

**Illinois State University**  
**Department of Mathematics**  
**Secondary Mathematics Education Sequence**

This sequence of the major is part of the entitlement program leading to high school teaching licensure in Illinois. It also provides the background to allow students to pursue careers in business, industry, and government.

**Mathematics Requirements (minimum 54 hours, grades of C or better in each course)**

MAT 145 Calculus I (4 hours)  
MAT 146 Calculus II (4 hours)  
MAT 147 Calculus III (4 hours)  
MAT 175 Elementary Linear Algebra (4 hours)  
MAT 211 Euclidean and Non-Euclidean Geometry (4 hours)  
MAT 223 Introduction to Secondary Mathematics Education (3 hours)  
MAT 236 Elementary Abstract Algebra (4 hours)  
MAT 260 Discrete Mathematics (4 hours)  
MAT 320 History of Mathematics (3 hours)  
MAT 323 Teaching Mathematics in the Secondary School (3 hours) Fall Only  
MAT 324 Seminars for Student Teachers of Mathematics (3 hours) Spring Only  
MAT 350.01 Applied Probability Models (4 hours)  
MAT 351.01 Statistics and Data Analysis (4 hours)

Capstone Experience (3 hours)—MAT 268 Introduction to Undergraduate Research in Mathematics or MAT 328 Mathematics for Secondary Teachers—A Capstone Experience

Elective (3-4 hours) — Chosen from 200- or 300-level mathematics courses that are offered for major/minor credit other than courses designed for the actuarial sequence.

Technology Requirement (3-4 hours)— Chosen from IT 168 Structured Problem-Solving Using the Computer (4) or MAT 326 Mathematical Problem Solving Using Technology (3) (Does not count toward the 54 Mathematics hours)

Senior Portfolio (Completed in MAT 323 and MAT 324)

**Professional Education Requirements (27 hours, grades of C or better in each course)**

PSY 215 Educational Psychology (3 hours)  
SED 101 The Exceptional Learner (3 hours)  
TCH 212 The Teaching Profession in Secondary Schools (2 hours)  
TCH 216 Principles & Practices for Teaching & Learning in Secondary Schools (3 hours)  
TCH 219 Integrating Multiple Literacies & Technology Across Secondary Curriculum (3 hours)  
EAF 228 Social Foundations or 231 Introduction to Philosophy of Education or 235 Historical Foundations (3 hours)  
STT 399.27 Student Teaching (10 hours) Spring Only

**Required Tests**

1. State of Illinois Test of Academic Proficiency (TAP); former Basic Skills Test ([www.icts.nesinc.com](http://www.icts.nesinc.com)); may substitute ACT Plus Writing with a composite score of at least 22 and a minimum of 19 in Combined English/Writing ([www.act.org](http://www.act.org))
2. State of Illinois Mathematics Content Test ([www.icts.nesinc.com](http://www.icts.nesinc.com))
3. State of Illinois Assessment of Professional Teaching (APT) Test ([www.icts.nesinc.com](http://www.icts.nesinc.com))
4. Teacher Performance Assessment (edTPA) (completed during student teaching) ([edtpa.aacte.org](http://edtpa.aacte.org))

## Secondary Mathematics Education Sequence--Sample Four-Year Plan

| Year 1  |   |
|---|---|
| <b>Fall</b><br>MAT 145 Calculus I<br>ENG 101 or COM 110<br>GE Natural Science<br>GE Individuals & Civic Life<br>LAN 112***  | <b>Spring</b><br>MAT 146 Calculus II<br>ENG 101 or COM 110<br>PSY 110 Fund of Psychology (GE Soc Sci)<br>GE Natural Science<br>GE United States Traditions  |
| Year 2  |   |
| <b>Fall</b><br>MAT 147 Calculus III<br>MAT 175 Elem Linear Algebra<br>PSY 215 Educational Psychology<br>GE Language in the Humanities<br>GE Fine Arts                   | <b>Spring</b><br>MAT 223 Intro Secondary Math Educ<br>MAT 260 Discrete Mathematics<br>MAT 320 History of Mathematics<br>TCH 212 The Teaching Profession in Sec<br>SED 101 The Exceptional Learner |
| Year 3  |   |
| <b>Fall</b><br>MAT 211 Euclid & Non-Euclid Geometry<br>MAT 350.01 Appl Probability Models<br>TCH 216 Principles & Practices for T & L<br>GE Humanities                  | <b>Spring</b><br>MAT 236 Abstract Algebra<br>MAT 351.01 Statistics & Data Analysis<br>MAT 268 * or IT 168**<br>TCH 219 Integrating Mult Literacies & Tech   |
| Year 4  |   |
| <b>Fall</b><br>MAT 323 Teach Math Secondary School<br>MAT 328* or MAT 326** or IT 168**<br>MAT Elective<br>EAF 228 or 231 or 235<br>University Wide Elective, if needed | <b>Spring</b><br>MAT 324 Seminars for Student Teachers<br>STT 399.27 Student Teaching   |

\*One of MAT 268 or MAT 328 must be completed.

\*\*One of IT 168 or MAT 326 must be completed.

\*\*\*Students must satisfy a foreign language requirement that may be met by: 3 years of a single foreign language in high school or completion of the second semester or higher of college-level foreign language (LAN 112 or articulated course) with a grade of "C" or better or equivalent proficiency as determined by examination. American Sign Language may be used to fulfill this requirement by transfer credit or by proficiency.

### **Overall Graduation Requirements**

Complete a minimum of 120 hours; complete General Education requirements; complete at least 42 senior level hours, complete residency requirements; complete a global studies course; complete the foreign language requirement; maintain a GPA of 2.8 overall and in the major; submission of senior portfolio. In addition, all Performance-Based Assessments for the Education Unit must be complete. In order to be eligible for licensure, all four required State of Illinois exams must be passed. **For complete, official information, consult your catalog.**

**Contact Dr. George Seelinger, Department Chair, for more information.**

Mathematics Department

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