














## 2023 - 2024 Major Map

### Mathematics (Secondary Education), BS

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

ASU is no longer accepting new students to this program. Please explore Degree Search for other similar program options.

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 207: Algebra and Geometry in the High School	3	C	<ul style="list-style-type: none"> <li>ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.</li> <li>Select your <b>Career Interest Communities</b> and play <b>me3@ASU</b>.</li> </ul>
 MAT 270: Calculus with Analytic Geometry I (MA)	4	C	
 MTE 210: Mentored Tutoring Internship	1	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		
TEL 111: Exploration of Education (SB)	3	C	
 Maintain 3.00 GPA in Critical Tracking Courses.			
Term hours subtotal:	15		
Term 2 15 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 208: Discrete Mathematics for Secondary Teachers	3	C	
 MAT 271: Calculus with Analytic Geometry II (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	
TEL 212: Understanding the Culturally Diverse Learner (HU & C)	3	C	
Natural Science - Quantitative (SQ)	4		
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
 Maintain 3.00 GPA in Critical Tracking Courses.			
Minimum 2.25 GPA ASU Cumulative.			
Term hours subtotal:	17		
Term 3 32 - 49 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 272: Calculus with Analytic Geometry III (MA)	4	C	<ul style="list-style-type: none"> <li>Meet with your academic advisor to discuss a summer internship and/or <b>Research Opportunities for Undergraduates (REU)</b>.</li> </ul>
 MTE 250: Technology and Mathematical Visualization	3	C	
Science and Society Elective	3	C	
Humanities, Arts and Design (HU) AND Global Awareness (G) AND Historical Awareness (H)	3		
Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		

❗ Complete First-Year Composition requirement.

❗ Maintain 3.00 GPA in Critical Tracking Courses.

Complete Mathematics (MA) requirement.

Term hours subtotal: 17

Term 4 49 - 64 Credit Hours Critical course signified by ❗	Hours	Minimum Grade	Notes
❗ MAT 300: Mathematical Structures (L)	3	C	<ul style="list-style-type: none"><li>• Apply for an Identity Verified Print (IVP) <b>fingerprint clearance card</b>. This is required by AZ state law for participation in internships in 6-12 grade schools.</li><li>• Upper-division MAT/STP/MTE courses should be taken through the Tempe campus, unless approved by a SoMSS advisor.</li></ul>
❗ MAT 310: Introduction to Geometry	3	C	
❗ MAT 342: Linear Algebra OR MAT 343: Applied Linear Algebra	3	C	
❗ MTE 320: Conceptual Foundations of 7-12 Mathematics Curricula and Assessment	3	C	
BLE 220: Foundations of Structured English Immersion (L)	3	C	
❗ Maintain 3.00 GPA in Critical Tracking Courses.			
Term hours subtotal:		15	

Term 5 64 - 79 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ MAT 371: Advanced Calculus I	3	C	<ul style="list-style-type: none"><li>• Meet with your advisor early in the semester to discuss enrollment in Teachers College (TEL) courses for Term 6. There may be specific steps you need to follow, prior to enrolling in these courses, including verification that you have obtained an IVP fingerprint card.</li><li>• Upper-division MAT/STP/MTE courses should be taken through the Tempe campus, unless approved by a SoMSS advisor.</li></ul>
★ MTE 430: The Development of Mathematical Thinking	3	C	
★ STP 420: Introductory Applied Statistics (CS)	3	C	
SPE 222: Orientation to Education of Exceptional Children (SB & C)	3	C	
MAT OR STP Upper Division Elective ( MAT 274 OR MAT 275 recommended)	3	C	
Minimum 2.25 GPA ASU Cumulative.			
Term hours subtotal:		15	

Term 6 79 - 94 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ MAT 415: Introduction to Combinatorics OR MAT 416: Graph Theory	3	C	<ul style="list-style-type: none"><li>• Upper-division MAT/STP/MTE courses should be taken through the Tempe campus, unless approved by a SoMSS advisor.</li></ul>
★ TEL 310: Instructional Thought and Action: Instructional Design and Planning	3	C	
★ TEL 317: Instructional Thought and Action: Learning Environment and Management	3	C	
★ TEL 318: Instructional Thought and Action: Assessment for Learning	3	C	
Upper Division Science and Society Elective	3	C	
★ Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).			
Minimum 2.25 GPA ASU Cumulative.			
Term hours subtotal:		15	

Term 7 94 - 108 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ MTE 482: Methods of Teaching Mathematics in Secondary School	3	C	<ul style="list-style-type: none"><li>• While enrolled in TEL 477, you will be paired with a mentor teacher in a 6-12th grade classroom. You will need to complete 75 hours over the semester. Reliable transportation is needed to get to school sites.</li><li>• Students seeking teacher certification must pass required educator <b>exams</b>. Please</li></ul>
★ TEL 332: Disciplinary Literacy Methods	3	C	
★ TEL 340: Families, Communities and Cultures: Cultivating Networks of Culturally Responsive Relationships (SB)	3	C	
★ TEL 477: Internship: Advanced	2	C	

MAT 441: Ring Theory OR MAT 445: Theory of Numbers OR 3 C  
MAT 440: Group Theory

Minimum 2.25 GPA ASU Cumulative.

Term hours subtotal: 14

Speak with your Teachers College advisor to plan appropriately.

- Upper-division MAT/STP/MTE courses should be taken through the Tempe campus, unless approved by a SoMSS advisor.
- Use Handshake to research **employment opportunities**.

Term 8 108 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ TEL 488: Student Teaching	11	C	<ul style="list-style-type: none"> <li>• Gather <b>professional references</b>.</li> <li>• Student teaching requires a full-time commitment in a 6-12th grade classroom for the semester.</li> </ul>
TEL 471: Professional Educator Series: The Principled Educator	1		
Minimum 2.25 GPA ASU Cumulative.			
Term hours subtotal:	12		

- 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/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.

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

#### Notes:

- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: <https://cisa.asu.edu/DSP>
- 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.

**Total Hours:** 120

**Upper Division Hours:** 45 minimum

**Major GPA:** 2.00 minimum

**Cumulative GPA:** 2.00 minimum

**Total hrs at ASU:** 30 minimum

**Hrs Resident Credit for**

**Academic Recognition:** 56 minimum

**Total Community College Hrs:** 64 maximum

**Total College Residency Hrs:** 12 minimum

#### General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)

- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed next to courses on the major map were valid for the 2023 - 2024 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.