

Mathematics, 7-12 Teacher Certification B.S.

Secondary and All-Level Education

See for information: Secondary and All-Level Education (<http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/education-human-services/curriculum-instruction/secondary-and-all-level-education/>)

Core Curriculum Courses

See the Core Curriculum Requirements (<http://coursecatalog.tamuc.edu/undergrad/core-curriculum-requirements/>) 42

Required courses in the major

MATH 2413	Calculus I *	
MATH 2414	Calculus II	4
MATH 321	College Geometry	3
MATH 332	Methods of Mathematical Proofs	3
MATH 334	Abstract Algebra	3
MATH 372	Mathematics Structures and Applications	3
MATH 402	Mathematical Probability	3
MATH 403	Mathematical Statistics	3
or MATH 453	Essentials of Statistics	
MATH 426	History of Mathematics	3
MATH 437	Number Theory	3
MATH 460	Math for Secondary Teachers	3

Plus 9 hours from: 9

MATH 2415	Calculus III	
MATH 317	Numerical Analysis	
MATH 325	Partial Differential Equations	
MATH 326	Applied Mathematics	
MATH 333	Advanced Linear Algebra	
MATH 371	Science and Math Education Theory and Practice (Repeatable up to 3 hours)	
MATH 436	Real Analysis	
MATH 438	Complex Analysis	
MATH 440	Topology	

Teacher Education Courses

SED 330	Foundations of Secondary Education	3
SED 331	Instructional Design for Diverse Learners	3
SED 332	Creating an Engaging Learning Environment	3
SED 400	Pedagogy and Classroom Management in Field-based Environments	3
SED 401	Technology Infused Curriculum and Assessment in Field-based Environments	3
SED 404	Secondary Teaching Practicum	3
SED 405	Secondary Residency in Teaching	3
RDG 380	Comprehension and Vocabulary in Middle and High Schools	3

Required support courses

Six hours from: 6

MATH 2305	Discrete Mathematics	
MATH 2318	Linear Algebra	
MATH 2320	Differential Equations	
PSY 300	Learning Processes and Development	3
PHYS 2425	University Physics I	
or PHYS 2426	University Physics II	
COSC 1436	Introduction to Computer Science and Programming	4
COSC 1437	Programming Fundamentals II	3-4
or COSC 2325	Introduction to Machine Language and Digital Logic.	

A grade of C or better is required for all math courses listed under "required courses in the major," "Plus 9 hours", and "required support courses."

Total Hours

122-123

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This courses will satisfy the Core Curriculum Requirements