UCF Degree Programs

Secondary Education - Mathematics Education

College of Education and Human Performance
School of Teaching, Learning, and Leadership,
Education Building, Room: 209

http://education.ucf.edu/mathed

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The Secondary Education B.S. -Mathematics Education program offers students the option of two tracks: Mathematics Education - Education Track and Mathematics Education - 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 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 the EDF 2005 Introduction to Teaching Profession, EDF 2085 Introduction to Diversity for Educators and EME 2040 Introduction to Technology for Educators courses with a minimum letter grade of "C-" (1.75) or better.
- Meet the Gordon Rule Requirement.
- Meet the 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. (General Education) 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)
- 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 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
- Required STA 2023 Statistical Methods I 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 (6 hrs)
- Prefer PSC 1121 Physical Science 3 hrs

Select 1:
- Prefer ANT 2511 The Human Species or 3 hrs
- Prefer BSC 1005 Biological Principles 3 hrs

2. Common Program Prerequisites (CPP) (11 hrs)
- See "Common Prerequisites" in the Transfer and Transitions Services section for more information.

EDF 2005 Introduction to the Teaching Profession 3 hrs
MAC 2311C Calculus with Analytic Geometry I GEP 4 hrs
MAC 2312 Calculus with Analytic Geometry II 4 hrs
MAC 2313 Calculus with Analytic Geometry III 4 hrs

3. Core Requirements: Basic Level (12 hrs)
- Education Track requires 12 semester hours
- Lifelong Learning Track requires 15 semester hours
- Both the Education Track and Lifelong Learning Track require successful completion of EDF 2085 and EME 2040
- Students should consult advisor regarding course options.

   1 EDF 2085 Introduction to Diversity for Educators 3 hrs
   1 EME 2040 Introduction to Technology for Educators 3 hrs

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.

Education Track (6 hrs)

1 EDF 2130 Child and Adolescent Development for Educators 3 hrs
MAC 2311C Calculus with Analytic Geometry I GEP 3 hrs
STA 2023 Statistical Methods I GEP 3 hrs
MAC 2312 Calculus with Analytic Geometry II GEP 3 hrs
MAC 2313 Calculus with Analytic Geometry III GEP 3 hrs
MAP 2302 Ordinary Differential Equations I 3 hrs

1 Courses taken at Florida College System institutions may substitute for select courses in Other Program Requirements with the permission of the department.

Lifelong Learning Track (9 hrs)

MAC 2311C Calculus with Analytic Geometry I GEP 3 hrs
STA 2023 Statistical Methods I GEP 3 hrs
MAC 2312 Calculus with Analytic Geometry II GEP 3 hrs
MAC 2313 Calculus with Analytic Geometry III GEP 3 hrs
MAP 2302 Ordinary Differential Equations I 3 hrs
MHS 2330 Career Planning 3 hrs

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

4. Core Requirements: Advanced Level (57 hrs)
- Education Track requires 60 semester hours
- Lifelong Learning Track requires 57 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

1 EDG 4410 Teaching Strategies and Classroom Management 3 hrs
1 EDF 4467 Learning Theory and Assessment 3 hrs
1 EDF 4603 Analysis and Application of Ethical, Legal, and Safety Issues in Schools 3 hrs
1 TSL 4080 Theory and Practice of Teaching ESOL 3 hrs
1 Students in Schools 3 hrs
1 EEX 4242 Teaching Exceptional Students in Secondary Settings 3 hrs
1 RED 4043 Content Reading in Kindergarten through Grade 12 3 hrs

Lifelong Learning Track: (3 hrs)

MAE 4634 Programs in Teaching of Mathematics 3 hrs

1 Prerequisite to Internship
UCF Degree Programs

Education Track Specialization Requirements 23 hrs
- A grade of "C-" (1.75) or better is required.
  - MAS 3105 Matrix and Linear Algebra 4 hrs
  - MAS 3203 Introduction to Number Theory 3 hrs
  - MHE 3302 Logic and Proof in Mathematics 3 hrs
  - MTG 4212 Modern Geometries 4 hrs
  - STA 4163 Statistical Methods II 3 hrs
  - 1 MAE 4634 Programs in Teaching of Mathematics 3 hrs
  - 1 MAE 3368 Middle and High School Mathematics for Teaching 3 hrs

1 Prerequisite to Internship I

Internship I Block 7 hrs
- Prior to Internship I, the student must have completed all Common Program Prerequisites, all Core Requirements: Basic Level, EDG 4410 and at least 50% of all required mathematics courses including MAE 3366 Middle and High School Mathematics for Teaching, MAE 4634 Programs in Teaching Mathematics and MAP 2302 Differential Equations 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/clinicalexps/.

- MAE 4360 Mathematics Instructional Analysis 4 hrs
- MAE 3940 Internship 3 hrs

Internship II Block 12 hrs
- At least 80% of all required mathematics 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 (Mathematics 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.clinicalexperiences.education.ucf.edu.
- 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.
  - MAE 4841 Internship 9 hrs
  - ESE 4033C Critical Issues and Trends in Secondary Education 3 hrs

Lifelong Learning Track Specialization 36 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.
- MAE 3366 Middle and High School Mathematics for Teaching 3 hrs
- MAE 4360 Mathematics Instructional Analysis 4 hrs
- MAS 3105 Matrix and Linear Algebra 4 hrs
- MAS 3203 Introduction to Number Theory 3 hrs
- MHE 3302 Logic and Proof in Mathematics 3 hrs
- MTG 4212 Modern Geometries 4 hrs
- STA 4163 Statistical Methods II 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 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 3 hrs
- MAN 3025 Management of Organizations 3 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

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.
  - 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.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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC 1101: Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAC 2311C: Calculus with Analytic Geometry I</td>
<td>4</td>
</tr>
<tr>
<td>PSC 1121: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>GEP B1 Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Freshman Year - Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC 1102: Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MAC 2312: Calculus with Analytic Geometry II</td>
<td>4</td>
</tr>
<tr>
<td>SPC 1608: Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>GEP B3 Elective (Prefer course from section B1)</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Select 1:

- AN 2511: The Human Species or
- BSC 1005: Biological Principles
  - 3 hrs

#### Freshman Year - Summer

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 2313: Calculus with Analytic Geometry III</td>
<td>4</td>
</tr>
<tr>
<td>PSY 2012: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Select 1:

- MUL 2010: Enjoyment of Music or
- THE 2000: Theatre Survey or
- PHI 2010: Introduction to Philosophy
  - 3 hrs

#### Sophomore Year - Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 2005: Introduction to the Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>MAP 2302: Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>POS 2041: American National Government</td>
<td>3</td>
</tr>
<tr>
<td>STA 2023: Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Education Track

- MHF 3302: Logic and Proof in Mathematics
  - 3 hrs

#### Lifelong Learning Track

- Choose Lifelong Learning Specialization course
  - 3 hrs

#### Sophomore Year - Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 2040: Introduction to Technology for Educators</td>
<td>3</td>
</tr>
<tr>
<td>EDF 2085: Introduction to Diversity for Educators</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Education Track

- 10 hrs

#### Mas 3105: Matrix and Linear Algebra and
- Mas 3203: Introduction to Number Theory and
- EDF 2130: Child and Adolescent Development for Educators
  - 3 hrs

#### Lifelong Learning Track

- MHS 2330: Career Planning and
  - 3 hrs

#### Select 1:

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

### Junior Year - Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4467: Learning Theory and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4410: Teaching Strategies and Classroom Management</td>
<td>3</td>
</tr>
<tr>
<td>EEX 4242: Teaching Exceptional Students in Secondary Settings</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Education Track

- STA 4163: Statistical Methods II
  - 3 hrs

#### Lifelong Learning Track

- Choose Lifelong Learning Specialization course
  - 3 hrs

### Junior Year - Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED 4043: Content Reading in Kindergarten through Grade 12</td>
<td>3</td>
</tr>
<tr>
<td>MAE 4634: Programs in Teaching of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>TSL 4080: Theory and Practice of Teaching ESOL Students in Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Education Track

- MAE 3366: Middle and High School Mathematics for Teaching
  - 3 hrs

#### Lifelong Learning Track

- Choose Lifelong Learning Specialization course
  - 3 hrs

### Senior Year - Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4603: Analysis and Application of Ethical, Legal, and Safety Issues in Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Education Track

- MTG 4212: Modern Geometries
  - 4 hrs

#### Lifelong Learning Track

- Choose Lifelong Learning Specialization course
  - 11 hrs

### Senior Year - Spring

#### Education Track

- MAE 4360: Mathematics Instructional Analysis
  - 4 hrs

#### Lifelong Learning Track

- Choose Lifelong Learning Specialization course
  - 11 hrs

### Program Academic Learning Compacts

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at:
  - http://www.oas.ucf.edu/alc/academic_learning_compacts.htm

### Equipment Fees

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