Mathematics, BS

Bachelor of Science in Mathematics Degree Program Requirements

Complete Core Curriculum Listing at https://catalog.pvamu.edu/universitycorecurriculum/

Core Curriculum 42 Credit Hours		
Communication		6
ENGL 1301	Freshman Composition I	
ENGL 1302	Freshman Composition II	
Mathematics		3
MATH 1316	Trigonometry	
Life and Physical Sciences (Select Two)		6
Language, Philosophy, and Culture (Select One)		3
Creative Arts (Select One)		3
American History (Select Two)		6
Government/Political Science		6
POSC 2305	American Government	
POSC 2306	Texas Government	
Social and Behavioral Sciences (Select One)		3
Component Area Option One (Select One)		3
Component Area Option Two (Select One)		3
Major Requirements		
MATH 2413	Calculus with Analytic Geometry I	4
MATH 2414	Calculus with Analytic Geometry II	4
MATH 2320	Differential Equations	3
MATH 2305	Discrete Mathematics	3
MATH 3301	Modern Algebra	3
MATH 3401	Calculus III	4
MATH 3302	Probability and Statistics	3
MATH 3307	Linear Algebra	3
MATH 4100	Mathematics Colloquium	1
MATH 4306	Numerical Analysis	3
MATH 4308	Advanced Calculus I	3
Approved 3000 or 4000 Level Mathematics Courses		6
Other Requirements		
English (Writing) [1]		3
Concentration (Select one from below)		**35**
Total Hours		**120**

Without Teacher Certification Concentration		
MATH 4389	Mathematics Capstone Course	3
Computer Science Electives [2,3]		11
General Electives		21
Total Hours		**35**

With Teacher Certification Concentration		
MATH 4305	Mathematics Teaching Capstone Course	3
CUIN 3300	Educational Foundations	3
CUIN 3301	Educational Psychology	3
CUIN 4310	Instructional Planning and Assessment	3
CUIN 4311	Instructional Methodology and Classroom Management	3
CUIN 4682	Student Teaching Secondary II	6

Computer Science Elective [2,3]	3
Foreign Language (one language)	6
General Electives	5
Total Hours	**35**

[1]   Any ENGL Writing course can be taken to satisfy the English requirement.

[2]   Any COMP course can be taken to satisfy the Computer Science requirement. Other select courses may also be used to satisfy the Computer Science requirement. These courses can be verified in consultation with your mathematics advisor.

[3]   For students who are double majors in Computer Science and Mathematics or Computer Science majors with a minor in Mathematics, courses taken in the Computer Science major or other higher-level computer courses will satisfy the 11 SCH of Computer Science courses listed above in the Computer Science Elective area.

Bachelor of Science in Mathematics-With Teacher Certification Degree Sequence

Core: https://catalog.pvamu.edu/universitycorecurriculum/

Freshman

Fall - Semester 1	Hours	Spring - Semester 2	Hours
Communication Core	3	Communication Core	3
ENGL 1301		ENGL 1302	
Mathematics Core	3	MATH 2413	4
MATH 1316		Life and Physical Sciences Core	3
Life and Physical Sciences Core	3	American History Core	3
American History Core	3	Social and Behavioral Science Core	3
Creative Arts Core	3		
Total	**15**	**Total**	**16**

Total Hours: 31

Sophomore

Fall - Semester 1	Hours	Spring - Semester 2	Hours
Language, Philosophy, and Culture Core	3	MATH 2320	3
Component Area Option One Core	3	Computer Science Elective	3
MATH 2414	4	Component Area Option Two Core	3
Government/Political Science Core	3	Government/Political Science Core	3
POSC 2305		POSC 2306	
MATH 2305	3	Elective	3
		Elective	2
Total	**16**	**Total**	**17**

Total Hours: 33

Junior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
MATH 3307	3	MATH 3301	3
MATH 3401	4	3000 or 4000 Level MATH Course	3
English Writing Requirement	3	MATH 3302	3
CUIN 3300	3	CUIN 3301	3
Foreign Language Requirement	3	Foreign Language Requirement	3
		MATH 4306	3
Total	**16**	**Total**	**18**

Total Hours: 34

Senior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
MATH 4100	1	CUIN 4682	6
MATH 4308	3		

3000 or 4000 Level MATH Course	3	
MATH 4305	3	
CUIN 4310	3	
CUIN 4311	3	
Total	**16 Total**	**6**

Total Hours: 22

Name		Unit
Total Semester Credit Hours: 120		

BS Mathematics Without Teacher Certification

https://catalognext.pvamu.edu/universitycorecurriculum/ (https://catalog.pvamu.edu/universitycorecurriculum/)

Freshman

Fall - Semester 1	Hours	Spring - Semester 2	Hours
Communication Core	3	Communication Core	3
ENGL 1301		ENGL 1302	
Mathematics Core	3	MATH 2413	4
MATH 1316		Life and Physical Sciences Core	3
Life and Physical Sciences Core	3	American History Core	3
American History Core	3	Social and Behavioral Sciences Core	3
Creative Arts Core	3		
Total	**15 Total**		**16**

Total Hours: 31

Sophomore

Fall - Semester 1	Hours	Spring - Semester 2	Hours
Language, Philosophy, and Culture Core	3	Elective	3
Component Area Option One Core	3	MATH 2320	3
MATH 2414	4	Computer Science Elective	4
Government/Political Science Core	3	Government/Political Science Core	3
POSC 2305		POSC 2306	
MATH 2305	3	Component Area Option Two Core	3
Total	**16 Total**		**16**

Total Hours: 32

Junior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
MATH 3307	3	MATH 3301	3
MATH 3401	4	3000 or 4000 Level MATH Course	3
English Writing Requirement	3	MATH 3302	3
Computer Science Elective	3	Computer Science Elective	4
Elective	3	Elective	3
Total	**16 Total**		**16**

Total Hours: 32

Senior

Fall - Semester 1	Hours	Spring - Semester 2	Hours
MATH 4100	1	MATH 4306	3
MATH 4308	3	MATH 4389	3
3000 or 4000 Level MATH Course	3	Elective	3
Elective	3	Elective	3

Elective	3		
Total	**13 Total**		**12**

Total Hours: 25

Name	Unit

Total Semester Credit Hours: 120

Marketable Skills

Marketable skills, as defined by the Texas Higher Education Coordinating Board's 60x30TX Plan (http://www.60x30tx.com/), include interpersonal, cognitive, and applied skill areas, are valued by employers, and can be either primary or complementary to a major. Marketable skills are acquired by students through education, including curricular, co-curricular, and extracurricular activities.

BS Mathematics

Degree Skills

1. Ability to use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems
2. Ability to choose the right mathematical methods or formulas to solve a problem
3. Ability to communicate effectively in the workplace, both through oral and written form, and transmit mathematical knowledge in various forms

Concentration Skills

1. Conduct oral and written communication in the context of mathematics instruction
2. Apply mathematical content knowledge and pedagogical content knowledge, and critical thinking to instructional design and delivery
3. Proficient use of essential technological teaching tools

Co-curricular and Extracurricular Skills

1. Ability to effectively communicate mathematical content in non-academic settings
2. Ability to work and communicate in groups
3. Ability to engage in logical and critical thinking among non-mathematicians