Mathematics, 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. The Utah Tech Mathematics Department also offers all coursework necessary to obtain a Utah Secondary Education Math Endorsement.

Program Curriculum

120 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)

Mathematics Core Requirements

Code	Title	Hours
MATH 1210	Calculus I (MA)	4
MATH 1220	Calculus II (MA)	4
MATH 2200	Discrete Mathematics	3
or CS 2100	Discrete Structures	
MATH 2210	Multivariable Calculus (MA)	4
MATH 2270	Linear Algebra	3
MATH 2280	Ordinary Differential Equations	3
MATH 3200	Introduction to Analysis I	3
MATH 3400	Probability & Statistics	3
MATH 3900	Number Theory	3
MATH 4000	Abstract Algebra I	3
MATH 4900	Senior Capstone Seminar (ALUR)	3

Mathematics Elective Requirements

Code	Title	Hours
Complete 12 credits from the following:		
MATH 3000	History of Mathematics	3
MATH 3100	Euclidean / Non-Euclidean Geom	3
MATH 3150	Introduction to Partial Differential Equations	3
MATH 3210	Introduction to Analysis II	3
MATH 3450	Statistical Inference	3
MATH 3500	Numerical Analysis	3
MATH 3605	Introduction to Modeling and Simulation	3
MATH 3700	Mathematical Modeling I	4
MATH 4010	Abstract Algebra II	3
MATH 4100	Introduction to Topology	3
MATH 4200	Introduction to Complex Analysis	3
MATH 4250	Programming for Scientific Computation	4
MATH 4550	Scientific Computation	3
MATH 4800	Industrial Careers in Mathematics	3
MATH 4890R	Independent Research	1-3

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
PHYS 2220 & PHYS 2225	Physics/Scientists EngineersII and Physics/Scientists Engineers II Lab	5

Graduation Requirements

1. Complete a minimum of 120 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. Grade C or higher (not C-) required in each Core Discipline Requirement, Mathematics Required Elective, and Mathematics Program Requirement course.
5. Cumulative GPA 2.0 or higher