BS in Mathematics Education (694620) MAP Sheet  
Physical and Mathematical Sciences, Mathematics Education  
For students entering the degree program during the 2023-2024 curricular year.  
This major is designed to prepare students to teach mathematics 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 or contact the Education Advisement Center, 350 MCKB, (801) 422-3426.

University Core and Graduation Requirements
University Core Requirements:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
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<tbody>
<tr>
<td>Religion Cornerstones</td>
<td></td>
<td></td>
<td>REL A 275</td>
</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
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<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
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<td>2.0</td>
<td>REL A 250</td>
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<td>Foundations of the Restoration</td>
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<td>REL C 225</td>
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<tr>
<td>The Eternal Family</td>
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<td>REL C 200</td>
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<td>The Individual and Society</td>
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<tr>
<td>American Heritage</td>
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<tr>
<td>Global and Cultural Awareness</td>
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<td>SC ED 353*</td>
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<tr>
<td>Skills</td>
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<tr>
<td>First Year Writing</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Advanced Written and Oral Communications</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Quantitative Reasoning</td>
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<td>4.0</td>
<td>MATH 112* or 113*</td>
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<tr>
<td>Languages of Learning (Math or Language)</td>
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<td>4.0</td>
<td>MATH 112* or 113*</td>
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<td>Arts, Letters, and Sciences</td>
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<tr>
<td>Civilization</td>
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<td>3.0</td>
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<tr>
<td>Civilization 213.0</td>
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<tr>
<td>Arts13.0</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Letters13.0</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Biological Science</td>
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<tr>
<td>Physical Science</td>
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<tr>
<td>Social Science</td>
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<td>Core Enrichment: Electives</td>
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<td>Religion Electives</td>
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<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>Variable</td>
<td>personal choice</td>
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</table>

*THESE CLASSES CAN FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (11 hours overlap)

Graduation Requirements:

Minimum residence hours required: 30.0
Minimum hours needed to graduate: 120.0

Suggested Sequence of Courses

Freshman Year
1st Semester
First-year Writing 3.0
MATH 112.0
Religion Cornerstone course 2.0
Biological Science 3.0
Letters 3.0
Total Hours 15.0
2nd Semester
American Heritage 3.0
MATH 113
MATH 290
Religion Cornerstone course
Social Science
Total Hours
Sophomore Year
3rd Semester
MATH 2132.0
MATH 2151.0
MTHED 1773.0
STAT 1213.0
Civilization 13.0
Religion Cornerstone course
Arts 3.0
Total Hours
4th Semester
MATH 3143.0
MATH Elective 3.0
MTHED 2764.0
Religion Cornerstone course
Physical Science 3.0
Total Hours
Junior Year
5th Semester
MTHED 2773.0
MTHED 2783.0
MTHED 3623.0
SC ED 3533.0
Advanced Written & Oral Communication 3.0
Religion elective 2.0
Total Hours
Senior Year
6th Semester
CPSE 4022.0
MATH 3413.0
MTHED 3013.0
MTHED 3083.0
Civilization 23.0
Religion Elective 2.0
Total Hours
7th Semester
MATH 3343.0
MTHED 3003.0
MTHED 3773.0
MTHED 3781.0
SC ED 3753.0
Religion Elective 2.0
Total Hours
8th Semester
BS in Mathematics Education (694620) 2023-2024 Program Requirements (78 Credit Hours)

Licensure: This program meets the educational requirements designed to lead to an occupationally required professional license or certificate in the state of Utah. Students pursuing occupations requiring a license or certificate in a state other than Utah should contact the appropriate BYU academic advisement center as well as the licensing agency in the state where they intend to work to seek information and guidance regarding licensure and certification requirements.

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 https://www.schools.utah.gov/curr/licensing or contact the Education Advisement Center, 350 MCKB, 801-422-3426.

For students accepted into the major after December 16, 2019, grades below C in any required coursework in a teaching major or teaching minor will not be accepted. Teacher candidates must maintain a cumulative GPA of 2.7 or higher once admitted into the program and to qualify for student teaching. For additional details on admission and retention requirements for teaching majors and teaching minors, see Educator Preparation Program Requirements in the Undergraduate Catalog.

requirement 1 Complete 7 courses
Core requirements. Note 1: Prerequisites for all mathematics education courses will be strictly adhered to. Note 2: FBI fingerprint and background clearance must be completed prior to enrollment in MthEd 276.

MTHED 177 - Critical Review of School Mathematics 3.0
MTHED 276 - Exploration of Mathematics Teaching 4.0
MTHED 277 - Task Design for Student Learning 3.0
MTHED 278 - Assessment of Student Learning 3.0
MTHED 308 - Mathematics Teaching with Technology 3.0
MTHED 377 - Mathematics Teaching in the Public Schools 3.0
MTHED 378 - Practicum in Mathematics Education 1.0

requirement 2 Complete 12 courses

MATH 112 - Calculus 1 4.0
MATH 113 - Calculus 2 4.0
MATH 213 - Elementary Linear Algebra 2.0
MATH 215 - Computational Linear Algebra 1.0
MATH 290 - Fundamentals of Mathematics 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
MTHED 300 - (MthEd-Math) History and Philosophy of Mathematics 3.0
MTHED 301 - Teaching Statistics and Probability 3.0
MTHED 362 - (MthEd-Math) Survey of Geometry 3.0
STAT 121 - Principles of Statistics 3.0

requirement 3 Complete 1 course

C S 110 - How to Program 3.0
C S 111 - Introduction to Computer Science 3.0
C S 180 - Introduction to Data Science 3.0
MATH 350 - Combinatorics & Graph Theory 3.0
MATH 371 - Abstract Algebra 1 3.0
MATH 380 - Mathematical Foundations of Data Science 3.0
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.

BS in Mathematics Education (694620) 2023-2024

CAREER OPPORTUNITIES:
Within Education: Majors in mathematics education prepare for careers in molding and shaping the future minds of the world. Majors prepare for jobs high in demand teaching mathematics at the middle and high school levels. The skills learned in math education set students apart in STEM fields, and the teaching skills gained will allow them to facilitate meaningful mathematics learning. Outside the physical classroom, math education graduates can develop curriculum or educational software, and work in organizations that provide tutoring, online education, or distance learning. Graduates are well positioned to pursue advanced degrees in order to facilitate professional development at the district and state administration.
levels or to qualify to teach higher education.

*Outside of Education:* Majors in mathematics education graduate with a broad background in advanced mathematics and mastery of essential communication skills. Graduates who choose to forego the traditional teaching route have found rewarding careers in business, computer programming, information technology, operations research, cryptography, finance and more. Not only are mathematics education graduates prepared to solve problems in these fields using their mathematical background, but the teaching experiences prepare them to be highly effective in communicating solutions to others.

**MAP DISCLAIMER**
While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

**DEPARTMENT INFORMATION**
**FACULTY ADVISOR:**
Amy Tanner
187 TMCB
Brigham Young University, Provo, UT 84602
Telephone: (801) 422-3640

**ADVISEMENT CENTER INFORMATION**
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