ACCELERATED B.A. IN MATHEMATICS (4-8 MATHEMATICS CERTIFICATION) / M.S. IN MATHEMATICS

Web Site: https://twu.edu/mathematics/undergraduate-programs/

This program will provide strong, qualified undergraduate students a path to accelerate their time to the MS degree. The program allows undergraduate students to begin taking graduate level courses when they have completed 72 credit hours toward their baccalaureate degree, but no undergraduate course may count toward the accelerated Master's degree. This accelerated program is also a financial and time saving degree plan.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/thecb-60x30-strategic-plan/) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

Degree Skills

a. Apply mathematical theories and techniques to the solution of practical problems in business, engineering, the sciences, or other fields.
b. Prepare and deliver lectures to students, prepare and evaluate assignments on mathematics topics taught in public schools.
c. Determine appropriate methods for data analysis.
d. Perform computations and apply methods of numerical analysis to data.
e. Demonstrate personal accountability and work habits, integrity, and ethical behavior.
f. Assemble sets of assumptions and explore the consequences of each set.
g. Proficient in the software tools to achieve the skills listed, such as Matlab, SAS, Geogebra, and Desmos.

Teacher Certification Skills

a. Appropriately explain the impact of effective planning and communication (within the chosen area of concentration) to relevant internal and external stakeholders in an education or community setting.
b. Identify, select, and implement entry-level instructional plans when serving as an instructor in the school setting.
c. Successfully manage organizational and student behavior when teaching in the school setting.
d. Efficiently and accurately assess student progress and use data to develop and modify instruction for K-12 students.
e. Work effectively and collaboratively with students and families from diverse backgrounds.

Admissions

Admission Requirements

To apply to the Accelerated Bachelor's to Master's program in Mathematics, students must:

- Be currently enrolled as a TWU Mathematics major.
- Have a minimum cumulative grade point average of 3.0 or higher.
- Have successfully completed a minimum of 60 hours of coursework toward the bachelor's degree.
- Have a minimum of 12 hours remaining in mathematics courses toward the major.

How to Apply to the Accelerated Program

To apply, students must:

a. Receive approval from the Division Head.
b. Once admitted to the Accelerated Program students must apply to the graduate M.S. in Mathematics program. Students cannot enroll in graduate-level coursework until accepted by the Graduate School.

Accelerated Undergraduate-Graduate Program Policy Guidelines

Students may apply to an approved accelerated degree program once they have completed at least 60 undergraduate semester credit hours. Upon admission to an accelerated program, students may enroll in graduate courses for credit once they have attained at least 72 undergraduate semester credit hours. Approved courses will apply to both an undergraduate and a graduate degree.

Conditions

- Up to 12 SCH of designated graduate courses may apply to both the Bachelor's degree and a Master's degree program comprised of 45 or fewer SCH; and up to 15 graduate SCH may apply toward both an undergraduate degree and a graduate degree program comprised of more than 45 SCH (Master's, Specialist or Doctoral degree.)
- Undergraduate students may enroll in no more than 6 SCH of graduate coursework in each semester or term.
- No undergraduate-level course may count toward a graduate degree.
- Minimal criteria for admission will include a cumulative undergraduate GPA of at least 3.0. Academic components may set higher requirements for their program.
- Once admitted to an accelerated program, students must maintain a 3.0 GPA throughout the remainder of their baccalaureate degree, or their admission to the accelerated graduate program may be revoked. Academic components may set additional requirements for their programs.
- Prior to applying to an accelerated degree program, students must have completed a minimum of 15 semester credit hours at Texas Woman's University.

Graduate Application Process

All students must meet the University requirements as outlined in the Admission to the TWU Graduate School (https://catalog.twu.edu/graduate/graduate-school/admission-graduate-school/) section of the catalog.

This academic program may have additional graduate admission criteria that must also be completed as outlined on the graduate program's website.

Degree Requirements

Total Semester Credit Hours (SCH): 120

Major: 39 SCH **Required Minor:** 26 SCH

Program Code: ; **CIP Code:** 27.0101.00

Texas Core Curriculum

Code	Title	SCHs
ENG 1013	Composition I	3
ENG 1023	Composition II	3
Mathematics		3
Life & Physical Sciences		6
Language, Philosophy, & Culture		3
Creative Arts		3
HIST 1013	History of the United States, 1492-1865	3
HIST 1023	History of the United States, 1865 to the Present	3
POLS 2013	U.S. National Government	3
POLS 2023	Texas Government	3
Social & Behavioral Sciences		3
CAO: Women's Studies		3
CAO: First Year Seminar, Wellness or Mathematics		3
Total SCHs		**42**

Courses Required for Major

Code	Title	SCHs
Required Mathematics Courses		
MATH 2014	Calculus I	4
MATH 4303	Secondary Mathematics in the Classroom	3
MATH 4203	Problem Solving in the Secondary STEM Classroom	3
MATH 2024	Calculus II	4
MATH 3104	Calculus III	4
MATH 4003	Mathematical Concepts in the Educational Setting	3
MATH 1523	Mathematics Concepts I	3
MATH 1533	Mathematics Concepts II	3
Graduate Coursework		
MATH 5323	Euclidean Geometry	3
MATH 5523	Introduction to Number Theory	3
MATH 5483	Theory of Probability and Statistics I	3
MATH 5513	Matrix Algebra	3
Total SCHs		**39**

Departmental Requirements

Code	Title	SCHs
CSCI 3013	Applied Computational Thinking	3
SPAN 1013	Elementary Spanish I	3
SPAN 1023	Elementary Spanish II	3
Total SCHs		**9**

Recommended Plan of Study

First Year

Fall		TCCN	SCHs
ENG 1013	Composition I	ENGL 1301	3
HIST 1013	History of the United States, 1492-1865	HIST 1301	3
POLS 2013	U.S. National Government	GOVT 2305	3
UNIV 1231	Learning Frameworks: First-Year Seminar	EDUC 1100, EDUC 1200, EDUC 1300	1
MATH 2014	Calculus I	MATH 2413	4
MATH 1523	Mathematics Concepts I	MATH 1350	3
	SCHs		**17**

Spring		TCCN	
ENG 1023	Composition II	ENGL 1302	3
HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
POLS 2023	Texas Government	GOVT 2306	3
MATH 2024	Calculus II	MATH 2414	4
MATH 1533	Mathematics Concepts II	MATH 1351	3
	SCHs		**16**

Second Year

Fall		TCCN	
SPAN 1013	Elementary Spanish I	SPAN 1411	3
Life/Physical Science Core			3
MATH 3104	Calculus III		4
MATH 4303	Secondary Mathematics in the Classroom		3
Language, Philosophy, & Culture Core			3
Mathematics Core			3
	SCHs		**19**

Spring		TCCN	
EDSP 3203	Learners with Exceptionalities		3
SPAN 1023	Elementary Spanish II	SPAN 1412	3
READ 3013	Literacy and Learning across the Curriculum		3
CAO: Women's Studies (Recommended Math 2053)			3
CAO: First Year Seminar, Wellness or Mathematics (Recommended - MATH 1703)			3
	SCHs		**15**

Third Year

Fall		TCCN	
EDUC 2003	Schools and Society	EDUC 1301	3
CSCI 3013	Applied Computational Thinking		3
Creative Arts Core			3
READ 3423	Literacy Foundations: 4-8		3
Life & Physical Sciences Core			3
	SCHs		**15**

Spring		**TCCN**	
MATH 4003	Mathematical Concepts in the Educational Setting		3
MATH 5513	Matrix Algebra		3
EDUC 3003	Learning Theory and Development		3
EDUC 3482	Teaching Diverse Learners Through Technology Integration		2
MATH 5523	Introduction to Number Theory		3
MATH 4203	Problem Solving in the Secondary STEM Classroom		3
	SCHs		**17**
Fourth Year			
Fall		**TCCN**	
MATH 5483	Theory of Probability and Statistics I		3
MATH 5323	Euclidean Geometry		3
EDUC 4113	Design and Implementation of Instruction and Assessment		3
EDUC 4243	Classroom Environment and Management		3
Social/Behavioral Science Core			3
	SCHs		**15**
Spring		**TCCN**	
EDUC 4946	Clinical Student Teaching		6
	SCHs		**6**
	Total SCHs:		**120**