



BS in MATHEMATICS EDUCATION (694620) MAP Sheet

Department of Mathematics Education

For students entering the degree program during the 2016–2017 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> or contact Education Student Services, 350 MCKB, (801) 422-3426.

UNIVERSITY CORE AND GRADUATION REQUIREMENTS				PROGRAM REQUIREMENTS (77 total hours, including licensure hours)		
UNIVERSITY CORE REQUIREMENTS				For students accepted into the major after August 1, 2014, grades below C in any required coursework in a teaching major or teaching minor will not be accepted. Teacher candidates must maintain a total GPA of 3.0 or higher throughout the program and to qualify for student teaching. For details on admission and retention requirements for teaching majors and teaching minors, see Educator Preparation Program (EPP) Requirements. Complete the following core requirements: MthEd 177 Critical Review of School Mathematics 3.0 MthEd 276 Exploration of Math Teaching 4.0 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 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. Complete the following: 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 301 Teaching Statistics & Probability 3.0 MthEd 362 Survey of Geometry 3.0 Stat 121 Principles of Statistics 3.0 Note: Math 112, 113 must be honors sections.		
<u>Requirements</u>	<u>#Classes</u>	<u>Hours</u>	<u>Classes</u>			
Religion Cornerstones				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, 350 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 Sc Ed 353* Multicultural Education 2.0 Sc Ed 375 Adolescent Development & Classroom Management 3.0 B. Complete 12 hours of one of the following: MthEd 476 Secondary Student-Teaching 12.0 MthEd 496 Academic Internship 12.0		
The Individual and Society						
Citizenship						
American Heritage						
Global & Cultural Awareness						
Skills						
Effective Communication						
First-Year Writing						
Adv Written & Oral Communication						
Quantitative Reasoning						
Languages of Learning (Math or Language)						
Arts, Letters, and Sciences						
Civilization 1 and 2						
Arts						
Letters						
Scientific Principles & Reasoning						
Biological Science						
Physical Science						
Social Science						
Core Enrichment: Electives						
Religion Electives						
Open Electives						
GRADUATION REQUIREMENTS:						
Minimum residence hours required				30.0		
Minimum hours needed to graduate				120.0		

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

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2016–2017

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

1 st Year Writing or A Htg 100	3.0 (3.0)
Math 112H	4.0
Religion Cornerstone course	2.0
Biological Science	3.0
Global & Cultural Awareness	3.0
Total Hours	15.0

2nd Semester

A Htg 100 or 1 st Year Writing	3.0 (3.0)
Math 113H	4.0
Math 290 (FWSu)	3.0
Religion Cornerstone course	2.0
Social Science	3.0
Total Hours	15.0

SOPHOMORE YEAR

3rd Semester

Math 313 (FWSpSu)	3.0
MthEd 177 (FWSp)	3.0
Stat 121	3.0
Civilization 1	3.0
Religion Cornerstone course	2.0
Arts	3.0
Total Hours	17.0

4th Semester

Math 314 (FWSpSu)	3.0
Math 371 (FWSp)	3.0
MthEd 276 (FW)	4.0
Religion Cornerstone course	2.0
Phy S 100 (Physical Science)	3.0
Total Hours	15.0

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
Advanced Written & Oral Communication	3.0
Religion Elective	2.0
Total Hours	16.0

6th Semester

CPSE 402 (FWSpSu)	2.0
Math 334 (FWSpSu)	3.0
MthEd 301	3.0
MthEd 308 (FWSp)	3.0
Civilization 2 and Letters	3.0
Religion Elective	2.0
Total Hours	16.0

SENIOR YEAR

7th Semester

MthEd 300 (FWSu)	3.0
Math 355 (F), 450 (WSu), or 487 (F,Sp)	3.0
MthEd 377 (FW)	3.0
MthEd 378 (FW)	1.0
Sc Ed 375	3.0
Religion Elective	2.0
Total Hours	15.0

8th Semester

MthEd 476 (FW) or MthEd 496 (F)	12.0 (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.

CAREER OPPORTUNITIES:

Majors in mathematics education prepare for careers in teaching at the middle and high school levels and for graduate studies in the field.

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.

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Brigham Young University, Provo, UT 84602
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