Mathematics, Graduate Certificate

The Graduate Certificate in Mathematics aims to improve mathematics education and student achievement by focusing on two specific research-supported areas. First, by delivering high-quality content-based knowledge critical to student achievement, and second, by targeting in-service teachers who desire to teach dual credit in high school, given that dual-credit/dual-enrollment students are more likely to persist in college and are more likely to complete a bachelor's degree in less time than those who did not attempt college credits in high school. Graduate courses for this program will be offered as evening classes and during summer sessions to match in-service teachers' schedules and will be taught on the main campus and live-interactive by Utah Valley University's full-time graduate faculty.

Matriculation Requirements

1. Admission to the Graduate Program.
2. A bachelor's degree from a regionally accredited institution, equivalent undergraduate coursework to the Mathematics Endorsement 4 or *Secondary Mathematics Endorsement*, and at least two years of teaching experience.
3. A passing score on the Entrance Exam or MATH 6000 Mathematics Core Review.

Program Requirements

Code	Title	Credit Hours
Total Credit Hours		**18**
Discipline Core Requirements		**18 Credits**
Complete Six of the following courses for a total of 18 credits		18
MATH 6100	Topics in Geometry and Topology (3)	
MATH 6210	Real Analysis (3)	
MATH 6310	Modern Algebra (3)	
MATH 6330	Advanced Linear Algebra (3)	
MATH 6350	Introduction to Combinatorics (3)	
MATH 6410	Topics in Ordinary Differential Equations (3)	
MATH 6610	Numerical Methods and Modeling (3)	
MATH 6620	Topics in Numerical Analysis (3)	
MATH 6700	Applications of Mathematics (3)	
STAT 6010	Theory of Statistics I (3)	
STAT 6020	Theory of Statistics II (3)	
or other approved courses		

Graduation Requirements

1. Completion of a minimum of 18 credits.
2. Overall grade point average of 3.0 (B) or above.
3. Residency hours -- minimum of 12 credit hours through course attendance at UVU.
4. Courses and project requirements must be finished within a five-year period. No courses will apply toward graduation which are older than five years.

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/).

First Year		
Semester 1		**Credit Hours**
MATH 6210	Real Analysis	3
	Credit Hours	**3**
Semester 2		
MATH 6310	Modern Algebra	3
	Credit Hours	**3**

Second Year		
Semester 1		
MATH 6100	Topics in Geometry and Topology	3
	Credit Hours	**3**
Semester 2		
MATH 6330	Advanced Linear Algebra	3
	Credit Hours	**3**
Third Year		
Semester 1		
STAT 6010	Theory of Statistics I	3
	Credit Hours	**3**
Semester 2		
Elective course from any of the remaining MATH6XXX or STAT6XXX		3
MATH 6350	Introduction to Combinatorics	
MATH 6610	Numerical Methods and Modeling	
MATH 6620	Topics in Numerical Analysis	
MATH 6700	Applications of Mathematics	
STAT 6020	Theory of Statistics II	
	Credit Hours	**3**
	Total Credit Hours	**18**

Program Learning Outcomes

1. Offer improved math instruction based on a solid foundation of graduate mathematics content and best practices for teaching strategies and technologies.
2. Implement problem-based, technology-intensive and student focused instruction by achieving the necessary breadth of expertise, skills, and professional disposition.
3. Teach mathematical concepts more effectively to secondary students from varied backgrounds and with diverse goals, from the broader, deeper, and more advanced perspectives provided by their course and project work.
4. Solve problems arising from a variety of other disciplines using mathematical methods of formulation, computation, and analysis.