

Curriculum - Mathematics (Statistics), BS

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Bachelor of Science, BS

College/School: [The College of Liberal Arts and Sciences](#)

Plan Code: LAMATTBS

Minimum credit hours: 120

Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
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Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in the class search.

Major Core

MAT 270 Calculus with Analytic Geometry I (MATH)

OR **MAT 265 Calculus for Engineers I (MATH)** C 3 - 4

MAT 271 Calculus with Analytic Geometry II (MATH)

OR **MAT 266 Calculus for Engineers II (MATH)** C 3 - 4

MAT 272 Calculus with Analytic Geometry III (MATH)

OR **MAT 267 Calculus for Engineers III (MATH)** C 3 - 4

MAT 300 Mathematical Structures C 3

MAT 343 Applied Linear Algebra

OR **MAT 342 Linear Algebra** C 3

MAT 371 Advanced Calculus I C 3

Requirement	Minimum Grade	Credit Hours
CSE 110 Principles of Programming (QTRS)	C	3
CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
Statistics Core		
STP 420 Introductory Applied Statistics (QTRS)	C	3
STP 421 Probability The STP 421 requirement serves as a capstone experience and must be taken from the School of Mathematical and Statistical Sciences.	C	3
STP 427 Mathematical Statistics The STP 427 requirement serves as a capstone experience and must be taken from the School of Mathematical and Statistical Sciences.	C	3
STP 429 Applied Regression (QTRS)	C	3
MAT or STP Advanced Course		
Upper Division MAT and STP Advanced Courses	C	6
ACT 430 Mathematics of Financial Derivatives		
ACT 435 Statistics for Risk Modeling		
ACT 450 Actuarial Models		
ACT 451 Short-Term Actuarial Mathematics		
MAT 372 Advanced Calculus II		
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 442 Advanced Linear Algebra		

Requirement	Minimum Grade	Credit Hours
MAT 472 Intermediate Real Analysis I		
400-Level STP Elective		

MAT and STP Advanced Courses

ACT 430 Mathematics of Financial Derivatives		
ACT 435 Statistics for Risk Modeling		
ACT 450 Actuarial Models		
ACT 451 Short-Term Actuarial Mathematics		
MAT 275 Modern Differential Equations (MATH)		
MAT 372 Advanced Calculus II	C	3
MAT 420 Scientific Computing		
MAT 421 Applied Computational Methods (MATH)		
MAT 423 Numerical Analysis I (MATH)		
MAT 442 Advanced Linear Algebra		
MAT 472 Intermediate Real Analysis I		
400-Level STP Elective		

Related Field

Related Field Course	C	10
Upper Division ACT Elective		
Upper Division AST Elective		
400-Level BCH Elective		
Upper Division BME Elective		
Upper Division CEE Elective		

CHE Elective

CHM 341 Elementary Physical Chemistry

CHM 343 Elementary Physical Chemistry Laboratory

CHM 345 Physical Chemistry I

CHM 346 Physical Chemistry II

CHM 348 Physical Chemistry Laboratory I

CHM 349 Physical Chemistry Laboratory II

CHM 453 Inorganic Chemistry

CHM 460 Biological Chemistry

CHM 471 Solid-State Chemistry

200-Level CIS Elective

Upper Division CIS Elective

CSE Elective

DAT 301 Exploring Data in R and Python

DAT 402 Machine Learning for Data Science

Upper Division ECN Elective

EEE Elective

Upper Division FIN Elective

GLG 418 Geophysics

GLG 419 Geodynamics

GLG 470 Hydrogeology

GLG 481 Geochemistry

Upper Division IEE Elective

Requirement	Minimum Grade	Credit Hours
<u>MAE Elective</u>		
Upper Division <u>MAT Elective</u>		
<u>MSE Elective</u>		
PHI 333 Symbolic Logic		
PHI 413 Advanced Symbolic Logic		
PHY 121 University Physics I: Mechanics (SCIT)		
PHY 122 University Physics Laboratory I (SCIT)		
PHY 131 University Physics II: Electricity and Magnetism (SCIT)		
PHY 132 University Physics Laboratory II (SCIT)		
PHY 150 Physics I (SCIT)		
PHY 151 Physics II (SCIT)		
200-Level <u>PHY Elective</u>		
Upper Division <u>PHY Elective</u>		
Upper Division <u>STP Elective</u>		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at <https://thecollege.asu.edu/student-resources/science-society>. At least one of the two courses must be upper division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Science and Society Elective C 3

Upper Division Science and Society Elective C 3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

LIA 101 Student Success in The College of Liberal Arts and Sciences

OR ASU 101-LA The ASU Experience

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Students enrolled in a campus immersion degree enroll in LIA 101.
Students enrolled in an online degree enroll in ASU 101-LA.

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition

OR ENG 105 Advanced First-Year Composition

C

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OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses.

<https://catalog.asu.edu/undergraduatereq>

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.