

2024-2025
 Bachelor of Science in Mathematics with a Concentration in Pure Mathematics
 Math (120 hrs.)

Mathematics (51 hrs.)

Course	Course Title	Credits	Grade	√	Sem.
1910	Calculus I	4			
1920	Calculus II	4			
2010	Intro. Linear Algebra	3			
2110	Calculus III	4			
2120	Differential Equations	3			
3810	Complex Variables	3			
3400	Intro Concepts Math	3			
3070	Statistical Methods I	3			
4010	Modern Algebra I	3			
4020	Modern Algebra II	3			
3430	College Geometry or	3			
4410	Differential Geometry				
4310	or Intro. Topology I				
4530	Linear Algebra I	3			
4470	Probability & Statistics I	3			
4110	Advanced Calculus I	3			
4120	Advanced Calculus II	3			
4993	Mathematical Research	3			

One Sequence from **Applied Mathematics Sequence** List: 3070-3080; 4050-4060; 4210-4220; 4250-4260; 4470-4480; 4550-4560; or any two of the three: 4050, 4350, or 4360 (**Recommended**).

History (6 hrs.)

2010	Early US History	3			
2020	Modern US History	3			

Humanities/Fine Arts (6 hrs.)

Social/Behavioral Science (6 hrs.)

Exams Required for Graduation: Senior Exit Exam

The Major Field Test will be given to students during their senior year in the Math Department (it is not a required exam for graduation, but is needed for testing results and data).

English (9 hrs.)

Course	Course Title	Credits	Grade	√	Sem.
1010	English Comp. I	3			
1020	English Comp. II	3			
2130	Top. American Lit.	3			
2235	Top. British Lit., or				
2330	Top. World Lit.				

Natural Science Sequence (8 hrs.)

8 credit hours chosen from the TTU General Education Core Courses in the Natural Sciences. These credit hours must come from two 4-credit hour courses in the same discipline. The possible disciplines are ASTR, BIOL, CHEM, GEOL/GEOG, and PHYS.

Computer Science (4 or 2 hrs.)

CSC 1300	Intro to Prob Sol & Comp Programming OR	4			
ENGR 1120	Prog for Engineers	2			

Communication (3 hrs.)

COMM 2025	Fundamentals of Communication, OR	3			
PC 2500	Communicating in the Profession				

Electives (enough credits to complete 120 hours.)

Some Suggested Mathematics Electives:

- 4310-4320 Intro to Topology I-II
- 4540 Linear Algebra II
- 4610-4620 History of Mathematics I-II
- 4850-4860 Computational Algebraic Geometry I-II
- 4050 Number Theory
- 4350 Introductory Combinatorics
- 4360 Graph Theory

2024-2025
 Bachelor of Science in Mathematics with a Concentration in Pure Mathematics
 Math (120 hrs.)

Freshman Year	Sem. Hrs.	Sophomore Year	Sem. Hrs.
MATH 1910 Calculus I	4	MATH 2010 Intro. Linear Algebra	3
MATH 1920 Calculus II	4	MATH 2110 Calculus III	4
ENGL 1010 English Comp. I	3	MATH 2120 Differential Equations	3
ENGL 1020 English Comp II	3	MATH 3400 Concepts of Math	3
Natural Science Sequence*	8	MATH 4010 Modern Algebra I	3
Humanities/Fine Arts Elective	3	COMM 2025 Fund of Communication	3
CSC 1300 Intro Prob. Sol & Comp Prog.	4	OR	
OR		PC 2500 Comm. in the Profession	3
ENGR 1120 Programing for Engineers	2	ENGL 2130, or 2235, or 2330	3
Electives	0 or 3	Social/Behavioral Science Electives	6
		Humanities/Fine Arts Electives	3
Total	29, 30, or 32	Total	31
Junior Year	Sem. Hrs.	Senior Year	Sem. Hrs.
MATH 3070 Statistical Methods I	3	MATH 4110 Advanced Calculus I	3
MATH 3810 Complex Variables	3	MATH 4120 Advanced Calculus II	3
MATH 4020 Modern Algebra II	3	MATH 4993 Mathematical Research	3
MATH 4530 Linear Algebra I	3	Mathematics**	6
MATH 4470 Probability and Statistics I	3	Electives	15
HIST 2010 Early US History	3		
HIST 2020 Modern US History	3		
MATH 3430, 4410, or 4310	3		
Electives	6		
Total	30	Total	30

* 8 credit hours chosen from the TTU General Education Core Courses in the Natural Sciences. These credit hours must come from two 4-credit hour courses in the same discipline. The possible disciplines are ASTR, BIOL, CHEM, GEOL/GEOG, and PHYS.

Upper-division mathematics courses (3000 or higher). The student must complete at least one sequence from **Applied Mathematics Sequence List: MATH 3070-3080, 4050-4060; 4250-4260; 4470-4480; 4550-4560; or any two of the three: 4050, 4350, or 4360 (**Recommended**).