Mathematics Education, BA/BS

Program Description

The Utah Tech University Mathematics Department helps students to achieve their academic, career, and life goals, including those related to basic computational skills, mathematical processes, and knowledge that develops real-life applications, modeling, and problem solving. The Department's comprehensive and integrated offerings help students master mathematical competencies for future career and educational endeavors. As part of an open-admissions institution, the Department offers a broad spectrum of Mathematics classes that are useful for skill levels from developmental to selected four-year degree requirements. The Mathematics faculty is dedicated to providing opportunities that promote student success. Utah Tech University also offers the **Math Endorsement for Secondary Education.** The following are help links for endorsement students:

Endorsement Levels (https://math.utahtech.edu/wp-content/uploads/sites/10/2015/06/ENDORSEMENT-LEVELS.pdf)

Endorsement Checklist (https://math.utahtech.edu/wp-content/uploads/sites/10/2015/06/NewEndorsementChecklist.pdf)

Professional Licensure/Certification (PLC) Requirements

The curriculum for programs at Utah Tech University leading to professional licensure are designed to prepare students for Utah licensure and certification requirements. Admission into programs for professions requiring licensure and certification does not guarantee that students will obtain a license or certificate. Licensure and certification requirements are set by agencies that are not controlled by or affiliated with the University, and licensure and certification requirements can change at any time.

Licensure boards in each state establish requirements for licensure and certification for their respective state. States vary by which professions are required to be licensed and how licensure functions, and such requirements may change at any time. The terms related to licensure and certification, among others, also vary by state as well.

Students and prospective students are strongly encouraged to contact the state licensure entity in the state where they intend to work to review all licensure and certification requirements imposed by the student's state(s) of choice. The University cannot provide verification of a student's ability to meet licensure or certification requirements unrelated to its educational programming. Some states require individuals to complete additional requirements that are unrelated to educational prerequisites. For more information, visit the State Authorization and Professional Licensure (https://academics.utahtech.edu/state-authorization/) web page and select the program, or speak to the director of the program.

Utah Tech University shall not be held liable if a student is unable to qualify for licensure or certification in any jurisdiction.

This disclosure is made pursuant to 34 CFR §668.43(a)(5)(v)(C).

Admission Requirements for Secondary Education Program

To be admitted to the Secondary Education Program and enroll in professional courses:

- USBE R277-504-3 A(3) "requires candidates to maintain a cumulative university GPA of 3.0, and receive a C or better in all education related courses and major required content courses"

and students must pass the appropriate PRAXIS II content area subject test(s). In addition, one of the following must be completed:

- Students with BA/BS degrees in progress must have completed at least 95% of major coursework and have approval of major academic content area department advisor
- Students with completed BA/BS or higher degrees must have their transcripts reviewed by content area department advisor

Code	Title	Hours
Secondary Education Program Professional Requirements		
Semester I		
MATH 4500	Methods Teach Secondary Math	3
SCED 3720	Reading Writing Content Areas (ALPP)	2
SCED 4100	Curriculum and Instruction	3
SCED 4200	Secondary Assessment	2
SCED 4600	Classroom Management (ALPP)	3
SCED 4300	Practicum Seminar	3

Semester II		
SCED 4900	Secondary Student Teaching	10
SCED 4989	Student Teaching Capstone	3

Program Curriculum

121 credits

Utah Tech General Education Requirements

All Utah Tech General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to Utah Tech's minimum General Education standards in American Institutions, English, and Mathematics.

General Education Core Requirements (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)

Code	Title	Hours
English		3-7
Mathematics		3-5
American Institutions		3-6
Life Sciences		3-10
Physical Sciences		3-5
Fine Arts		3
Literature/Humanities		3
Social & Behavioral Sciences		3

Code	Title	Hours
Bachelor of Arts: Foreign Language Requirement		**3-16**
Complete one of the following:		
- Complete 16 credits in a single foreign language, through earned credit (grade C or higher), credit by examination, or vertical credit from the courses listed on the GE Foreign Language Requirement page [1]		
- Complete a 2020 or higher foreign language course (grade C or higher)		
- Complete a 3060 foreign language course listed below (grade C or higher)		
- Receive 16 transfer credits for GEFL 1000 (8) and GEFL 2000 (8) in a single foreign language (grade C or higher)		
OR		
Complete a 1010 course listed below in a second foreign language (grade C or higher) AND one of the following:		
1. In a language not taught at Utah Tech, receive 12 FLATS exam credits for FLAT 1000 (8) and FLAT 2000 (4)		
or		
2. In a language not taught at Utah Tech, receive 12 transfer credits articulated as GEFL 1000 (8) and GEFL 2000 (4) (all grade C or higher)		
OR		
Available only to students who are nonnative English speakers, complete one of the following:		
- Complete 16 credits of ESL courses listed below (grade B or higher)		
- Complete ESL 2750 or ESL 2760 (grade B or higher).		
- Submit one of the following test scores required for unconditional Utah Tech admission: TOEFL (61 iBT, 173 CBT, or 500 PBT); or Michigan (70); or USU-IELE equivalent score. Other tests may be accepted for admission to Utah Tech but will not fulfill this requirement. Official scores must be submitted to the Registrar's Office.		
Total Hours		**3-16**

[1] General Education Foreign Language Classes may be found on the General Education page. (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)

Secondary Education Pre-Program Requirements

Code	Title	Hours
HIST 1700	American History (AI)	3
or POLS 1100	American Government (AI)	

FSHD 1500	Human Development Lifespan (SS, GC)	3
or PSY 1010	General Psychology (SS, GC)	
or PSY 1100	Human Development Through Lifespan (SS, GC)	
EDUC 1010	Foundations/Intro to Education	3
EDUC 2010	Intro to Exceptional Learners	3
EDUC 2400	Foundations Multicultural/ESL (SS, GC, ALCI)	3
EDUC 2500	Instructional Technology in K-12 Classrooms (Must be taken within the last 5 years)	3
EDUC 3110		3
EDUC 2700	Graduation Planning, Program Application & Career Prep	0

Mathematics Core Requirements

Code	Title	Hours
MATH 1040	Introduction to Statistics (MA)	3
MATH 1210	Calculus I (MA)	4
MATH 1220	Calculus II (MA)	4
MATH 2200	Discrete Mathematics	3
MATH 2210	Multivariable Calculus (MA)	4
MATH 2270	Linear Algebra	3
MATH 2280	Ordinary Differential Equations	3
MATH 3000	History of Mathematics	3
MATH 3010	Algebra for Secondary Mathematics Teaching	3
MATH 3020	Geometry and Statistics for Secondary Mathematics Teaching	3
MATH 3100	Euclidean / Non-Euclidean Geom	3
MATH 3120	Transition to Advanced Mathematics	3
MATH 3200	Introduction to Analysis I	3
MATH 3400	Probability & Statistics	3
MATH 4000	Abstract Algebra I	3

Mathematics Program Requirements

Code	Title	Hours
CS 1400	Fundamentals of Programming	3
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers I Lab	5

Graduation Requirements

1. Complete a minimum of 121 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits (3000 and above).
3. Complete at least 30 upper-division credits at Utah Tech for institutional residency.
4. Cumulative university GPA 3.0 or higher.
5. Grade C or higher required (not C-) in each Mathematics Core Requirement and Program requirement course.
6. USBE R277-504-3 A(3) “requires candidates to maintain a cumulative university GPA of 3.0, and receive a C or better in all education related courses and major required content courses"
7. 3.0 GPA or higher in Education and Secondary Education program prerequisite and professional courses.

Graduation Plan

1st Year

Fall Semester	Hours	Spring Semester	Hours
MATH 1040	3	MATH 1220	4
MATH 1210	4	MATH 2200	3
General Education (Fine Arts) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3	ENGL 1010	3

HIST 1700 or POLS 1100	3	General Education (Life Sciences) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
FSHD 1500, PSY 1010, or PSY 1100	3		
	16		**13**

2nd Year

Fall Semester	Hours	Spring Semester	Hours
MATH 2270	3	MATH 2210	4
MATH 3000	3	MATH 2280	3
ENGL 2010	3	EDUC 1010	3
PHYS 2210 & PHYS 2215	5	General Education (Literature/Humanities) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
	14		**13**

3rd Year

Fall Semester	Hours	Spring Semester	Hours
CS 1400	3	MATH 3400	3
MATH 3010	3	MATH 3020	3
MATH 3100	3	MATH 3120	3
EDUC 2010	3	MATH 4500	3
EDUC 2400 (GLOCUP)	3	EDUC 2500 (Must be taken within the last 5 years)	3
		EDUC 2110	3
	15		**18**

4th Year

Fall Semester	Hours	Spring Semester	Hours
MATH 3200	3	SCED 4900	10
MATH 4000	3	SCED 4989	3
SCED 3720	2		
SCED 4100	3		
SCED 4200	2		
SCED 4600	3		
SCED 4300	3		
	19		**13**

Total Hours 121

BA/BS Mathematics Education Program Learning Outcomes

At the successful conclusion of this program, students will be able to:

1. Employ mathematical techniques in computational problems.
2. Interpret mathematical models.
3. Construct quantitative and logical arguments.
4. Apply mathematical knowledge to real world problems.
5. Communicate in mathematical language through the use of proper notation and terminology.