

Mathematics - Secondary Education

Degree Type

Bachelor of Science

Division of Teacher Education: Susan Fernandez, Ed.D., Dean

Department Chair: Clay Barton, M.Ed.

Program Coordinator: Kim Neal, Ph.D.

The purpose of the Math Education Secondary Program is to provide highly qualified, effective secondary educators who are not only specifically trained in a specialized content discipline but also in understanding the needs, nature, challenges, and opportunities of working with young adolescents in the high school environment. A primary goal of this program is to equip high school educators with knowledge, skills, pedagogies, and frameworks that use research as well as cognitive and social development theory to meet the needs of the students at this stage of development. The technical skills, background knowledge and teacher dispositions are all critical to developing the best mathematics education teachers.

Basic Education Courses Prior to admission

The following education courses are required before being admitted to the Teacher Education Math Education degree

Item #	Title	Credits
EDU 224	Foundation of Teaching and Learning	3
EDU 228	Foundations of Literacy	3
EDU 230	Human Development and Learning	3
EDU 300	Assessment for Learning	3
Total Credits		12

Course Sequencing

EDU Advanced Coursework After Program Admission

The following education courses must be taken after admission to the Teacher Education program

Item #	Title	Credits
EDU 232	Inclusive, Equitable, and Differentiated Instructional Practices	3
EDU 342	Classroom Environment for Middle and High School Classrooms	3
EDU 350	Advanced Assessment	3
EDU 382	Technology and Teaching	3
EDU 455	Content Area Literacy in Middle and High Schools	3
EDU 480	Internship. (All Licensure Programs)	12
EDU 483	Internship Seminar (All Licensure Programs)	3

Secondary Mathematics Pedagogical Coursework Required

The following courses are required math courses for Teacher Education Math Education

Item #	Title	Credits
MAT 200	Applied Statistics	3
MAT 211	Calculus I--Differential Calculus	4
MAT 212	Calculus II--Integral Calculus	4
MAT 213	Calculus III Multivariable Calculus	4
MAT 225	Survey of Higher Mathematics	3
MAT 227	Discrete Mathematics	3
MAT 261	Differential Equations	3
MAT 334	Linear Algebra	3
MAT 335	Modern Geometry	3
MAT 336	Methods of Teaching Secondary Mathematics	3
MAT 433	Abstract Algebra I	3

Students Choose at Least 3 hours from the following courses

Students must choose at least 3 credit hours from the following math courses

Item #	Title	Credits
MAT 338	Vector Analysis	3
MAT 342	Partial Differential Equations	3
MAT 351	Introduction to Probability and Statistics	4
MAT 371	Numerical Analysis	3
MAT 434	Abstract Algebra II	3
MAT 443	Real Analysis I	3
MAT 444	Real Analysis II	3
MAT 445	Complex Analysis	3
MAT 451	Topology	3
MAT 455	Number Theory	3
MAT 490	Special Topics in Mathematics	3