

MATHEMATICS WITH TEACHER CERTIFICATION, BACHELOR OF SCIENCE

General Requirements

Code	Title	Credits
Core Curriculum		42
Required Support Courses		9
Major (Required) Courses		35-36
Teacher Certification Required Courses		29
Electives		4
Total Credits		120

- Completion of this Degree Requires Admission to the Educator Preparation Program (EPP)
- 36 upper-division credit hours required for degree
- 30 advance hours from A&M-SA for residency
- CIP Code: 27.0101

Code	Title	Credits
Core Curriculum		
ENGL 1301	Composition I	3
ENGL 1302	Composition II	3
or ENGL 2311	Technical Writing	
MATH 2313	Calculus I	3
PHYS 2325	University Physics I (See Required Support Courses)	3
PHYS 2326	University Physics II (See Required Support Courses)	3
Lang/Phil/Culture		3
Creative Arts		3
American History		3
American History		3
Government/Political Science		3
Government/Political Science		3
Social & Behavioral		3
SPCH 1315	Fund of Public Speaking	3
or SPCH 1318	Interpersonal Communication	
Select one of the following:		3
MATH 2312	Pre-Calculus	
Course from List not previously used to satisfy a core component area requirement		
Subtotal:		42
Required Support Courses		
PHYS 2125	University Physics Lab I ¹	1
PHYS 2126	University Physics Lab II ²	1
CSCI 1436	Programming Fundamentals I	4
UNIV 1301	First Year Seminar	3
Subtotal:		9
Major (Required) Courses ^{3,4}		

MATH 2113	Calculus I Lab	1
MATH 2314	Calculus II	4
& MATH 2114	and Calculus II Lab	
MATH 3320	Differential Equations	3
MATH 3325	Intro to Mathematical Proofs	3
MATH 3340	Linear Algebra with Appl	3
or MATH 4341	Linear Alg and Matrix Theory	
MATH 3360	Modern Geometry	3
MATH 3370	Discrete Mathematics	3
MATH 3415	Calculus III	3-4
or MATH 4370	Vector Analysis	
MATH 4303	Statistical Methods	3
MATH 4321	Real Variables	3
MATH 4340	Modern Algebra	3
MATH 4350	Probability	3
Subtotal:		35-36

Teacher Certification Required Courses ^{5,6}

EDCI 3303	Knowledge of Pedagogy & Assess	3
EDSE 3345	Survey of Exceptional Individuals	3
EDCI 4311	Teaching and Pedagogy for Middle School and Secondary Teachers	3
EDCI 3358	Classroom Management: Middle and Secondary Level Teachers	3
EDCI 4309	Legal and Ethical Issues in Education	3
EDCI 4357	Math Methods: Middle School and Secondary Levels	3
EDRG 4325	Disciplinary & Contnt Area Lit	3
EDFR 3110	Field Lab Residency I	1
EDFR 3120	Field Lab Residency II	1
EDFR 4623	Scndry Clinic Tch:Fld Res III (Unpaid semester at A&M-SA)	6
Subtotal:		29

Electives

As needed to complete 120 credit hours required		0-1
EDRG 3389	Teach Rdg in Inter and Mid Sch ⁷	3

Total Credits **120**

All students must complete the University's Core Curriculum (<https://catalog.tamusa.edu/undergraduate/academic-policies-procedures/core-curriculum/>) and the specific requirements of the major. In some cases, a course that is required for a major may also be counted towards the Core Curriculum.

- ¹ Must be taken concurrently with PHYS 2325 University Physics I
- ² Must be taken concurrently with PHYS 2326 University Physics II
- ³ 2.75 overall GPA for major
- ⁴ 'C' or higher required in MATH courses
- ⁵ 2.75 overall GPA
- ⁶ 'C' or higher required in EDXX courses
- ⁷ Recommended courses for teacher certification

Students who do not meet teacher preparation and certification requirements may be required to switch to a non-certification degree program.

Completion of 45 hours; all with a 'C' or better; Cumulative GPA of 2.75; Qualifying scores in Reading, Writing and Mathematics.

Code	Title	Credits
ENGL 1301	Composition I	3
ENGL 2311	Technical Writing	3
MATH 1314	College Algebra (at least)	3
An additional math course		
HIST 1301	US History to 1865	3
HIST 1302	US History from 1865	3
SPCH 1315	Fund of Public Speaking	3
	or SPCH 1318 Interpersonal Communication	
2 Life & Physical Sciences		

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Core Curriculum		
ENGL 1301	Composition I	3
ENGL 1302	Composition II	3
	or ENGL 2311 Technical Writing	
MATH 2313	Calculus I	3
PHYS 2325	University Physics I (See Required Support Courses)	3
PHYS 2326	University Physics II (See Required Support Courses)	3
Lang/Phil/Culture		
Creative Arts		
American History		
American History		
Government/Political Science		
Government/Political Science		
Social & Behavioral		
SPCH 1315	Fund of Public Speaking	3

or SPCH 1318 Interpersonal Communication
Select one of the following: 3

MATH 2312	Pre-Calculus	
Course from List not previously used to satisfy a core component area requirement		
Subtotal:		42

Required Support Courses

PHYS 2125	University Physics Lab I ¹	1
PHYS 2126	University Physics Lab II ²	1
CSCI 1436	Programming Fundamentals I	4
UNIV 1301	First Year Seminar	3
Subtotal:		9

Major (Required) Courses ^{3,4}

MATH 2113	Calculus I Lab	1
MATH 2314	Calculus II	4
	& MATH 2114 and Calculus II Lab	
MATH 3320	Differential Equations	3
MATH 3325	Intro to Mathematical Proofs	3
MATH 3340	Linear Algebra with Appl	3
	or MATH 4341 Linear Alg and Matrix Theory	
MATH 3360	Modern Geometry	3
MATH 3370	Discrete Mathematics	3
MATH 3415	Calculus III	3-4
	or MATH 4370 Vector Analysis	
MATH 4303	Statistical Methods	3
MATH 4321	Real Variables	3
MATH 4340	Modern Algebra	3
MATH 4350	Probability	3
Subtotal:		35-36

Teacher Certification Required Courses ^{5,6}

EDCI 3303	Knowledge of Pedagogy & Assess	3
EDSE 3345	Survey of Exceptional Individuals	3
EDCI 4311	Teaching and Pedagogy for Middle School and Secondary Teachers	3
EDCI 3358	Classroom Management: Middle and Secondary Level Teachers	3
EDCI 4309	Legal and Ethical Issues in Education	3
EDCI 4357	Math Methods: Middle School and Secondary Levels	3
EDRG 4325	Disciplinary & Contnt Area Lit	3
EDFR 3110	Field Lab Residency I	1
EDFR 3120	Field Lab Residency II	1
EDFR 4623	Scndry Clinic Tch:Fld Res III (Unpaid semester at A&M-SA)	6
Subtotal:		29

Electives

As needed to complete 120 credit hours required		0-1
EDRG 3389	Teach Rdg in Inter and Mid Sch ⁷	3

Total Credits **120**

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- ² Must be taken concurrently with PHYS 2326 University Physics II
- ³ 2.75 overall GPA for major

- ⁴ 'C' or higher required in MATH courses
- ⁵ 2.75 overall GPA
- ⁶ 'C' or higher required in EDXX courses
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Completion of 45 hours; all with a 'C' or better; Cumulative GPA of 2.75; Qualifying scores in Reading, Writing and Mathematics.

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ENGL 1301	Composition I	3
ENGL 2311	Technical Writing	3
MATH 1314	College Algebra (at least)	3
An additional math course		
HIST 1301	US History to 1865	3
HIST 1302	US History from 1865	3
SPCH 1315	Fund of Public Speaking	3
or SPCH 1318	Interpersonal Communication	
2 Life & Physical Sciences		

Plan of Study

This suggested plan of study is intended to be used as a guide in conjunction with official degree requirements outlined in the catalog. While this plan demonstrates a course of study that covers eight semesters, each student's academic path is unique and your timeline may look different. Students should regularly consult with academic advisors as they plan their course schedules as course offerings may vary.

Course	Title	Credits
First Year		
First Semester		
ENGL 1301	Composition I	3
MATH 1314 & MATH 1014	College Algebra and College Algebra Recitation	3
Creative Arts		3
SPCH 1315 or SPCH 1318	Fund of Public Speaking or Interpersonal Communication	3
HIST 1301	US History to 1865	3
Credits		15
Second Semester		
MATH 2312	Pre-Calculus	3
ENGL 1302 or ENGL 2311	Composition II or Technical Writing	3
Lang/Phil/Culture		3
UNIV 1301	First Year Seminar	3
HIST 1302	US History from 1865	3
Credits		15
Second Year		
First Semester		
MATH 2313 & MATH 2113	Calculus I and Calculus I Lab	4

PHYS 1301 or CHEM 1311 or BIOL 1306	General Physics I or General Chemistry I or Gen Biology I-Attr Living Sys	3
PHYS 1101 or CHEM 1111 or BIOL 1106	General Physics Lab I or General Chemistry Lab I or General Biology I Lab	1
Social and Behavioral Sciences		3
GOVT 2305	Federal Government	3
EDCI 3303	Knowledge of Pedagogy & Assess	3

Credits 17

Second Semester		
MATH 2314 & MATH 2114	Calculus II and Calculus II Lab	4
PHYS 1302 or CHEM 1312 or BIOL 1307	General Physics II or General Chemistry II or Gen Biology II-Biol Organisms	3
PHYS 1102 or CHEM 1111 or BIOL 1107	General Physics Lab II or General Chemistry Lab I or General Biology II - Lab	1
EDSE 3346	Development of Exceptional Individuals	3
GOVT 2306	Texas Government	3
EDCI 4311	Teaching and Pedagogy for Middle School and Secondary Teachers	3

Credits 17

Third Year		
First Semester		
MATH 3415	Calculus III	4
MATH 3325	Intro to Mathematical Proofs	3
MATH 3340 or MATH 4341	Linear Algebra with Appl or Linear Alg and Matrix Theory	3
EDCI 3358	Classroom Management: Middle and Secondary Level Teachers	3

Credits 13

Second Semester		
MATH 3320	Differential Equations	3
CSCI 1436	Programming Fundamentals I	4
EDCI 4309	Legal and Ethical Issues in Education	3
EDCI 4357	Math Methods: Middle School and Secondary Levels	3

Credits 13

Fourth Year		
First Semester		
MATH 4303	Statistical Methods	3
MATH 4321	Real Variables	3
MATH 3360	Modern Geometry	3
EDRG 4325	Disciplinary & Contnt Area Lit	3
EDFR 3110	Field Lab Residency I	1

Credits 13

Second Semester		
MATH 3370	Discrete Mathematics	3
MATH 4340	Modern Algebra	3
MATH 4350	Probability	3
EDRG 3389	Teach Rdg in Inter and Mid Sch	3

EDFR 3120	Field Lab Residency II	1
Credits		13
Third Semester		
EDFR 4623	Scndry Clinic Tch:Fld Res III	6
Credits		6
Total Credits		122