

Mathematics Education, B.S.

The Secondary Education – Mathematics major is designed for students who plan to teach Mathematics at middle, junior or high school level or for graduate studies in the field. The degree will prepare students to become state certified to teach the subject at any secondary level and help to address shortages of secondary math educators in Utah. Graduates will not only understand the art of teaching but also have a deep content knowledge of Mathematics. Graduates of this program are able to accurately interpret and translate pictorial and descriptive information into mathematical statements; solve problems quantitatively and communicate results clearly; demonstrate understanding of numeric, algebraic and geometric reasoning; and, demonstrate computational skills in areas of applied mathematics.

Matriculation Requirements

1. Completion of MATH 1210 Calculus I QL, MATH 1220 Calculus II, and MATH 2210 Calculus III with a 3.0 GPA.
2. Completion of STAT 2040 Principles of Statistics QL with a grade of "B-" or higher.
3. ENGL and MATH QL courses must have a grade C or higher.
4. GPA of 3.0 or higher with no grade lower than a C in content area courses.
5. Completion of all General Education requirements and 70% of content area courses.
6. Pass LiveScan Criminal Background Check.

Program Requirements

Code	Title	Credit Hours
Total Credit Hours		120
General Education Requirements		38 Credits
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC Literacies and Composition Across Contexts CC	3
ENGL 2010	Intermediate Academic Writing CC	3
STAT 2040	Principles of Statistics QL ¹	4
Complete one of the following:		3
HIST 2700 & HIST 2710	US History to 1877 AS and US History since 1877 AS (6)	
HIST 1700	American Civilization AS (3)	
HIST 1740	US Economic History AS (3)	
POLS 1000	American Heritage AS (3)	
POLS 1100	American National Government AS (3)	
Complete the following:		
PHIL 2050	Ethics and Values IH	3
HLTH 1100 or EXSC 1097	Personal Health and Wellness TE Fitness for Life TE	2
Distribution Courses:		
Biology		3
PHYS 2210	Physics for Scientists and Engineers I PP	4
PHYS 2215	Physics for Scientists and Engineers I Lab	1
Additional Biology or Physical Science ²		3
Humanities Distribution		3
Fine Arts Distribution		3
Social/Behavioral Science		3
Discipline Core Requirements		50 Credits
MATH 1210 or MATH 121H	Calculus I QL ¹ Calculus I QL	4
MATH 1220 or MATH 122H	Calculus II Calculus II	4
MATH 2210	Calculus III	4

or MATH 221H	Calculus III	
MATH 2270	Linear Algebra	3
MATH 2280	Ordinary Differential Equations	3
MATH 3000	History of Mathematics WE	3
MATH 3010	Methods of Secondary School Mathematics Teaching	3
MATH 3030	Algebra for Secondary Mathematics Teaching	3
MATH 3100	Foundations of Geometry	3
MATH 3200	Foundations of Analysis	3
MATH 3300	Foundations of Abstract Algebra	3
MATH 4030	Geometry for Secondary Mathematics Teaching	3
MATH 4040	Statistics and Probability for Secondary Mathematics Teaching	3
STAT 3040	Probability and Statistics for Engineering and the Sciences	3
Complete 5 credits of any courses 1000 or higher		5
Professional Education Core Requirements ³		32
		Credits
EDSC 1010	Introduction to Education	2
EDSC 3000	Educational Psychology	3
EDSC 325G	Equitable Technology Integration GI	2
EDSP 340G	Exceptional Students GI	2
EDSC 4200	Classroom Management I	2
EDSC 4250	Classroom Management II	2
EDSC 4440	Content Area Literacies	3
EDSC 445G	Multicultural and Multilingual Education	3
EDSC 455G	Secondary Curriculum Instruction and Assessment GI	3
EDSC 4850	Student Teaching Secondary	8
EDSC 4990	Teacher Assessment Project	2

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According to student placement, pre-requisites may be required

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PHYS 2220 Physics for Scientists and Engineers II PP recommended

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Must be completed with a grade of B- or higher.

Graduation Requirements

1. Completion of a minimum of 120 semester credits with at least 40 credit hours in upper-division courses.
2. Overall Grade of 3.0 (B) or above with no grade lower than a C or better in MATH or STAT courses and no grade lower than a B- in EDSC or EDSP courses.
3. Residency hours -- minimum of 30 credit hours through course attendance at UVU, with at least 10 hours earned in the last 45 hours.
4. Completion of GE and specified departmental requirements.
5. Completion of Math Department Exit Survey.
6. Successful completion of at least one Global/Intercultural course.

Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track. (<http://www.uvu.edu/wolverinetrack/>) (Note: This graduation plan has not been updated, please contact the department for the most updated plan.)

First Year

Semester 1		Credit Hours
MATH 1210 or MATH 121H	Calculus I QL or Calculus I QL	4
STAT 2040	Principles of Statistics QL	4
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Contexts CC	3

Electives		5
	Credit Hours	16
Semester 2		
MATH 1220 or MATH 122H	Calculus II or Calculus II	4
ENGL 2010	Intermediate Academic Writing CC	3
PHIL 2050	Ethics and Values IH	3
Humanities GE		3
HLTH 1100 or EXSC 1097	Personal Health and Wellness TE or Fitness for Life TE	2
	Credit Hours	15
Second Year		
Semester 3		
MATH 2210 or MATH 221H	Calculus III or Calculus III	4
PHYS 2210	Physics for Scientists and Engineers I PP	4
PHYS 2215	Physics for Scientists and Engineers I Lab	1
American Institutions		3
Fine Arts GE		3
MATH 2270	Linear Algebra	3
	Credit Hours	18
Semester 4		
MATH 2280	Ordinary Differential Equations	3
Biology GE		3
Additional Science GE		3
Social/Behavioral GE		3
MATH 3030	Algebra for Secondary Mathematics Teaching	3
	Credit Hours	15
Third Year		
Semester 5		
MATH 4040	Statistics and Probability for Secondary Mathematics Teaching	3
MATH 3100	Foundations of Geometry	3
EDSP 340G	Exceptional Students GI	2
EDSC 1010	Introduction to Education	2
EDSC 3000	Educational Psychology	3
EDSC 455G	Secondary Curriculum Instruction and Assessment GI	3
	Credit Hours	16
Semester 6		
MATH 3000	History of Mathematics WE	3
MATH 3200	Foundations of Analysis	3
MATH 3300	Foundations of Abstract Algebra	3
EDSC 4440	Content Area Literacies	3
EDSC 445G	Multicultural and Multilingual Education	3
	Credit Hours	15
Fourth Year		
Semester 7		
MATH 3010	Methods of Secondary School Mathematics Teaching	3
MATH 4030	Geometry for Secondary Mathematics Teaching	3
STAT 3040	Probability and Statistics for Engineering and the Sciences	3
EDSC 4200	Classroom Management I	2
EDSC 325G	Equitable Technology Integration GI	2
	Credit Hours	13
Semester 8		
EDSC 4850	Student Teaching Secondary	8
EDSC 4250	Classroom Management II	2
EDSC 4990	Teacher Assessment Project	2
	Credit Hours	12
	Total Credit Hours	120

Program Learning Outcomes

1. understand deeply the mathematics they will teach in the future; become familiar with the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics;
2. apply national and state standards for mathematics education to develop content-appropriate lessons;
3. use and compare different assessment techniques; develop a disposition favoring continual gathering and use of information about their students' mathematical understandings;
4. appropriately and responsibly use technology to enhance opportunities for students' mathematical thinking;
5. understand the development of mathematics through numerous and varied experiences related to the cultural, historical, and scientific evolution of mathematics; I
6. learn to use their mathematics and pedagogy knowledge flexibly in authentic situations through field experiences with secondary students under the supervision of highly qualified, experienced teachers and university supervisors.