ACCELERATED B.A. IN MATHEMATICS (7-12 MATHEMATICS CERTIFICATION) / M.S. IN MATHEMATICS TEACHING

Web Site: https://twu.edu/mathematics/accelerated-bachelor-to-masters-in-mathematics/

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 90 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 Geometer's Sketchpad.

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

All applicants must meet the general undergraduate admission requirements (http://catalog.twu.edu/undergraduate/admission-information/).

Admission Requirements

To apply to the Accelerated Bachelor's to Master's program in Mathematics Teaching, 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 72 but no more than 90 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 Lead.

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

Accelerated Graduate Program Policy Guidelines

Students may apply to the accelerated graduate degree program once they have attained advanced junior standing with at least 72 undergraduate semester credit hours (SCH). Upon admission to an accelerated program, students with senior standing (90 earned SCH) may enroll in graduate courses for credit. Approved courses will apply to both an undergraduate and a graduate degree.

Conditions

- Undergraduate students may enroll in no more than 6 SCH of graduate coursework in each semester or term.
- Minimal criteria for admission will include a cumulative undergraduate GPA of at least 3.0. The program may set higher GPA requirements as outlined on their TWU graduate program website at the time of graduate application.
- 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.

Graduate Application Process

All students must meet the University requirements as outlined in the Admission to the TWU Graduate School (http://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): 121

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

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

Courses Required for Major

Code	Title	SCHs
Required Mathematics Courses		
MATH 2014	Calculus I	4
MATH 2024	Calculus II	4
MATH 3013	Discrete Mathematics	3
or MATH 3083	Elementary Number Theory	
MATH 3053	Abstract Algebra	3
MATH 3104	Calculus III	4
MATH 4003	Mathematical Concepts in the Educational Setting	3
MATH 4013	Probability and Statistics	3
Graduate Coursework		
MATH 5203	Problem Solving in the Math Classroom	3
MATH 5303	Algebra in the Mathematics Classroom	3
or MATH 4303	Algebra in the Mathematics Classroom	
MATH 5313	Geometry in the Mathematics Classroom	3
or MATH 4313	Geometry in the Mathematics Classroom	
MATH 5323	Euclidean Geometry	3
MATH 5513	Matrix Algebra	3
Total SCHs		**39**

Departmental Requirements

Code	Title	SCHs
CSCI 3002	Advanced Computing Technology	2
CSCI 3013	Applied Computational Thinking	3
SPAN 1013	Elementary Spanish I	3
or EDBE 3053	Theories of Second Language Acquisition for ESL and Bilingual Teachers	
SPAN 1023	Elementary Spanish II	3
or EDBE 3453	Teaching English As a Second Language	
Electives		2
Total SCHs		**13**

Professional Education Studies

Admission to the Educator Preparation Program is required. Students must apply for admission into the Educator Preparation Program prior to enrolling in EDUC 3003/EDUC 3482, EDUC 4113/EDUC 4243, and EDUC 4946. Information is available from the Office of Educator Preparation Services (https://twu.edu/teacher-certification/).

Code	Title	SCHs
Pedagogical and Professional Responsibility		
EDUC 2003	Schools and Society	3
EDUC 3003	Learning Theory and Development	3
EDUC 3482	Teaching Diverse Learners Through Technology Integration	2
EDUC 4113	Design and Implementation of Instruction and Assessment	3
EDUC 4243	Classroom Environment and Management	3
EDUC 4946	Clinical Student Teaching	6
Related Studies in Education		
READ 3013	Literacy and Learning across the Curriculum	3
EDSP 3203	Learners with Exceptionalities	3
Total SCHs		**26**

Notes:

a. EDUC 2003 may be taken at a community college. Check with the Office of Educator Preparation Services (https://twu.edu/teacher-certification/) to make sure the course has the equivalent number.

b. EDUC 4113 and EDUC 4243 must be taken during the same semester.

Recommended Plan of Study

First Year

Fall		TCCN	SCHs
MATH 1313	Trigonometry	MATH 1316	3
MATH 1703	Elementary Statistics I	MATH 1342	3
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: The First Year Experience	EDUC 1100, EDUC 1200, EDUC 1300	1
	SCHs		16

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
SPAN 1013 or EDBE 3053	Elementary Spanish I or Theories of Second Language Acquisition for ESL and Bilingual Teachers	SPAN 1411	3
Life/Physical Science Core			3
	SCHs		15

Second Year

Fall		TCCN	
MATH 2014	Calculus I	MATH 2413	4
SPAN 1023 or EDBE 3453	Elementary Spanish II or Teaching English As a Second Language	SPAN 1412	3
CSCI 3013	Applied Computational Thinking		3
Creative Arts Core			3
Life/Physical Science Core			3
Elective			2
	SCHs		18

Spring		TCCN	
MATH 2024	Calculus II	MATH 2414	4

		TCCN	
MATH 2053	Women and Minorities in Engineering, Mathematics, and Science		3
EDSP 3203	Learners with Exceptionalities		3
READ 3013	Literacy and Learning across the Curriculum		3
Language, Philosophy, & Culture Core			3
	SCHs		**16**
Third Year			
Fall		**TCCN**	
MATH 3104	Calculus III		4
MATH 4303	Algebra in the Mathematics Classroom		3
CSCI 3002	Advanced Computing Technology		2
EDUC 2003	Schools and Society	EDUC 1301	3
Social/Behvioral Science Core			3
	SCHs		**15**
Spring		**TCCN**	
MATH 3083	Elementary Number Theory		3
MATH 4003	Mathematical Concepts in the Educational Setting		3
MATH 5203	Problem Solving in the Math Classroom		3
MATH 5513	Matrix Algebra		3
EDUC 3003	Learning Theory and Development		3
EDUC 3482	Teaching Diverse Learners Through Technology Integration		2
	SCHs		**17**
Fourth Year			
Fall		**TCCN**	
MATH 3053	Abstract Algebra		3
MATH 4013	Probability and Statistics		3
MATH 5313	Geometry in the Mathematics Classroom		3
MATH 5323	Euclidean Geometry		3
EDUC 4113	Design and Implementation of Instruction and Assessment		3
EDUC 4243	Classroom Environment and Management		3
	SCHs		**18**
Spring		**TCCN**	
EDUC 4946	Clinical Student Teaching		6
	SCHs		**6**
	Total SCHs:		**121**