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/

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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.

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: Prefer a second course from GEP section B1 to meet Gordon Rule Requirement

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 3 hrs
- General Education Program elective: Prefer a second course from GEP section B1

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 2014C Principles of Statistics 3 hrs

D: Social Foundations (6 hrs)
- Prefer POS 2041 American National Government 3 hrs
- Prefer PSY 2012 General Psychology 3 hrs

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

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 2065 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

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 6 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 CPP
- CHM 2045C Chemistry Fundamentals I CPP
- 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 or 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
- 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
- TSL 4080 Theory and Practice of Teaching ESOL Students in Schools 3 hrs

Lifelong Learning Track 55 hrs
- SCE 4361 Programs in Teaching Science 3 hrs

Education Track Specialization Requirements 21 hrs
- CHM 2205 Introduction to Organic and Biochemistry 5 hrs
- CHM 2046 Chemistry Fundamentals II CPP
- CHM 2046L Chemistry Fundamentals Laboratory CPP
- 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
- PCB 3703C Human Anatomy or 4 hrs
- PCB 3063 Genetics & PCB 3063L 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/clinicalexp/

Internship II 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/clinicalexp/

Lifelong Learning Track Specialization 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 2106C Digital Imaging Fundamentals 3 hrs
- DIG 2500C Fundamentals of Interactive Design 3 hrs
- DIG 3811 User-Centered Design 3 hrs
- DEP 2004C Developmental Psychology 3 hrs

5. Restricted Electives
- None

6. Capstone Requirements
- None

7. Foreign Language Requirements

Admissions
- State University System foreign language admission requirement: two years in high school or one year of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

Graduation
- 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.
- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.

Education Track
- Pass all applicable sections of the Florida Teacher Certification Examination. See http://www.fldoe.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
UCF Degree Programs

Transfer Notes
- None

Acceptable Substitutes for Transfer Courses
- None

Plan of Study (120 hrs)
- Recommended Four Year Sequence of Courses

Freshman Year - Fall
12 hrs
GEP B1 Elective 3 hrs
ENC 1101 Composition I 3 hrs
PSY 2012 General Psychology 3 hrs

Select 1:
- STA 2014C Principles of Statistics or STA 1063C Basic Statistics Using Microsoft Excel 3 hrs

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
SPG 1698 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 3 hrs

Junior Year - Fall
14 hrs
EDF 4467 Learning Theory and Assessment 3 hrs
EDG 4410 Teaching Strategies and Classroom Management 3 hrs

Education Track
4 hrs
PCB 3044 Principles of Ecology and PCB 3044L Principles of Ecology Laboratory 3 hrs

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

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

Junior Year - Spring
13 hrs
SCE 4361 Programs in Teaching Science 3 hrs

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

Education Track
7 hrs
SCE 4360 Science Instructional Analysis and SCE 3940 Internship 3 hrs

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

Program Academic Learning Compacts
- Program Academic Learning Compacts ( student learning outcomes) for undergraduate programs are located at: http://www.oeas.ucf.edu/academiclearningcompacts.html

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