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

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

The Science Education Chemistry B.S program offers students the option of two tracks: Science Education - Chemistry Track and Science Education - Chemistry 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 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) (37 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 from section B1 to meet Gordon Rule Requirement 3 hrs

Select 1:
- Prefer MUL 2100 Enjoyment of Music or 3 hrs
- Prefer THE 2000 Theatre Survey or 3 hrs
- Prefer PHI 2100 Introduction to Philosophy or 3 hrs
- General Education Program elective: Prefer a second course from GEP section B1 3 hrs

C: Mathematical Foundations (6 hrs)
- Required MAC 1114C College Trigonometry 3 hrs

Select 1:
- Prefer STA 1063C Basic Statistics Using Microsoft Excel or 3 hrs
- Prefer STA 2046C 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)
- 1 Required BSC 2010C Biology I 4 hrs
- 1 Required PSC 1121 Physical Science 3 hrs

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

2. Common Program Prerequisites (CPP) (21 hrs)
- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.

- 1 EDF 2085 Introduction to Diversity for Educators 3 hrs
- 1 EME 2040 Introduction to Technology for Educators 3 hrs
- 1 CHM 2045C Chemistry Fundamentals I 4 hrs
- 1 CHM 2046L Chemistry Fundamentals Laboratory 1 hr
- 1 PHY 2053C College Physics I 4 hrs

1 In addition, 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 (4 hrs)
- Education Track requires 4 semester hours
- Lifelong Learning Track requires 7 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.
- CHM 2045C Chemistry Fundamentals I CPP
- PSC 1121 Physical Science GEP
- PSC 1121L Physical Science Lab 1 hr
- BSC 2010C Biology I GEP
- MAC 1114C College Trigonometry GEP

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

Lifelong Learning Track
- 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
- Education Track requires 18 semester hours of Education Core Requirements
- Lifelong Learning Track requires 21 semester hours of Education Core Requirements

- 1 EDF 4467 Learning Theory and Assessment 3 hrs
- 1 EDF 4803 Analysis and Application of Ethical, Legal, and Safety Issues in Schools 3 hrs
- 1 EDF 4410 Teaching Strategies and Classroom Management 3 hrs
- 1 EEP 4242 Teaching Exceptional Students in Secondary Settings 3 hrs
- 1 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
- SCE 4361 Programs in Teaching Science 3 hrs

1 Pre-requisite for Internship I (Education Track)

Education Track Specialization Requirements 21 hrs
- CHM 2046L Chemistry Fundamentals Laboratory CPP
- CHM 2046L Chemistry Fundamentals Laboratory CPP
- PHY 2053C College Physics I CPP
- CHM 3120 Analytical Chemistry 3 hrs
- CHM 3120L Analytical Chemistry 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
- CHS 3501 Introduction to Forensic Science 3 hrs
- BCH 4053 Biochemistry I 3 hrs
- SCE 4361 Programs in Teaching Science 3 hrs
Internship I Block  
- Program Internship I Prerequisites: EDG 4410, TSL 4080 and at least 50% of all required chemistry 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/).
- Satisfactory completion of Internship I 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/).
- At least 80% of all required chemistry 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 (Chemistry 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/](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-5.066.
- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the Florida Educator Accomplished Practices.
- 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).

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
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

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

Lifelong Learning Track Specialization 34 hrs

Requirements
- 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.

CHM 3120  Analytical Chemistry  3 hrs
CHM 3120L  Analytical Chemistry 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
CHS 3501  Introduction to Forensic Science  3 hrs
BOCH 4053  Biochemistry I  3 hrs
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 2030C  Digital Video Fundamentals  3 hrs
DIG 2109C  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
DEP 3202  Psychology of Exceptional Children  3 hrs
DEP 3464  Psychology of Aging  3 hrs
EXP 3604C  Cognitive Psychology  4 hrs
EXP 3250  Principles of Human Factors Psychology  3 hrs
EAB 3703C  Principles of Behavior Modification  4 hrs

MAN 3025  Management of Organizations  3 hrs
MAN 4101  Human Relations in Management  3 hrs
MAR 3023  Marketing  3 hrs
ECT 4184  Curriculum Development Techniques for Industry Training  3 hrs
HFT 1000  Introduction to the Hospitality and Tourism Industry  3 hrs
HFT 2750  The Event Industry  3 hrs
HFT 3798  Fairs and Festivals  3 hrs
HFT 4754  Exhibit and Trade Show Operations  3 hrs
## Plan of Study (120 hrs)

#### Recommended Four Year Sequence of Courses

### Freshman Year - Fall
- **GEP B1 Elective**: 3 hrs
- **ENC 1101**: Composition I 3 hrs
- **PSC 1121**: Physical Science 3 hrs
- **PSC 1121L**: Physical Science Lab 1 hr
- **PSY 2012**: General Psychology 3 hrs

### Freshman Year - Spring
- **ENC 1102**: Composition II 3 hrs
- **MAC 1114C**: College Trigonometry 3 hrs
- **PHI 2010**: Introduction to Philosophy 3 hrs
- **GEP B3 Elective (Preferred course from section B1)**

### Freshman Year - Summer
- **Select 1:**
  - **MUL 2010**: Enjoyment of Music or 3 hrs
  - **THE 2000**: Theatre Survey or 3 hrs
  - **PHI 2010**: Introduction to Philosophy 3 hrs

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

### Sophomore Year - Fall
- **EDF 2095**: Introduction to the Teaching Profession 3 hrs
- **BSC 2010C**: Biology I 4 hrs
- **CHM 2045C**: Chemistry Fundamentals I 4 hrs
- **SPC 1608**: Fundamentals of Oral Communication 3 hrs

### Sophomore Year - Spring
- **CHM 2046**: Chemistry Fundamentals II 3 hrs
- **CHM 2046L**: Chemistry Fundamentals Laboratory 1 hr
- **EDF 2085**: Introduction to Diversity for Educators 3 hrs
- **EME 2040**: Introduction to Technology for Educators 3 hrs

### Education Track
- **1 EDF 2130**: Child and Adolescent Development for Educators 3 hrs

### Lifelong Learning Track
- **3 hrs**

### Sophomore Year - Summer
- **PHY 2053C**: College Physics I 4 hrs

### Junior Year - Fall
- **EDF 4467**: Learning Theory and Assessment 3 hrs
- **EDG 4410**: Teaching Strategies and Classroom Management 3 hrs
- **EEX 4242**: Teaching Exceptional Students in Secondary Settings 3 hrs

### Education Track
- **CHM 2210**: Organic Chemistry I and 3 hrs
- **CHM 3120**: Analytical Chemistry and 3 hrs
- **CHM 3120L**: Analytical Chemistry Laboratory 1 hr

### Lifelong Learning Track
- **Choose Lifelong Learning Specialization courses**: 7 hrs

### Junior Year - Spring
- **RED 4043**: Content Reading in Kindergarten through Grade 12 3 hrs
- **SCE 4361**: Programs in Teaching Science 3 hrs

### Education Track
- **CHM 2211**: Organic Chemistry II and 3 hrs
- **CHM 2211L**: Organic Laboratory Techniques I and 2 hrs
- **CHS 3501**: Introduction to Forensic Science 3 hrs

### Lifelong Learning Track
- **Choose Lifelong Learning Specialization courses**: 12 hrs

### Program Academic Learning Compacts
- **Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:**

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