## UCF Degree Programs

**Science Education - Physics (B.S.)**

**College of Education and Human Performance**

**School of Teaching, Learning, and Leadership,**

**Education Building, Room: 209**


Dr. Janet Andreasen, ED 123Q, Janet.Andreasen@ucf.edu

The Science Education - Physics B.S. program offers students the
option of two tracks: Science Education - Physics Track and Science
Education - Physics Lifelong Learning Track (non-certification).

The Education Track is appropriate for students interested in
opportunities for employment in formal, 6-12 schools that require
certification. The Lifelong Learning Track is appropriate for students
seeking opportunities for employment outside 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 requirement are subject to change based on state mandates.

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

- Students are advised to take the preferred courses.

<table>
<thead>
<tr>
<th>A: Communication Foundations  (9 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required ENC 1101 Composition I     3 hrs</td>
</tr>
<tr>
<td>Required ENC 1102 Composition II    3 hrs</td>
</tr>
<tr>
<td>Prefer SPC 1608 Fundamentals of Oral Communication 3 hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: Cultural &amp; Historical Foundations (9 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Program elective from section B1 to meet Gordon Rule Requirement 3 hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefer MUL 2010 Enjoyment of Music or 3 hrs</td>
</tr>
<tr>
<td>Prefer THE 2000 Theatre Survey or 3 hrs</td>
</tr>
<tr>
<td>Prefer PHI 2010 Introduction to Philosophy 3 hrs</td>
</tr>
<tr>
<td>General Education Program elective: Prefer a second course from GEP section B1</td>
</tr>
</tbody>
</table>

### 2. Education Common Program Prerequisites (CPP)  (29 hrs)

- See “Common Prerequisites” in the Transfer and Transition Services section for more information.

<table>
<thead>
<tr>
<th>A: Science Foundations  (7 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Required PHY 2048C Physics for Engineers &amp; Scientists I 4 hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Prefer ANT 2511 The Human Species or 3 hrs</td>
</tr>
<tr>
<td>1 Prefer BSC 1005 Biological Principles 3 hrs</td>
</tr>
</tbody>
</table>

1 A grade of “C-” (1.75) or better is required.

2 A grade of “C-” (1.75) or better is required.

### 3. Core Requirements: Basic Level  (3 hrs)

- Education Track requires 3 semester hours
- Lifelong Learning Track requires 6 semester hours

<table>
<thead>
<tr>
<th>Education Track  3 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 2048C Physics for Engineers &amp; Scientists I GEP</td>
</tr>
<tr>
<td>MAC 2311C Calculus with Analytic Geometry I GEP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lifelong Learning Track  6 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 2330 Career Planning 3 hrs</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Select 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 2130 Child and Adolescent Development for Educators 3 hrs</td>
</tr>
<tr>
<td>EDP 2270 Adult Development &amp; Learning 3 hrs</td>
</tr>
</tbody>
</table>

### 4. Core Requirements: Advanced Level  (47 hrs)

- Education Track requires 50 semester hours
- Lifelong Learning Track requires 47 semester hours

<table>
<thead>
<tr>
<th>Education Core Requirements  18 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 EDF 4467 Learning Theory and Assessment 3 hrs</td>
</tr>
<tr>
<td>1 EDF 4603 Analysis and Application of Ethical, Legal, and Safety Issues in Schools 3 hrs</td>
</tr>
<tr>
<td>1 EDG 4410 Teaching Strategies and Classroom Management 3 hrs</td>
</tr>
<tr>
<td>1 EEX 4242 Teaching Exceptional Students in Secondary Settings 3 hrs</td>
</tr>
<tr>
<td>1 RED 4043 Content Reading in Kindergarten through Grade 12 3 hrs</td>
</tr>
<tr>
<td>1 TSL 4080 Theory and Practice of Teaching ESOL 3 hrs</td>
</tr>
<tr>
<td>1 SCE 4361 Programs in Teaching Science 3 hrs</td>
</tr>
</tbody>
</table>

*Pre-requisite for Internship I (Education Track)*

### Education Track Specialization Requirements  13 hrs

<table>
<thead>
<tr>
<th>Education Track Specialization Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045C Chemistry Fundamentals I CPP</td>
</tr>
<tr>
<td>CHM 2046 Chemistry Fundamentals II CPP</td>
</tr>
<tr>
<td>CHM 2046L Chemistry Fundamentals Laboratory CPP</td>
</tr>
<tr>
<td>MAC 2312 Calculus with Analytic Geometry II CPP</td>
</tr>
<tr>
<td>MAC 2313 Calculus with Analytic Geometry III CPP</td>
</tr>
<tr>
<td>PHY 2049C Physics for Engineers and Scientists II CPP</td>
</tr>
</tbody>
</table>
Select 1:  
- PHY 3752C Physics of Scientific Instruments or 3 hrs
- PHY 3722C Physics Laboratory-Electronics 3 hrs

**Internship I Block**  
7 hrs
- Program Internship I Prerequisites: EDG 4410, TSL 4080 and at least 50% of all required physics courses must be completed prior to Internship I with a minimum grade of "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/](http://www.education.ucf.edu/clinicalexp/)

**Internship II**  
12 hrs
- At least 80% of all required physics 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 (Physics 6-12) of the Florida Teacher Certification Examination (FTCE)](http://www.education.ucf.edu/clinicalexp/) is 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/](http://www.education.ucf.edu/clinicalexp/)
- Satisfactory completion of Internship II requires the student to demonstrate proficiency in all Florida Educator Accomplished Practices in accordance with State Board of Education Rule 6A-5.006.

**Lifelong Learning Track Specialization**  
26 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 3101</td>
<td>Physics for Engineers and Scientists III</td>
<td>3 hrs</td>
</tr>
<tr>
<td>PHY 3752C</td>
<td>Physics of Scientific Instruments</td>
<td>3 hrs</td>
</tr>
<tr>
<td>PHY 3722C</td>
<td>Physics Laboratory-Electronics</td>
<td>3 hrs</td>
</tr>
<tr>
<td>EDG 4941</td>
<td>Directed Field Experience</td>
<td>1 hr</td>
</tr>
<tr>
<td>EDG 4948</td>
<td>Service Learning</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 3525</td>
<td>Digital Media Production I</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 2000</td>
<td>Introduction to Digital Media</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 2030C</td>
<td>Digital Video Fundamentals</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 2109C</td>
<td>Digital Imaging Fundamentals</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 2500C</td>
<td>Fundamentals of Interactive Design</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DIG 3811</td>
<td>User-Centered Design</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DEP 2004C</td>
<td>Developmental Psychology</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DEP 3202</td>
<td>Psychology of Exceptional Children</td>
<td>3 hrs</td>
</tr>
<tr>
<td>DEP 3464</td>
<td>Psychology of Aging</td>
<td>3 hrs</td>
</tr>
<tr>
<td>EXP 3604C</td>
<td>Cognitive Psychology</td>
<td>4 hrs</td>
</tr>
<tr>
<td>EXP 3250</td>
<td>Principles of Human Factors Psychology</td>
<td>3 hrs</td>
</tr>
<tr>
<td>EAB 3703C</td>
<td>Principles of Behavior Modification</td>
<td>4 hrs</td>
</tr>
<tr>
<td>MAN 3025</td>
<td>Management of Organizations</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MAN 4101</td>
<td>Human Relations in Management</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MAR 3023</td>
<td>Marketing</td>
<td>3 hrs</td>
</tr>
<tr>
<td>ECT 4184</td>
<td>Curriculum Development Techniques for Industry Training</td>
<td>3 hrs</td>
</tr>
<tr>
<td>HFT 1000</td>
<td>Introduction to the Hospitality and Tourism Industry</td>
<td>3 hrs</td>
</tr>
<tr>
<td>HFT 2750</td>
<td>The Event Industry</td>
<td>3 hrs</td>
</tr>
<tr>
<td>HFT 3798</td>
<td>Fairs and Festivals</td>
<td>3 hrs</td>
</tr>
<tr>
<td>HFT 4754</td>
<td>Exhibit and Trade Show Operations</td>
<td>3 hrs</td>
</tr>
</tbody>
</table>

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 Florida Educator Accomplished Practices.

Education Track
- Pass all applicable sections of the Florida Teacher Certification Examination. See [http://www.fldoe.org](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

**Transfer Notes**
- None
Acceptable Substitutes for Transfer Courses

- None

Plan of Study (120 hrs)

**Freshman Year - Fall** 15 hrs
- GEP B1 Elective 3 hrs
- ENC 1101 Composition I 3 hrs
- PSY 2012 General Psychology 3 hrs
- SPC 1608 Fundamentals of Oral Communication 3 hrs
- STA 1063C Basic Statistics Using Microsoft Excel or STA 2014C Principles of Statistics 3 hrs

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

**Freshman Year - Spring** 16 hrs
- GEP B3 Elective (Prefer course from section B1) 3 hrs
- MAC 2311C Calculus with Analytic Geometry I 4 hrs
- ENC 1102 Composition II 3 hrs
- POS 2041 American National Government 3 hrs
- Select 1: 3 hrs
- MAC 2311C Calculus with Analytic Geometry I 4 hrs
- ENC 1102 Composition II 3 hrs
- POS 2041 American National Government 3 hrs

**Freshman Year - Summer** 7 hrs
- MAC 2312 Calculus with Analytic Geometry II 4 hrs
- **1** EDF 2005 Introduction to the Teaching Profession 3 hrs

**Sophomore Year - Fall** 14 hrs
- MAC 2313 Calculus with Analytic Geometry III 4 hrs
- PHY 2048C Physics for Engineers & Scientists I 4 hrs
- EDF 2065 Introduction to Diversity for Educators 3 hrs
- **Select 1:** 3 hrs
- ANT 2511 The Human Species or 3 hrs
- BSC 1005 Biological Principles 3 hrs

**Sophomore Year - Spring** 14 hrs
- CHM 2045C Chemistry Fundamentals I 4 hrs
- EME 2040 Introduction to Technology for Educators 3 hrs
- PHY 2049C Physics for Engineers and Scientists II 4 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 3 hrs
- EDP 2270 Adult Development & Learning 3 hrs

**Sophomore Year - Summer** 4 hrs
- CHM 2046 Chemistry Fundamentals II 3 hrs
- CHM 2046L Chemistry Fundamentals Laboratory 1 hr

**Junior Year - Fall** 12 hrs
- EEX 4242 Teaching Exceptional Students in Secondary Settings 3 hrs
- EDG 4410 Teaching Strategies and Classroom Management 3 hrs
- TSL 4080 Theory and Practice of Teaching ESOL Students in Schools 3 hrs

**Education Track** 3 hrs
- PHY 3101 Physics for Engineers and Scientists III 3 hrs

**Lifelong Learning Track** 3 hrs
- Choose Lifelong Learning Specialization course 3 hrs

**Junior Year - Spring** 13 hrs
- EDF 4467 Learning Theory and Assessment 3 hrs
- RED 4043 Content Reading in Kindergarten through Grade 12 3 hrs
- SCE 4361 Programs in Teaching Science 3 hrs

**Education Track** 4 hrs
- PHY or PHZ 3000 or 4000 level elective 4 hrs

**Lifelong Learning Track** 4 hrs
- MHS 2330 Career Planning and 3 hrs
- Choose Lifelong Learning Specialization course 1 hr

**Senior Year - Fall** 13 hrs
- EDF 4603 Analysis and Application of Ethical, Legal, and Safety Issues in Schools 3 hrs

**Education Track** 10 hrs
- SCE 4360 Science Instructional Analysis 4 hrs
- SCE 3940 Internship 3 hrs

**Select 1:** 3 hrs
- PHY 3752C Physics of Scientific Instruments or 3 hrs
- PHY 3722C Physics Laboratory-Electronics 3 hrs

**Lifelong Learning Track** 10 hrs
- Choose Lifelong Learning Specialization courses 10 hrs

**Senior Year - Spring** 12 hrs

**Education Track** 12 hrs
- SCE 4941 Internship 12 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.oeas.ucf.edu/academiclearningcompacts.html](http://www.oeas.ucf.edu/academiclearningcompacts.html)

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