# Mathematics Education: Mathematics Specialization (9-12)

**Intro to Education (C or better required)**
- (2) ED 100 (Fall Freshmen) OR
- (2) ED 150/151-SAY Village (Fall & Spring Freshmen)

**Introduction to Computing**
- (1) E 115 or COS 100

**Programming Elective**
- (3) CSC 112, CSC 116, or MA 116  
  *C or better required – recommend MA 116*

**English and Communication**
- (4) ENG 101 Academic Writing & Research  
  *C- or better required*
- (3) COM 112 Interpersonal Communication

**Mathematical Sciences (C or better required)**
- (4) MA 141 Calculus I  
  *Prerequisite: MA 141 with grade of C- or better*
- (4) MA 241 Calculus II  
  *Prerequisite: MA 241 with grade of C- or better*
- (4) MA 242 Calculus III  
  *Prerequisite: MA 241 with grade of C- or better*
- (3) MA 351 Intro Discrete Math (FALL ONLY)  
  *Recommended take junior year*  
  *Prerequisite: MA 224, 225, 231 or 241*
- (3) MA 225 Foundations of Advanced Math  
  *Prerequisite: MA 241*
- (3) MA 405 Linear Algebra  
  *Prerequisite: MA 241*
- (3) MA 403 Introduction to Modern Algebra (FALL ONLY)  
  *Prerequisite: MA 225*
- (3) MA 408 Foundations of Euclidean Geometry  
  *Prerequisite: MA 225*
- (3) Mathematics Elective  
  *Choose one from GEP list, see degree audit*
- (3) Mathematics Elective  
  *Choose one from GEP list, see degree audit*
- (3) ST 311 Introduction to Statistics  
  *Choose one from GEP list, see degree audit*
- (3) ST 312 Introduction to Statistics II  
  *Choose one from GEP list, see degree audit*
- (1) ST 307 Introduction to Stat Programming - SAS

**Natural Sciences**
- (4) CH 101/102 and (4) CH 201/202  
  *OR*
- (4) BIO 181 and (4) BIO 183  
  *OR*
- (4) PY 205/206 and (4) PY 208/209  
  *OR*
- (4) PY 211 and (4) PY 212  
  *3 GEP Natural Science courses*

**GEP Courses**
- (3) Choose a course from the GEP Humanities list  
  *3 GEP courses - choose one GEP Humanities, Social Sciences, or Visual Performing Arts course (Strongly Recommend ECI 305)*  
  *2-3 Interdisc Perspectives*
- (3) Interdisc Perspectives (ECI 305 Equity and Education*USD)*

**USD and GK may “double-count” for both co-req and another GEP Requirement**
- (3) US Diversity Co-Requisite  
  *Global Knowledge Co-Requisite*
- (3) Foreign Language Proficiency

### SOPHOMORE YEAR

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<th>Fall Semester</th>
<th>Spring Semester</th>
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<tr>
<td>(2) EMS 204 Intro to Mathematics Education B- or better required</td>
<td>(2) ED 204 Intro to 21st Century Teaching</td>
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### JUNIOR YEAR

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<th>Fall Semester</th>
<th>Spring Semester</th>
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<tr>
<td>(3) ELP 344 School and Society</td>
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<td>(3) EDP 304 Education Psychology</td>
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| (3) ECI 416 Teaching Exceptional Students | (5) EMS 480 Teaching Mathematics with Technology (SPRING ONLY)  
  *Prerequisite: EMS 204 with a B- or better; MA 131 or 141*

### SENIOR YEAR

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<th>Fall Semester</th>
<th>Spring Semester</th>
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| (3) EMS 472 Teaching Math Topics in High School  
  *Co-requisite: EMS 470*  
  *Prerequisite: EMS 480 passed with a C or better* | (3) EMS 471 Senior Teaching (Spring Only)  
  *Prerequisite: ATC*
| (3) EMS 490 School Math from an Adv. Perspective  
  *Co-requisite: EMS 472* | (2) EMS 495 Senior Seminar |

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| (3) EMS 470 Methods & Materials for Teaching Math  
  *Co-requisite: EMS 472* | (3) EMS 471 Senior Teaching (Spring Only)  
  *Prerequisite: ATC*
| (2) ED 311 Classroom Assessment Lab | (1) ED 312 Classroom Assessment Lab |

**Take EMS 480 before the semester in which you take EMS 470/472/490. (Professional Semester 1)**

At most one grade below a C is permitted in the courses satisfying the science requirement.

At most one grade below a C is permitted in the mathematics, statistics, and computer science courses.

Completed _______ out of 4.5

**PROFESSIONAL GROWTH UNITS (PGU’s):** must earn 4.5 PGU’s by graduation. Register for sessions and track PGU’s in SAGE → "Professional Development” tab

**ATC REQUIREMENTS (Admission to Teacher Candidacy):**  
- ENG 101  
- 2 Math courses  
- EMS 204/ED 204  
- GPA at least 2.75  
- Praxis I

**Must have met ATC in order to register for ED 311/312.** View your progress in SAGE → "Gateways” tab