Science Education - Biology (B.S.)
College of Education and Human Performance
School of Teaching, Learning, and Leadership,
Education Building, Room: 209
http://education.ucf.edu/science/

Dr. Malcolm Butler, ED 322T, malcolm.butler@ucf.edu,
407-823-3272
Dr. Janet Andreassen, ED123Q, janet.andreasen@ucf.edu

The Science Education - Biology B.S. program offers students the option of two tracks: Science Education- Biology Track and Science Education - Biology Lifelong Learning Track (non-certification). The Education Track is appropriate for students interested in opportunities for employment with formal 6-12 schools that require certification. The Lifelong Learning Track is appropriate for students seeking opportunities for employment outside of formal K-12 schools that do not require certification.

Admission Requirements
- Complete the University General Education requirements or its equivalent, i.e. an AA degree from a Florida College System or State University System institution.
- Complete all Education Common Program Prerequisite courses with a minimum letter grade of “C-” (1.75) or better.
- Meet the Gordon Rule Requirement
- Meet Foreign Language Admission Requirement.
- Have a minimum 2.5 overall GPA
- Education Track: Pass all four parts of the General Knowledge Test (no alternatives or waivers are accepted). The Lifelong Learning Track is a non-certification program and does not require the General Knowledge Test.

Degree Requirements
- Students should see an advisor prior to registering for classes
- The courses designated in 1 (UCF General Education Program) and 2 (Education Common Program Prerequisites) should be completed prior to admission to the major and upper division education courses.
- The Education Track is a state-approved, initial teacher preparation program designed in compliance with Florida Statutes and State Board of Education Rule 6A-5.066. Degree requirements are subject to change based on state mandates.

1. UCF General Education Program (GEP) (38 hrs)
   - Note: Students are advised to take the preferred courses.
   - Required: 3 hrs
   - Preferred: 3 hrs

A: Communication Foundations (9 hrs)
- Required ENC 1101 Composition I 3 hrs
- Required ENC 1102 Composition II 3 hrs
- Prefer SPC 1608 Fundamentals of Oral Communication 3 hrs

B: Cultural & Historical Foundations (9 hrs)
- General Education Program elective from section B1 to meet Gordon Rule Requirement 3 hrs

Select 1:
- Prefer MUL 2010 Enjoyment of Music or 3 hrs
- Prefer THE 2000 Theatre Survey or 3 hrs
- Prefer PHI 2010 Introduction to Philosophy or 3 hrs
- General Education Program elective: Prefer a second course from GEP section B1 3 hrs

C: Mathematical Foundations (7 hrs)
- Required MAC 2311C Calculus with Analytic Geometry I 4 hrs

Select 1:
- Prefer STA 1063C Basic Statistics Using Microsoft Excel or 3 hrs
- Prefer STA 2041 Principles of Statistics 3 hrs

D: Social Foundations (6 hrs)
- Prefer POS 2041 American National Government 3 hrs
- Prefer PSY 212 General Psychology 3 hrs

E: Science Foundations (7 hrs)
- 1 Required PSC 1121 Physical Science 3 hrs
- 1 Required BSC 2010C Biology I 4 hrs

1 A grade of “C-” (1.75) is required.

2. Common Program Prerequisites (CPP) (21 hrs)
- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.
- EDF 2005 Introduction to the Teaching Profession 3 hrs
- EDF 2085 Introduction to Diversity for Educators 3 hrs
- EME 2040 Introduction to Technology for Educators 3 hrs
- BSC 2010C Biology I GEP
- MAC 2311C Calculus with Analytic Geometry I GEP
- 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

1 In addition to this course, a minimum of 6 hours with an international or diversity focus is required. The foreign language admission requirement may be used to meet this requirement.

3. Core Requirements: Basic Level (3 hrs)
- Education Track requires 3 semester hours
- Lifelong Learning Track requires 3 semester hours

Transfer Notes: Courses taken at Florida College System institutions may substitute for select courses in this section with the permission of the department.
- Students should consult with advisor regarding course options
  - BSC 2010C Biology I GEP
  - BSC 2011C Biology II GEP
  - CHM 2045C Chemistry Fundamentals I GEP
  - PSC 1121 Physical Science GEP

Education Track (3 hrs)
- EDF 2130 Child and Adolescent Development for Educators 3 hrs

Lifelong Learning Track (6 hrs)
- MHS 2330 Career Planning 3 hrs

Select 1:
- EDF 2130 Child and Adolescent Development for Educators 3 hrs
- EDP 2270 Adult Development & Learning 3 hrs

4. Core Requirements: Advanced Level (55 hrs)
- Education Track requires 58 semester hours
- Lifelong Learning Track requires 55 semester hours

Education Core Requirements (18 hrs)
- Education Track requires 18 semester hours of Education Core Requirements
- Lifelong Learning Track requires 21 semester hours of Education Core Requirements
- EDF 4467 Learning Theory and Assessment 3 hrs
- EDF 4603 Analysis and Application of Ethical, Legal, and Safety Issues in Schools 3 hrs
- 1 EDG 4410 Teaching Strategies and Classroom Management 3 hrs
- EEX 4242 Teaching Exceptional Students in Secondary Settings 3 hrs
- RED 4043 Content Reading in Kindergarten through Grade 12 3 hrs
- 1 TSL 4080 Theory and Practice of Teaching ESOL Students in Schools 3 hrs

Lifelong Learning Track (3 hrs)
- SCE 4361 Programs in Teaching Science 3 hrs

1 Prerequisite to Internship I
Education Track Specialization Requirements 21 hrs
CHM 2205 Introduction to Organic and Biochemistry 5 hrs
CHM 2046 Chemistry Fundamentals II 4 hrs
CHM 2046L Chemistry Fundamentals Laboratory 1 hr
PCB 3044 Principles of Ecology 3 hrs
PCB 3044L Principles of Ecology Laboratory 1 hr
MCB 3020C General Microbiology 5 hrs
SCE 4361 Programs in Teaching Science 3 hrs

Select 1: 4 hrs
PCB 3703C Human Physiology or 4 hrs
ZOO 3733C Human Anatomy or 4 hrs
PCB 3063 Genetics & PCB 3053L Genetics Lab 4 hrs

Internship I Block 7 hrs
- Program Internship I Prerequisites: EDG 4410, TSL 4080 and at least 50% of all required biology courses must be completed prior to Internship I with a minimum grade of a "C-" (1.75) or better. However, a minimum GPA of 2.5 is required in the professional, specialization, and overall for admission to Internship I.
- Passing score on the General Knowledge Test portion of the Florida Teacher Certification Examination (FTCE) is required before application to Internship I.
- Passing score on the Professional Education Test portion of the Florida Teacher Certification Examination (FTCE) is strongly recommended as soon as possible after completing the following courses: EDG 4410 Teaching Strategies and Classroom Management, EDF 4467 Learning Theory and Assessment, RED 4043 Content Reading, Kindergarten through Grade 12, and TSL 4080 Theory and Practice of Teaching ESOL Students in Schools.
- Students must apply and be approved for Internship I. Deadline dates and applications are available through the Office of Clinical Experiences at http://www.education.ucf.edu/clinicalex/
- SCE 4360 Science Instructional Analysis 4 hrs
- SCE 3940 Internship 3 hrs

Internship II Block 12 hrs
- At least 80% of all required biology courses and all methods courses must be completed with a letter grade of "C-" (1.75) or better before registering for Internship II. However, a minimum GPA of 2.5 is required in the professional, specialization, and overall for admission to Internship II.
- Passing scores on all sections [General Knowledge, Professional, and Subject Area (Biology 6-12)] of the Florida Teacher Certification Examination (FTCE) are required prior to entry into Internship II.
- Students must apply and be approved for Internship II. Deadline dates and applications are available through the Office of Clinical Experiences at http://www.education.ucf.edu/clinicalex/
- SCE 4941 Internship 3 hrs
- ESE 4033C Critical Issues and Trends in Secondary Education 3 hrs

Lifelong Learning Track Specialization Requirements 34 hrs
- Select preferred specialization courses with advisor approval. A minimum of nine (9) hours must be taken in the content area. Substitutions are allowed with advisor approval.
- A grade of "C-" (1.75) or better is required.
- Must have a total of 48 or more hours of upper level courses to graduate.

PCB 3044 Principles of Ecology 3 hrs
PCB 3044L Principles of Ecology Laboratory 1 hr
MCB 3020C General Microbiology 5 hrs
PCB 3703C Human Physiology 4 hrs
ZOO 3733C Human Anatomy 4 hrs
PCB 3063 Genetics 3 hrs
PCB 3063L Genetics Laboratory 1 hr
EDG 4941 Directed Field Experience 1 hr
EDG 4948 Service Learning 3 hrs
DIG 3525 Digital Media Production I 3 hrs
DIG 2000 Introduction to Digital Media 3 hrs
DIG 2030 Digital Video Fundamentals 3 hrs
DIG 2109 Digital Imaging Fundamentals 3 hrs
DIG 2500 Fundamentals of Interactive Design 3 hrs
DIG 3811 User-Centered Design 3 hrs
DEP 2004 Developmental Psychology 3 hrs
DEP 3202 Psychology of Exceptional Children 3 hrs
DEP 3464 Psychology of Aging 3 hrs
EXP 3604 Cognitive Psychology 4 hrs
EXP 3250 Principles of Human Factors Psychology 3 hrs
EAB 3703 Principles of Behavior Modification 4 hrs
MAN 4101 Human Relations in Management 3 hrs
MAR 3023 Marketing 3 hrs
HFT 1000 Introduction to the Hospitality and Tourism Industry 3 hrs
HFT 2750 The Event Industry 3 hrs
ECT 4184 Curriculum Development Techniques for Industry Training 3 hrs
HFT 3798 Fairs and Festivals 3 hrs
HFT 4754 Exhibit and Trade Show Operations 3 hrs
SCE 4360 Science Instructional Analysis 4 hrs

5. Restricted Electives
- None

7. Foreign Language Requirements
- None

8. Electives
- None

9. Additional Requirements
- None

10. Required Minors
- None

11. Departmental Exit Requirements
- Achieve a minimum 2.5 GPA in all courses within the major.
- In courses throughout the program, you must upload key assignments into your LiveText Dashboard. These key assignments are then assessed by faculty. The resulting data provides evidence of your demonstrated professional growth, reflection, and proficiency in all Florida Educator Accomplished Practices. All teacher education candidates, lifelong learning majors and early childhood and development and education majors (all ECDE tracks) are required to complete all LiveText requirements in order to be cleared for graduation. http://livetext.education.ucf.edu/

Education Track
- Pass all applicable sections of the Florida Teacher Certification Examination. See http://www.fdoe.org for test dates and test sites. Effective January 1, 2015, only examination results earned by educators within 10 years prior to the date of application for a new Florida Educator’s Certificate with the Florida Department of Education may be acceptable for certification eligibility requirements (SBE Rule 6A-4.002)
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**

- None

**Certificates**

- None

**Related Minors**

- None

**Advising Notes**

- None

**Transfer Notes**

- None

**Acceptable Substitutes for Transfer Courses**

- None

<table>
<thead>
<tr>
<th>Plan of Study</th>
<th>(120 hrs)</th>
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<tbody>
<tr>
<td><strong>Freshman Year - Fall</strong></td>
<td>12 hrs</td>
</tr>
<tr>
<td>GEP B1 Elective</td>
<td>3 hrs</td>
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<tr>
<td>ENC 1101 Composition I</td>
<td>3 hrs</td>
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<tr>
<td>PSY 2012 General Psychology</td>
<td>3 hrs</td>
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<td><strong>Select 1:</strong></td>
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<tr>
<td>STA 2014C Principles of Statistics or STA 1063C Basic Statistics Using Microsoft Excel</td>
<td>3 hrs</td>
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| **Freshman Year - Spring** | 15 hrs |
| GEP B3 Elective (Prefer course from section B1) | 3 hrs |
| ENC 1102 Composition II | 3 hrs |
| PSC 1121 Physical Science | 3 hrs |
| SPCH 1608 Fundamentals of Oral Communication | 3 hrs |
| **Select 1:** | |
| MUL 2010 Enjoyment of Music or THE 2000 Theatre Survey or PHI 2010 Introduction to Philosophy | 3 hrs |

| **Freshman Year - Summer** | 6 hrs |
| POS 2041 American National Government | 3 hrs |

| **Education Track** | 3 hrs |
| EDF 2130 Child and Adolescent Development for Educators | 3 hrs |

| **Lifelong Learning Track** | 3 hrs |
| EDF 2130 Child and Adolescent Development for Educators or EDP 2270 Adult Development & Learning | 3 hrs |

| **Sophomore Year - Fall** | 15 hrs |
| BSC 2010C Biology I | 4 hrs |
| CHM 2045C Chemistry Fundamentals I | 4 hrs |
| MAC 2311 Calculus with Analytic Geometry I | 4 hrs |
| EDF 2005 Introduction to the Teaching Profession | 3 hrs |

| **Sophomore Year - Spring** | 14 hrs |
| BSC 2011C Biology II | 4 hrs |
| EDF 2085 Introduction to Diversity for Educators | 3 hrs |
| EME 2040 Introduction to Technology for Educators | 3 hrs |
| CHM 2046 Chemistry Fundamentals II | 3 hrs |
| CHM 2046L Chemistry Fundamentals Laboratory | 1 hr |

| **Sophomore Year - Summer** | 3 hrs |
| TSL 4080 Theory and Practice of Teaching ESOL Students in Schools | 3 hrs |

| **Junior Year - Fall** | |
| EDF 4467 Learning Theory and Assessment | 3 hrs |
| EDS 410 Teaching Strategies and Classroom Management | 3 hrs |

| **Education Track** | 4 hrs |
| PCB 3044 Principles of Ecology and PCB 3044L Principles of Ecology Laboratory | 1 hr |

| **Select one of the following sequences of courses:** | |
| PCB 3063 Genetics and PCB 3063L Genetics Laboratory | 3 hrs |
| or PCB 3703C Human Physiology | 4 hrs |
| or ZOO 3733C Human Anatomy | 4 hrs |

| **Lifelong Learning Track** | 8 hrs |
| Choose Lifelong Learning Specialization courses | 8 hrs |

| **Junior Year - Spring** | 13 hrs |
| RED 4043 Content Reading in Kindergarten through Grade 12 | 3 hrs |

| **Education Track** | 10 hrs |
| MCB 3020C General Microbiology and CHM 2205 Introduction to Organic and Biochemistry | 5 hrs |

| **Lifelong Learning Track** | 10 hrs |
| MHS 2330 Career Planning and Choose Lifelong Learning Specialization courses | 7 hrs |

| **Junior Year - Summer** | 3 hrs |
| SCE 4361 Programs in Teaching Science | 3 hrs |

| **Senior Year - Fall** | 13 hrs |
| EDF 4603 Analysis and Application of Ethical, Legal, and Safety Issues in Schools | 3 hrs |
| EEX 4242 Teaching Exceptional Students in Secondary Settings | 3 hrs |

| **Education Track** | 7 hrs |
| SCE 4360 Science Instructional Analysis and SCE 3940 Internship | 4 hrs |

| **Lifelong Learning Track** | 7 hrs |
| Choose Lifelong Learning Specialization courses | 7 hrs |

| **Senior Year - Spring** | 12 hrs |
| SCE 4941 Internship and ESE 4033C Critical Issues and Trends in Secondary Education | 9 hrs |
| or | 3 hrs |

| **Lifelong Learning Track** | 12 hrs |
| Choose Lifelong Learning Specialization courses | 12 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](http://www.oetas.ucf.edu/alc/academic_learning_compacts.htm)

**Equipment Fees**

- Part-Time Student: $12 per term
- Full-Time Student: $24 per term