For students entering the degree program during the 2012–2013 curricular year. This major is designed to prepare students to teach in public schools. In order to graduate with this major, students are required to complete Utah State Office of Education licensing requirements. To view these requirements go to [http://education.byu.edu/ess/licensing.html](http://education.byu.edu/ess/licensing.html) or contact Education Student Services, 120 MCKB, (801) 422-3426.

<table>
<thead>
<tr>
<th>UNIVERSITY CORE AND GRADUATION REQUIREMENTS</th>
<th>PROGRAM REQUIREMENTS (74.0 total hours, including licensure hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNIVERSITY CORE REQUIREMENTS</strong></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td>#Classes</td>
</tr>
<tr>
<td>Doctoral Foundation</td>
<td></td>
</tr>
<tr>
<td>Book of Mormon</td>
<td>2</td>
</tr>
<tr>
<td>New Testament</td>
<td>1</td>
</tr>
<tr>
<td>Doctrine and Covenants</td>
<td>1</td>
</tr>
<tr>
<td>The Individual and Society</td>
<td></td>
</tr>
<tr>
<td>Citizenship</td>
<td>1–2</td>
</tr>
<tr>
<td>Global &amp; Cultural Awareness</td>
<td>1</td>
</tr>
<tr>
<td>Skills</td>
<td></td>
</tr>
<tr>
<td>Effective Communication</td>
<td></td>
</tr>
<tr>
<td>First-Year Writing</td>
<td>1</td>
</tr>
<tr>
<td>Adv Written &amp; Oral Communication</td>
<td>1</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>1</td>
</tr>
<tr>
<td>Languages of Learning (Math or Language)</td>
<td>1</td>
</tr>
<tr>
<td>Arts, Letters, and Sciences</td>
<td></td>
</tr>
<tr>
<td>Civilization 1 and 2</td>
<td>2</td>
</tr>
<tr>
<td>Arts</td>
<td>1</td>
</tr>
<tr>
<td>Letters</td>
<td>1</td>
</tr>
<tr>
<td>Scientific Principles &amp; Reasoning</td>
<td></td>
</tr>
<tr>
<td>Biological Science</td>
<td>1–2</td>
</tr>
<tr>
<td>Physical Science</td>
<td>1–2</td>
</tr>
<tr>
<td>Social Science</td>
<td>1</td>
</tr>
<tr>
<td>Core Enrichment: Electives</td>
<td></td>
</tr>
<tr>
<td>Religion Electives</td>
<td>3–4</td>
</tr>
<tr>
<td>Open Electives</td>
<td>Variable</td>
</tr>
<tr>
<td><strong>GRADUATION REQUIREMENTS:</strong></td>
<td></td>
</tr>
<tr>
<td>Minimum residence hours required</td>
<td></td>
</tr>
<tr>
<td>Minimum hours needed to graduate</td>
<td></td>
</tr>
</tbody>
</table>

Grades below C- in professional education courses or content courses will not be accepted in the teaching major or teaching minor. Teacher candidates must have a cumulative 2.85 GPA in teaching major or teaching minor courses to qualify for student teaching.

**Complete the following core requirements:**
- MthEd 177 Critical Review of School Mathematics 3.0
- MthEd 277 Task Design & Assessment of Student Understanding 3.0
- MthEd 308 Mathematics Teaching with Technology 3.0
- MthEd 377 Math Teaching in the Public Schools 3.0
- MthEd 378 Practicum in Mathematics Education 1.0

Note: Prerequisites for all mathematics education courses will be strictly adhered to.

**Complete the following major requirements:**
- Math 112* Honors Calculus 1 4.0
- Math 113* Honors Calculus 2 4.0
- Math 290 Fundamentals of Mathematics 3.0
- Math 313 Elementary Linear Algebra 3.0
- Math 314 Calculus of Several Variables 3.0
- Math 334 Ordinary Differential Equations 3.0
- Math 341 Theory of Analysis 1 3.0
- Math 371 Abstract Algebra 1 3.0
- MthEd 300 History and Philosophy of Mathematics 3.0
- MthEd 362 Survey of Geometry 3.0
- Stat 301 Statistics & Probability for Secondary Educators 3.0

Note: Math 112, 113 must be honors sections.

**Complete one course from the following:**
- Math 355 Graph Theory 3.0
- Math 450 Combinatorics 3.0
- Math 487 Number Theory 3.0

A teaching minor is not needed for licensure. However, students interested in teaching an academic subject in addition to mathematics should consider pursuing a teaching minor in that discipline.

**Complete the teacher licensure requirements:**
- Contact Education Student Services, 120 MCKB, 422-3426, to schedule the final interview to clear your application for the secondary teaching license.
- You should be registered for your last semester at BYU prior to the scheduled appointment.

**Complete the Professional Education Component:**

**A. Complete the following:**
- CPSE 402 Educating Students with Disabilities 2.0
- MthEd 276 Exploration of Math Teaching (4 hours req.) 4.0V
- Sc Ed 350 Adolescent Development in an Education Context 2.0
- Sc Ed 353* Multicultural Education 2.0
- Sc Ed 379 Classroom Management 1.0

Note: FBI fingerprint and background clearance must be completed prior to enrollment in Sc Ed 276R.

**B. Complete 12 hours of one of the following:**
- MthEd 476 Student-Teaching Internship
- MthEd 496 Academic Internship

*THESE CLASSES CAN FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (11.0 hours overlap)*

FOR UNIVERSITY CORE OR PROGRAM QUESTIONS CONTACT THE ADVISEMENT CENTER
Physical and Mathematical Sciences College Advisement Center
N-181 ESC
Brigham Young University, Provo, UT 84602
Telephone: (801) 422-2674

FACULTY ADVISOR:
Amy Tanner
187 TMCB
Brigham Young University, Provo, UT 84602
Telephone: (801) 422-3640
Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester
- 1st Year Writing 3.0
- Math 112H 4.0
- Rel A 121 2.0
- Biological Science 3.0
- Global & Cultural Awareness 3.0
Total Hours 15.0

2nd Semester
- A Htg 100 (3.0) or 1st Year Writing (3.0)
- Math 113H 4.0
- Math 290 (FWSu) 3.0
- Rel A 122 2.0
- Social Science 3.0
Total Hours 15.0

SOPHOMORE YEAR

3rd Semester
- Math 313 (FWSpSu) 3.0
- MthEd 177 (FWSu) 3.0
- Stat 301 (FSp) 3.0
- Civilization 1 3.0
- Rel A 211/212 General elective 3.0
Total Hours 16.0

4th Semester
- CPSE 402 (FWSu) 2.0
- Math 314 (FWSu) 3.0
- Math 371 (FWSp) 3.0
- MthEd 276 (FW) 4.0
- Sc Ed 350 (FWSpSu) 2.0
- Rel C 324/325 2.0
Total Hours 16.0

JUNIOR YEAR

5th Semester
- Math 341 (FW) 3.0
- MthEd 362 (FWSu) 3.0
- MthEd 277 (FWSp) 3.0
- Sc Ed 353 (FWSpSu) 2.0
- Religion Elective 2.0
Total Hours 16.0

6th Semester
- Math 334 (FWSpSu) 3.0
- Math 355 (F), 450 (WSu), or 487 (F,Sp) 3.0
- Civil Ed 308 (FWSpSu) 3.0
- Civilization 2 and Letters 3.0
- Religion Elective 2.0
Total Hours 14.0

SENIOR YEAR

7th Semester
- MthEd 300 (FWSpSu) 3.0
- MthEd 377 (FW) 3.0
- MthEd 378 (FW) 1.0
- Sc Ed 379 (FW) 1.0
- Phy S 100 (Physical Science) 3.0
- Religion Elective 2.0
Total Hours 16.0

8th Semester
- MthEd 476 (FW) 12.0
- or MthEd 496 (F) 12.0
Total Hours 12.0

THE DISCIPLINE:
Mathematics is the discipline through which we make sense of the order, patterns, and quantitative situations we perceive in the world around us. The foundational skills of this discipline—the abilities to formulate, focus and solve problems; to articulate, test and justify conjectures; to communicate one’s reasoning about quantities and the relationships between them; and to see connections between different mathematical ideas and real-world contexts—are highly valued in society and are characteristics of any educated person.

Mathematics is not only a body of knowledge but also a process of analysis, reasoning, comparison, deduction, generalization, and problem solving.

Mathematics educators depend heavily upon their own understanding of mathematics in order to identify and articulate the mathematical ideas they want students to learn, to assess which concepts their students already possess that might serve as a foundation for learning, and to develop activities that help students develop rich understandings.

They also use their understanding of the nature of the discipline to structure a culture of inquiry, reasoning, and problem solving in their classrooms.

Courses in the undergraduate program are designed to help prospective teachers plan, manage, and implement classroom activities that facilitate students' learning of mathematics.

Specific program goals include (1) mastery of the foundational skills of mathematics, (2) deep reflection on mathematics learning at all levels, through observation of and participation in high-quality classroom practice, (3) increased autonomy and confidence as an investigator, active learner, and productive thinker, and (4) extended field experience, informed by the best current understanding.

Program faculty include educational and mathematical researchers, specialists in both preservice and inservice teacher education, and school practitioners, spanning a broad range of interest and experience.

Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

Note 2: The sequence of courses suggested may not fit the circumstances of every student. Students should contact their college advisement center for help in outlining an efficient schedule.