Mathematics Education: Math Ed and Math Dual Degree (9-12)

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

**Introduction to Computing**
- (1) E 115 or COS 100
- (3) CSC 112, CSC 114, 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
- (4) MA 241 Calculus II *Prerequisite: MA 141 with grade of C- or better*
- (4) MA 242 Calculus III *Prerequisite: MA 241 with grade of C- or better*
- (3) MA 341 Applied Differential or MA 351 Intro Discrete Math *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 421 Intro Probability
- (3) MA 407 Modern Algebra
- (3) MA 408 Foundations of Euclidean Geometry *Take Fall Senior Year Prerequisite: MA 225*
- (3) MA 425 Math Analysis I
- (3) ST 370 Probability and Statistics for Engineers

**Natural Sciences (C- or better required)**
- (4) CH 101/102
- (4) PY 201 OR PY 205/206
- (4) BIO 181, BIO 183, CH 201/202, PY 202, or PY 208/209

**GEP Courses**
- (3) ______ Choose a course from the GEP Humanities list
- (3) ______ Choose a course from the GEP Humanities list
- (1) ______ Any 100 level Health & Exercise Studies
- (1) ______ Any HE Course
- (3) ______ Additional Breadth – Choose one GEP Humanities, Social Sciences, or Visual Performing Arts course *(Strongly Recommend ECI 305)*
- (2-3) ______ Interdisc Perspectives

USD and GK may “double-count” for both co-req and another GEP Requirement

- (3) ______ US Diversity Co-Requisite ______
- (3) ______ Global Knowledge Co-Requisite ______
- (3) ______ Foreign Language Proficiency

**Math Electives**
- (3) ______
- (3) ______
- (3) ______

**C or better required in all courses below unless otherwise stated**

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ (3) EDP 304 Education Psychology</td>
<td>___ (3) EDP 304 Education Psychology</td>
</tr>
<tr>
<td>___ (2) EMS 204 Intro to Mathematics Education B- or better required</td>
<td>___ (2) EMS 204 Intro to 21st Century Teaching</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ (3) ELP 344 School and Society</td>
<td>___ (3) EMS 480 Teaching Mathematics with Technology [<em>SPRING ONLY</em>]</td>
</tr>
<tr>
<td>___ (2) ED 311 Classroom Assessment <em>Prerequisite: ATC</em></td>
<td>Prerequisite: EMS 204 with a B- or better; MA 131 or 141</td>
</tr>
<tr>
<td>___ (1) ED 312 Classroom Assessment Lab</td>
<td>___ (3) EMS 472 Teaching Math Topics in High School</td>
</tr>
<tr>
<td>___ (3) ECI 305 Education and Equity</td>
<td></td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ (3) EMS 490 School Math from an Adv. Perspective</td>
<td>Prior admission to Professional Semester required</td>
</tr>
<tr>
<td>___ (3) EMS 470 Methods &amp; Materials for Teaching Math <em>Co-requisite: EMS 472</em></td>
<td>(12) EMS 471 Student Teaching (Spring Only)</td>
</tr>
<tr>
<td>___ (3) ECI 416 Teaching Exceptional Students</td>
<td></td>
</tr>
</tbody>
</table>

- You need to take EMS 472 & 480 before the semester in which you take EMS 470 & 490. (Professional Semester 1)
- A grade below C is not permitted in MA 141, 241, 242, 225, 341 or 351.
- 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.

---

**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
PGU events and details can be found at: [https://ced.ncsu.edu/academics/professional-education/professional-development/](https://ced.ncsu.edu/academics/professional-education/professional-development/)

**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

---

**Completed _____ out of 4.5**