

# UCF Degree Programs

## Biology (B.S.)

College of Sciences

Department of Biology, BL, Room: 301

<http://www.cos.ucf.edu/biology>

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The Biology B.S. degree allows the student to choose coursework to be awarded the general Biology B.S. degree or to select a track in one (or more) of five areas, which are:- Ecology, Evolutionary and Conservation Biology- Marine and Aquatic Biology- Plant Sciences- Pre-Health Professional Biology- Zoology and Pre-Veterinarian Science. These tracks are designed to align students with specific courses that will prepare them for the job market or more advanced study.

### 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 Department of Biology.
- 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.
- A "C" (2.0) or better is required in all Core Courses with a BSC or PCB prefix.
- Students must achieve a minimum cumulative GPA of 2.0 in all UCF courses taken in the Common Program Prerequisites, the Biology Core and the Upper Division Restricted Electives.
- 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 Biology	2 hrs

- Upon reaching junior standing (60 hours), Biology majors are expected to have completed the following courses and associated 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 II	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 I	2 hrs
PHY 2053C	College Physics I	4 hrs
PHY 2054C	College Physics II	4 hrs

### 1. UCF General Education Program (GEP) (38 hrs)

- Certain courses must be selected in the GEP for this major, bringing the total GEP hours to more than 36.
- At least one course completed in each Foundation area must be a designated State General Education Core Course.

### A: Communication Foundations (9 hrs)

Required	ENC 1101	Composition I	3 hrs
Required	ENC 1102	Composition II	3 hrs
Prefer	SPC 1603C	Fundamentals of Technical Presentations	3 hrs

### B: Cultural & Historical Foundations (9 hrs)

### C: Mathematical Foundations (6 hrs)

#### Mathematics: 3 hrs

- Prior to enrolling in Math, take Math Placement Test ~

<http://utc.sdes.ucf.edu>

Suggested	MAC 2233	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
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### D: Social Foundations (6 hrs)

### E: Science Foundations (8 hrs)

- A minimum grade of "C" (2.0) is required for this Biology course to be used as a prerequisite.

Required	BSC 2010C	Biology I	4 hrs
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### Select the sequence identified by the Chemistry

#### Placement exam;

- Prior to enrolling in Chemistry, take Chemistry Placement Test- <http://knightsource.sdes.ucf.edu/placement>
- For students with a strong chemistry background and a high Chemistry Placement score:

Required	CHM 2045C	Chemistry Fundamentals I	4 hrs
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or - Students with little chemistry background should take this two semester equivalent instead.

Required	CHM 2040	Chemistry Fundamentals IA	3 hrs
		and	
Required	CHM 2041	Chemistry Fundamentals IB	3 hrs

### 2. Common Program Prerequisites (CPP) (16 hrs)

- Completion of the CPPs should take into account the GEP and Major requirements. Although other courses may satisfy the CPP, those identified in this section specifically satisfy the major requirements.
- See "Common Prerequisites" in the Transfer and Transitions Services section for more information.
- See Transfer Notes for possible substitutes for the courses listed below.

#### Biology:

- A minimum grade of "C" (2.0) is required in these Biology courses to allow their use as a prerequisite. While a lower grade may satisfy the CPP, it will not satisfy the major.

BSC 2010C	Biology I	GEP
BSC 2011C	Biology II	4 hrs

#### Chemistry:

- Take Placement test before starting chemistry;

<http://knightsource.sdes.ucf.edu/placement>

CHM 2045C	Chemistry Fundamentals I	4 hrs
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or - both of the following:

CHM 2040	Chemistry Fundamentals IA and	3 hrs
CHM 2041	Chemistry Fundamentals IB	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

### or 7 hrs

MAC 2311C	Calculus with Analytic Geometry I and	4 hrs
STA 2023	Statistical Methods I	3 hrs

### Physics: Complete one entire sequence 8 hrs

PHY 2053C	College Physics I and	4 hrs
PHY 2054C	College Physics II	4 hrs

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<b>- or</b>		<b>8 hrs</b>
PHY 2048C	General Physics Using Calculus I and	4 hrs
PHY 2049C	General Physics Using Calculus II	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;

#### Biology Basic Core:

■ 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.

#### Take all of the following:

BSC 2010C	Biology I and	GEP/PPP
BSC 2011C	Biology II	GEP/PPP

#### Cognate Sciences Basic Core:

##### Chemistry Sequence

CHM 2045C	Chemistry Fundamentals I	GEP/PPP
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#### or

CHM 2040	Chemistry Fundamentals IA and	GEP/PPP
CHM 2041	Chemistry Fundamentals IB	GEP/PPP

#### and

CHM 2046	Chemistry Fundamentals II and	PPP
CHM 2046L	Chemistry Fundamentals Laboratory	PPP

#### Organic or Analytic Sequence 8 hrs

Preferred CHM 2010	Organic Chemistry I	3 hrs
Preferred CHM 2211	Organic Chemistry II	3 hrs
CHM 2211L	Organic Laboratory Techniques I	2 hrs

#### or 9 hrs

CHM 2205	Introduction to Organic and Biochemistry and	5 hrs
CHM 3120	Analytical Chemistry and	3 hrs
CHM 3120L	Analytical Chemistry Laboratory	1 hr

#### Physics Sequence

PHY 2053C	College Physics I and	GEP/PPP
PHY 2054C	College Physics II	PPP

#### or

PHY 2048C	General Physics Using Calculus I and	PPP
PHY 2049C	General Physics Using Calculus II	PPP

#### Mathematics

MAC 2233	Concepts of Calculus or	GEP/PPP
MAC 2253	Applied Calculus or	GEP/PPP
Preferred MAC 2311C	Calculus with Analytic Geometry I	GEP/PPP

#### and

STA 2023	Statistical Methods I	GEP/PPP
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### 4. Core Requirements: Advanced Level (13 hrs)

#### Biology Advanced Core:

■ 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.

PCB 3023	Molecular Cell Biology	3 hrs
PCB 3044	Principles of Ecology	3 hrs
PCB 3063	Genetics	3 hrs
PCB 4683	Evolutionary Biology	4 hrs

#### Biology Laboratories:

■ Students are required to take two labs from those listed below

■ One of these labs must come from section A. The second lab can come from section B or an additional lab from section A.

#### A. Laboratories

PCB 3044L	Principles of Ecology Laboratory	1 hr
PCB 3063L	Genetics Laboratory	1 hr
PCB 4683L	Evolutionary Biology Lab	1 hr

#### B. Laboratories

■ May include other laboratories as approved by an advisor

BOT 4223C	Plant Anatomy	4 hrs
BOT 4303C	Plant Kingdom	5 hrs
BOT 3018C	Culinary Botany Across the Cultures	3 hrs
BOT 4713C	Plant Taxonomy	5 hrs

BSC 4312C	Advanced Marine Biology	4 hrs
BSC 4445C	Genomics Lab: Methods in Data Collection and Analysis	4 hrs
ENY 4004C	General Entomology	4 hrs
ZOO 3713C	Comparative Vertebrate Anatomy	5 hrs
ZOO 4205C	Biology and Ecology of Metazoan Invertebrates	4 hrs
ZOO 4462C	Herpetology	4 hrs
ZOO 4480L	Mammalogy Lab	1 hr
ZOO 4603C	Embryology/Development	5 hrs
ZOO 4910L	Research Experience in Animal Behavior in a Zoo Environment	1 hr

#### Biology Tracks

##### For each track the following apply:

■ Student must complete at least one course dealing exclusively with zoology and one course dealing exclusively with botany.

■ A minimum C (2.0) required in each course taken to meet the "Required Electives" within each track (does not apply to courses taken to meet "Restricted Electives").

■ A minimum C (2.0) overall required for the track.

■ No substitutions are allowed.

■ At least 10 hours of the Upper Division Restricted electives must be taken within the UCF Biology Department. Courses offered by the Department of Biology have been identified. Additional courses may be used to meet requirements with approval of the undergraduate program coordinator via petition.

■ Transferred courses must be at a 3000 level or higher, and be evaluated by the undergraduate program coordinator, in order to count as an Upper Division Restricted Elective.

■ Courses at the 5000 level are only open to seniors and beginning graduate students. Faculty teaching course must approve override.

#### 5. Restricted Electives (22 hrs)

##### Biology B.S.: General Track 22 hrs

■ A biology major who meets the GEP, core, lab, and upper division restricted electives requirements, as well as all UCF graduation requirements is eligible to receive a general B.S. in Biology.

#### Restricted Electives 22 hrs

##### Courses must be selected from the list below.

<sup>1</sup> ANT 3550C	Primatology	3 hrs
BCH 4053	Biochemistry I	3 hrs
BCH 4054	Biochemistry II	3 hrs
<sup>2</sup> BOT 3018C	Culinary Botany Across the Cultures	3 hrs
<sup>2</sup> BOT 3802	Ethnobotany	3 hrs
<sup>2</sup> BOT 4223C	Plant Anatomy	4 hrs
<sup>2</sup> BOT 4303C	Plant Kingdom	5 hrs
BOT 4434C	General Mycology	4 hrs
<sup>2</sup> BOT 4503	Plant Physiology	3 hrs
<sup>2</sup> BOT 4713C	Plant Taxonomy	5 hrs
<sup>2</sup> BOT 4850	Medicinal Botany	3 hrs
<sup>3</sup> BSC 3052	Conservation Biology	3 hrs
<sup>3</sup> BSC 3312	Principles of Marine Biology	3 hrs
<sup>3</sup> BSC 4312C	Advanced Marine Biology	4 hrs
<sup>3</sup> BSC 4330	Invasion Biology	3 hrs
<sup>3</sup> BSC 4445C	Genomics Lab: Methods in Data Collection and Analysis	4 hrs
<sup>3</sup> BSC 4821	Biogeography	4 hrs
<sup>3</sup> BSC 4861L	Urban Ecological Field Studies	3 hrs
<sup>3</sup> BSC 5258L	Tropical Biology Research and Conservation	3 hrs
<sup>1</sup> ENY 4004C	General Entomology	4 hrs
<sup>1</sup> ENY 5006C	Entomology	4 hrs
MCB 3020C	General Microbiology	5 hrs
<sup>1</sup> PAZ 4234	Zoo and Aquarium Management	3 hrs
<sup>3</sup> PCB 3044L	Principles of Ecology Laboratory	1 hr
<sup>3</sup> PCB 3063L	Genetics Laboratory	1 hr
<sup>3</sup> PCB 3343L	Principles of Field Ecology	2 hrs
<sup>3</sup> PCB 3354	Tropical Ecology and Conservation	3 hrs
<sup>3</sup> PCB 3355L	Tropical Marine Biology	2 hrs
<sup>3</sup> PCB 3442	Aquatic Ecology	3 hrs
<sup>3</sup> PCB 4353	Florida Ecology, Natural History and Conservation	3 hrs

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<sup>3</sup> PCB 5435C Marine Ecology of Florida	4 hrs	PCB 3442 Aquatic Ecology	3 hrs
<sup>3</sup> PCB 5485 Models in Ecology	3 hrs	PCB 4723 Animal Physiology	4 hrs
PCB 3233 Immunology	3 hrs	PAZ 4234 Zoo and Aquarium Management	3 hrs
PCB 3703C Human Physiology	4 hrs	ZOO 3713C Comparative Vertebrate Anatomy	5 hrs
<sup>3</sup> PCB 4402 Disease Ecology & Ecoimmunology	3 hrs	ZOO 4205C Biology and Ecology of Metazoan	4 hrs
<sup>3</sup> PCB 4514 Genetics II	3 hrs	Invertebrates	
PCB 4524 Molecular Biology II	3 hrs	ZOO 4310C Vertebrate Evolution & Ecology	4 hrs
<sup>3</sup> PCB 4678 Evolution and Medicine	3 hrs	ZOO 4480 Mammalogy	4 hrs
<sup>3</sup> PCB 4683L Evolutionary Biology Lab	1 hr	ZOO 4513 Animal Behavior	3 hrs
<sup>3</sup> PCB 4684 Population Genetics	3 hrs	ZOO 5456C Ichthyology	4 hrs
<sup>1</sup> PCB 4723 Animal Physiology	4 hrs		
<sup>1</sup> ZOO 3713C Comparative Vertebrate Anatomy	5 hrs	<b>Additional Biology Electives</b>	<b>7 hrs</b>
ZOO 3733C Human Anatomy	4 hrs	■ Courses must be selected from the General Biology	
<sup>1</sup> ZOO 4205C Biology and Ecology of Metazoan	4 hrs	Track restricted elective list	
Invertebrates		<b>Biology B.S.: Plant Sciences Track</b>	<b>22 hrs</b>
<sup>1</sup> ZOO 4310C Vertebrate Evolution & Ecology	4 hrs	<b>Required Elective</b>	<b>3 hrs</b>
<sup>1</sup> ZOO 4480 Mammalogy	4 hrs	■ "C" (2.0) or better required.	
<sup>3</sup> ZOO 4480L Mammalogy Lab	1 hr	BOT 3802 Ethnobotany	3 hrs
<sup>1</sup> ZOO 4513 Animal Behavior	3 hrs		
<sup>1</sup> ZOO 4603C Embryology/Development	5 hrs	<b>Restricted Electives (choose from the</b>	<b>12 hrs</b>
<sup>1</sup> ZOO 4753C Vertebrate Histology	4 hrs	<b>following):</b>	
<sup>1</sup> ZOO 4462C Herpetology	4 hrs	BOT 3018C Culinary Botany Across the Cultures	3 hrs
<sup>1</sup> ZOO 5456C Ichthyology	4 hrs	BOT 4850 Medicinal Botany	3 hrs
<sup>1</sup> ZOO 5463C Herpetology	4 hrs	BOT 4223C Plant Anatomy	4 hrs
<sup>1</sup> ZOO 5475L Field Ornithology	3 hrs	BOT 4503 Plant Physiology	3 hrs
<sup>3</sup> ZOO 4910L Research Experience in Animal Behavior in	1 hr	BOT 4713C Plant Taxonomy	5 hrs
a Zoo Environment		BSC 4330 Invasion Biology	3 hrs
		PCB 3354 Tropical Ecology and Conservation	3 hrs
		<b>Additional Biology Electives</b>	<b>7 hrs</b>
<sup>1</sup> Fulfills Zoology requirement.		■ Courses must be selected from the General Biology	
<sup>2</sup> Fulfills Botany requirement.		Track restricted elective list	
<sup>3</sup> Taught within the Biology department		<b>Biology B.S.: Pre-Health Professional Biology</b>	<b>22 hrs</b>
<b>Biology B.S.: Ecology, Evolutionary and</b>	<b>22 hrs</b>	<b>Track</b>	
<b>Conservation Biology Track</b>		<b>Required Electives (choose two from the</b>	
<b>Required Electives (choose two from the</b>		<b>following): (9-10hrs)</b>	
<b>following): (6-8hrs)</b>		■ "C" (2.0) or better required in each course.	
■ "C" (2.0) or better required in each course.		PCB 4723 Animal Physiology	4 hrs
BSC 3052 Conservation Biology	3 hrs	ZOO 3713C Comparative Vertebrate Anatomy	5 hrs
BSC 4821 Biogeography	4 hrs	ZOO 4603C Embryology/Development	5 hrs
PCB 4684 Population Genetics	3 hrs		
ZOO 4310C Vertebrate Evolution & Ecology	4 hrs	<b>Restricted Electives (choose from the</b>	
		<b>following): (5-6hrs)</b>	
<b>Restricted Electives (choose from the</b>		BCH 4053 Biochemistry I	3 hrs
<b>following): (7-9hrs)</b>		BCH 4054 Biochemistry II	3 hrs
BOT 4303C Plant Kingdom	5 hrs	BOT 4434C General Mycology	4 hrs
BSC 4330 Invasion Biology	3 hrs	BOT 4850 Medicinal Botany	3 hrs
BSC 4821 Biogeography	4 hrs	MCB 3020C General Microbiology	5 hrs
BSC 3052 Conservation Biology	3 hrs	PCB 3233 Immunology	3 hrs
BSC 4861L Urban Ecological Field Studies	3 hrs	PCB 3703C Human Physiology	4 hrs
PCB 3343L Principles of Field Ecology	2 hrs	PCB 4514 Genetics II	3 hrs
PCB 3044L Principles of Ecology Laboratory	1 hr	PCB 4678 Evolution and Medicine	3 hrs
PCB 3355L Tropical Marine Biology	2 hrs	PCB 4723 Animal Physiology	4 hrs
PCB 3442 Aquatic Ecology	3 hrs	ZOO 3713C Comparative Vertebrate Anatomy	5 hrs
PCB 4353 Florida Ecology, Natural History and	3 hrs	ZOO 3733C Human Anatomy	4 hrs
Conservation		ZOO 4205C Biology and Ecology of Metazoan	4 hrs
Genetics II	3 hrs	Invertebrates	
PCB 4678 Evolution and Medicine	3 hrs	ZOO 4513 Animal Behavior	3 hrs
PCB 4684 Population Genetics	3 hrs	ZOO 4603C Embryology/Development	5 hrs
PCB 5326C Ecosystems of Florida	5 hrs	ZOO 4753C Vertebrate Histology	4 hrs
ZOO 3713C Comparative Vertebrate Anatomy	5 hrs		
ZOO 4310C Vertebrate Evolution & Ecology	4 hrs	<b>Additional Biology Electives (6-8hrs)</b>	
ZOO 4480 Mammalogy	4 hrs	■ Courses must be selected from the General Biology	
ZOO 4513 Animal Behavior	3 hrs	Track restricted elective list	
<b>Additional Biology Electives: (5-9hrs)</b>		<b>Biology B.S.: Zoology and Pre-Veterinarian</b>	<b>22 hrs</b>
■ Courses must be selected from the General Biology		<b>Science Track</b>	
Track restricted elective list		<b>Required Electives (choose one from the</b>	
<b>Biology B.S.: Marine and Aquatic Biology</b>	<b>22 hrs</b>	<b>following): (3-4hrs)</b>	
<b>Track</b>		■ "C" (2.0) or better required in each course.	
<b>Required Elective</b>	<b>3 hrs</b>	PCB 4723 Animal Physiology	4 hrs
■ "C" (2.0) or better required.		ZOO 4513 Animal Behavior	3 hrs
BSC 3312 Principles of Marine Biology	3 hrs		
<b>Restricted Electives (choose from the</b>	<b>12 hrs</b>	<b>Restricted Electives (choose from the</b>	
<b>following):</b>		<b>following): (11-12hrs)</b>	
BSC 4312C Advanced Marine Biology	4 hrs	ANT 3550C Primatology	3 hrs
BSC 4821 Biogeography	4 hrs	ENY 4004C General Entomology	4 hrs
OCE 3008 Oceanography	3 hrs	PAZ 4234 Zoo and Aquarium Management	3 hrs
PCB 3044L Principles of Ecology Laboratory	1 hr	PCB 4723 Animal Physiology	4 hrs
PCB 3355L Tropical Marine Biology	2 hrs	ZOO 3713C Comparative Vertebrate Anatomy	5 hrs

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ZOO 4205C	Biology and Ecology of Metazoan Invertebrates	4 hrs
ZOO 4310C	Vertebrate Evolution & Ecology	4 hrs
ZOO 4603C	Embryology/Development	5 hrs
ZOO 4480	Mammalogy	4 hrs

### Additional Biology Electives (6-8hrs)

- Courses must be selected from the General Biology Track restricted elective list

### 6. Capstone Requirements

- None

### 7. Foreign Language Requirements

#### Admissions

- 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 "C" (2.0) or better is required in all Core Courses with a BSC or PCB prefix.

- Students must achieve a minimum cumulative GPA of 2.0 in all UCF courses taken in the Common Program Prerequisites, the Biology Core and the Upper Division Restricted Electives.

- All attempts of UCF courses that could meet requirements are included in the major GPA calculation. All attempts of UCF courses listed for the major taken beyond the minimum required are included in the GPA calculation (e.g, additional restricted electives taken beyond the required 22 hours).

- Departmental Residency Requirement consists of at least 22 semester hours of regularly scheduled 3000-4000 level courses taken from the UCF Department of Biology.

- Students are required to pass the comprehensive exit exam in Biology. We recommend that this exam be taken as soon as you have completed all of the Biology core courses. A passing grade is determined as a scaled score greater than the bottom 10% of nation-wide test takers.

- 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.

- Biology majors are discouraged from taking courses as a transient student at a Florida College System institution, except in situations where the first semester of a two semester sequence has already been taken at a Florida College System institution.

### 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 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

- Honors versions of courses will substitute for regular versions.

- The following substitutions are acceptable for common program prerequisites if taken as part of the AA course work. Although the CPP may be satisfied, prerequisites for subsequent Biology courses may still have to be met:

- BSC 2010C: BSCX040/X040L

- BSC 2011C: BSCX041/X041L; ZOOX010/X010L; BOTX010/X010L; BOTX013/X013L

- CHM 2046/CHM 2046L: CHMX046C

- Math/Statistics and Physics: Although a number of courses will satisfy the CPP, please refer to the catalog copy for the specific courses that are 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://knightsource.sdes.ucf.edu/placement>

- 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

<b>Freshman Year - Fall</b>	<b>15 hrs</b>	
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

<b>Freshman Year - Spring</b>	<b>14 hrs</b>
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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
Math Course		3 hrs

<b>Freshman Year - Summer</b>	<b>7 hrs</b>
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Math Course	4 hrs
GEP	3 hrs

<b>Sophomore Year - Fall</b>	<b>14 hrs</b>
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CHM 2210	Organic Chemistry I	3 hrs
PHY 2053C	College Physics I	4 hrs
GEP		3 hrs
GEP		4 hrs

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### **Sophomore Year - Spring** 13 hrs

CHM 2211	Organic Chemistry II	3 hrs
GEP		3 hrs
PCB 3044	Principles of Ecology	3 hrs
PHY 2054C	College Physics II	4 hrs

### **Sophomore Year - Summer** 5 hrs

CHM 2211L	Organic Laboratory Techniques I	2 hrs
GEP		3 hrs

### **Junior Year - Fall** 15 hrs

STA 2023	Statistical Methods I	3 hrs
Botany Elective or Upper Division Biology Elective		4 hrs
Upper Division Biology		3 hrs
Free Elective		4 hrs

### **Junior Year - Spring** 13 hrs

PCB 3063	Genetics	3 hrs
Upper Division Biology Elective		3 hrs
Free Elective		3 hrs
Zoology Elective or Botany Elective		4 hrs

### **Junior Year - Summer** 4 hrs

Upper Division Biology Elective		4 hrs
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### **Senior Year - Fall** 11 hrs

PCB 4683	Evolutionary Biology	4 hrs
PCB 3023	Molecular Cell Biology	3 hrs
Upper Division Biology Lab		1 hr
Free Elective		3 hrs

### **Senior Year - Spring** 14 hrs

Upper Division Biology Elective		4 hrs
Upper Division Biology Elective		4 hrs
Upper Division Biology Elective		3 hrs
Upper Division Biology Elective		3 hrs

### **Program Academic Learning Compacts**

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:  
[http://www.oeas.ucf.edu/aic/academic\\_learning\\_compacts.htm](http://www.oeas.ucf.edu/aic/academic_learning_compacts.htm)

### **Equipment Fees**

- Part-Time Student: \$24.85 per term
- Full-Time Student: \$49.70 per term