirements. Consult a departmental advisor for alternate, new or more appropriate selections.
- Prior to enrolling in CHM 2045C, take Chemistry Placement Test. Instructions are at http://chemplacement.sdes.ucf.edu/
- Prior to enrolling in Math, take Math Placement Test ~ http://utc.sdes.ucf.edu/
- Although all classes are listed as being taken during the academic year, you may be required to complete 9 hours of them during the Summer. Consult with an advisor to determine if you are exempt

Freshman Year - Fall
- BSC 2010C  Biology I  4 hrs
- CHM 2045C  Chemistry Fundamentals I  4 hrs
- Math Course, depending on placement score  4 hrs
- ENC 1101  Composition I  3 hrs

Freshman Year - Spring
- BSC 2011C  Biology II  4 hrs
- CHM 2046  Chemistry Fundamentals II  3 hrs
- CHM 2046L  Chemistry Fundamentals Laboratory  1 hr
- Note: This lab may be taken in a later term if seats are not available.
- ENC 1102  Composition II  3 hrs
- Elective or Math course if needed  3 hrs

Sophomore Year - Fall
- MAC 2311C  Calculus with Analytic Geometry I  4 hrs
- CHM 2210  Organic Chemistry I  3 hrs
- PCB 3063  Genetics  3 hrs
- PCB 3044  Principles of Ecology  3 hrs

Sophomore Year - Spring
- CHM 2211  Organic Chemistry II  3 hrs
- CHM 2211L  Organic Laboratory Techniques I  2 hrs
- Note: This lab may be taken in a later term if seats are not available.
- STA 2023  Statistical Methods I  3 hrs
- Restricted Elective  5 hrs
- GEP  3 hrs

Junior Year - Fall
- PHY 2053C  College Physics I  4 hrs
- PCB 3023  Molecular Cell Biology  3 hrs
- Restricted Elective  5 hrs
- Elective  3 hrs

Junior Year - Spring
- PHY 2054C  College Physics II  4 hrs
- Restricted Elective  4 hrs
- GEP  3 hrs
- Elective  4 hrs

Senior Year - Fall
- PCB 4863  Evolutionary Biology  4 hrs
- Restricted Elective  4 hrs
- GEP  3 hrs
- GEP  3 hrs
- Elective  2 hrs

Senior Year - Spring
- Restricted Elective  4 hrs
- GEP  3 hrs
- GEP  3 hrs
- Elective  3 hrs
Program Academic Learning Compacts

Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:
http://www.oetas.ucf.edu/alc/academic_learning_compacts.htm

Equipment Fees

- Part-Time Student: $19 per term
- Full-Time Student: $38 per term