










2024 - 2025 Major Map

Mathematics, BA

School/College: The College of Liberal Arts and Sciences
LAMATBA

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming (QTRS OR CS) OR CSE 100: Principles of Programming with C++ (QTRS OR CS)	3	C	<ul style="list-style-type: none"> ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students. ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned. Select your Career Interest Communities and play me3@ASU.
 MAT 270: Calculus with Analytic Geometry I (MATH OR MA)	4	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
LIA 101: Student Success in The College of Liberal Arts and Sciences	1		
Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	15		
Term 2 15 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 271: Calculus with Analytic Geometry II (MATH OR MA)	4	C	
Related Field	4	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	15		
Term 3 30 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 272: Calculus with Analytic Geometry III (MATH OR MA)	4	C	<ul style="list-style-type: none"> Minimum grade of C required in all MAT and STP classes; grade of B or better strongly correlated with timely graduation. Meet with your academic advisor to discuss summer internship and/or Research Opportunities for Undergraduates (REU). PHY 121 and PHY 122 or MSE 208 are recommended to satisfy the Scientific
Second Language: Requirement satisfied through the following: * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Humanities, Arts and Design (HUAD)	3		
Scientific Thinking in Natural Sciences (SCIT)	4		
 Complete First-Year Composition requirement.			
Complete Mathematics (MATH) requirement.			
Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	15		

Thinking in Natural Sciences (SCIT) requirement as they also satisfy Related Field requirements.

Term 4 45 - 61 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ MAT 300: Mathematical Structures (L)	3	C	<ul style="list-style-type: none"> • Meet with your academic advisor to discuss options for adding a minor, certificate, or concurrent major to your degree program. • Upper division MAT/STP courses should be taken through the Tempe campus, unless approved by a SoMSS advisor.
⚠ MAT 342: Linear Algebra OR MAT 343: Applied Linear Algebra	3	C	
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Humanities, Arts and Design (HUAD)	3		
Social and Behavioral Sciences (SOBE)	3		
Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	16		

Term 5 61 - 77 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ MAT 370: Intermediate Calculus OR MAT 371: Advanced Calculus I	3	C	<ul style="list-style-type: none"> • Minimum grade of C required in all MAT and STP classes; grade of B or better strongly correlated with timely graduation. • Meet with your academic advisor to discuss post-graduation plans, e.g. graduate school, career preparation. • Upper division MAT/STP courses should be taken through the Tempe campus, unless approved by a SoMSS advisor. • PHY 121 and PHY 122 or MSE 208 are recommended to satisfy the Scientific Thinking in Natural Sciences (SCIT) requirement as they also satisfy Related Field requirements.
Complete 2 courses:			
Upper Division Related Field	6		
Scientific Thinking in Natural Sciences (SCIT)	4		
Sustainability (SUST)	3		
Term hours subtotal:	16		

Term 6 77 - 91 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Additional Course in the Major (ACT, DAT, MAT or STP)	3	C	<ul style="list-style-type: none"> • Minimum grade of C required in all MAT and STP classes; grade of B or better strongly correlated with timely graduation. • Upper division MAT/STP courses should be taken through the Tempe campus, unless approved by a SoMSS advisor. • Use Handshake to research employment opportunities.
Related Field	2	C	
American Institutions (AMIT)	3		
Global Communities, Societies and Individuals (GCSI)	3		
Upper Division Elective OR MAT 484: Internship	3		
Term hours subtotal:	14		

Term 7 91 - 106 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
Complete 2 courses:			<ul style="list-style-type: none"> • Minimum grade of C required in all MAT and STP classes; grade of B or better strongly correlated with timely graduation. • Upper division MAT/STP courses should be taken through the Tempe campus, unless approved by a SoMSS advisor. • Meet with your academic advisor to discuss post-graduation plans, e.g. graduate school, career preparation.
★ Upper Division Additional Course in the Major (ACT, DAT, MAT or STP)	6	C	
Governance and Civic Engagement (CIVI)	3		
Complete 2 courses:			
Upper Division Elective	6		
Term hours subtotal:	15		

- Develop your professional online presence.

Term 8 106 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Additional Course in the Major (ACT, DAT, MAT or STP)	4	C	<ul style="list-style-type: none"> • Minimum grade of C required in all MAT and STP classes; grade of B or better strongly correlated with timely graduation. • Upper division MAT/STP courses should be taken through the Tempe campus, unless approved by a SoMSS advisor. • Meet with your academic advisor for final degree check and apply for graduation through your My ASU.
★ Additional Course in the Major (ACT, DAT, MAT or STP)	2	C	
Complete 3 courses:	8		
Upper Division Elective			
Term hours subtotal:	14		

Hide Course List(s)/Track Group(s)

Additional Course in the Major (ACT, DAT, MAT or STP)	Related Field
ACT Upper Division Elective	ACT Upper Division Elective
DAT Upper Division Elective	AST Upper Division Elective
MAT 243: Discrete Mathematical Structures	BCH 4** Elective
MAT 274: Elementary Differential Equations (MATH OR MA) or MAT 275: Modern Differential Equations (MATH OR MA)	BME Upper Division Elective
MAT Upper Division Elective	CEE Upper Division Elective
STP 4** 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 (L)
	CHM 349: Physical Chemistry Laboratory II (L)
	CHM 453: Inorganic Chemistry
	CHM 460: Biological Chemistry
	CHM 471: Solid-State Chemistry
	CIS 2** Elective
	CIS Upper Division Elective
	CSE Elective
	DAT Upper Division Elective
	ECN Upper Division Elective
	EEE Elective
	FIN Upper Division Elective

GLG 418: Geophysics
GLG 419: Geodynamics
GLG 470: Hydrogeology
GLG 481: Geochemistry
IEE Upper Division Elective
MAE Elective
MAT 243: Discrete Mathematical Structures
MAT 274: Elementary Differential Equations (MATH OR MA) or MAT 275: Modern Differential Equations (MATH OR MA)
MAT Upper Division Elective
MSE Elective
PHI 333: Symbolic Logic
PHI 413: Advanced Symbolic Logic
PHY 121: University Physics I: Mechanics (SCIT OR SQ)
PHY 122: University Physics Laboratory I (SCIT OR SQ)
PHY 131: University Physics II: Electricity and Magnetism (SCIT OR SQ)
PHY 132: University Physics Laboratory II (SCIT OR SQ)
PHY 150: Physics I (SCIT OR SQ)
PHY 151: Physics II (SCIT OR SQ)
PHY 2** Elective
PHY Upper Division Elective
STP Upper Division Elective

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- **University Undergraduate Graduation Requirements**

Notes:

Mathematics Placement Assessment score determines placement in first mathematics course.

Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 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.