



# The Bachelor of Science in Mathematics Education Emphasis Four-Year Plan for Catalog Year 2022

**THIS IS A SAMPLE PROGRAM. EACH STUDENT SHOULD CONSULT A DEPARTMENT ADVISOR TO PREPARE A PROGRAM THAT FITS THEIR INDIVIDUAL BACKGROUND AND ACADEMIC NEEDS.**

	<u>Fall Semester</u>		<u>Spring Semester</u>
<b>Freshman Year</b>			
MATH 122A & B	5	MATH 129	3
ENGL 101 or 107 or 109H	3	CSC 110 or ISTA 130 <sup>1</sup>	4
GE Core	3	ENGL 102 or 108	3
GE Core	3	GE Core	3
MATH 195M <sup>2</sup>	1	GE Core	3
UNIV 101	1		
	<b>Total 16</b>		<b>Total 16</b>
<b>Sophomore Year</b>			
MATH 205	3	MATH 315	3
MATH 223	4	MATH 355	3
MATH 313	3	EDP 301	3
GE Core	3	SERP 400	3
Second Language	4	Second Language	4
	<b>Total 17</b>		<b>Total 16</b>
<b>Junior Year</b>			
MATH 330	3	MATH 361	3
MATH 323	3	MATH 406A	4
MATH 396L <sup>4</sup>	1	TLS 435	3
Lab Science <sup>3</sup>	4	Lab Science <sup>3</sup>	4
LCEV 408	3	GE Core	3
	<b>Total 14</b>		<b>Total 17</b>
<b>Senior Year</b>			
MATH 404	3	MATH 494C	15
MATH 406B	4		
MATH 407	3		
POL 210 <sup>5</sup>	3		
GE Core	3		
UNIV 301	1		
	<b>Total 17</b>		<b>Total 15</b>

**This degree program requires at least 120 total units, including 42 upper-division units (300-400 level)**

<sup>1</sup> CSC 110, ISTA 130, ECE 175, or CHEE 205 are recommended for most math majors. Other courses that can be used are: CSC 120, MIS 301, NSCS 311, and PHYS 305. These latter courses may have additional eligibility criteria.

<sup>2</sup> MATH 195M is an optional one-unit colloquium for new majors. Other programs, including Honors, ASEMS, and more, may require 1 unit colloquia in certain semesters.

<sup>3</sup> BS degree requirements for Mathematics Majors: 1. Laboratory Science: **Two** of the following lab science courses are required to satisfy requirements: CHEM 141&143, 142&144; CHEM 151, 152; CHEM 161&163, 162&164; MCB 181R&181L, ECOL 182R&182L; PHYS 141, 161H, 142, 241, 162H, 261H; GEOS 251, 302, 304, 308, 322; PSIO 201, 202. Note that for courses with separate registration for lecture and lab, BOTH components must be completed. 2. Second Language: Second-semester proficiency in a second language is required for the BS degree. (The Application Course requirement does not apply to Education emphasis students.)

<sup>4</sup> MATH 396L is a 1-unit supplement to 323 and is required for students earning a C or lower in 313. Students who earn a D in 313 must take another proof-based course before 323.

<sup>5</sup> The Constitution Requirement for certification is fulfilled by completing one of: (1) POL 210 at UA; (2) POS 210 at Pima Community College; (3) Equivalent course from another AZ community college; (4) Attaining a passing score on the AEPA AZ and US Constitution exams. Notify the Math Center if POL 210 fills up before your priority registration opens for your final semester before student teaching.

See an academic advisor if you have questions regarding the Mid-Career Writing Assessment requirement.

**B.A. / B.S. in Mathematics - Mathematics Education Emphasis - Courses & Prerequisites**

MATHEMATICS COURSES	SEM. OFFERED	PREREQUISITES	MATHEMATICS TEACHING AND LEARNING COURSES	SEM. OFFERED	PREREQUISITES
<input type="checkbox"/> <b>ISTA 130</b> or <b>CSC 110</b> Intro. to Computer Science	Fall, Spring	MATH 112: required for CSC, recommended for ISTA	<input type="checkbox"/> <b>MATH 205* (16 hrs FP)</b> Teaching Mathematics	Fall	MATH 122B or 125; MATH 129 or consent of instructor; Sophomore standing
<input type="checkbox"/> <b>MATH 122A&amp;B</b> or <b>125</b> Calculus I	Fall, Spring, Summer	MATH 120R† or placement	<input type="checkbox"/> <b>EDP 301</b> Educational Psychology and Child and Adolescent Development	Fall, Spring, Summer	
<input type="checkbox"/> <b>MATH 129</b> Calculus II	Fall, Spring, Summer	MATH 122B† or MATH 125†	<input type="checkbox"/> <b>SERP 400</b> Survey of Exceptional Students	Fall, Spring, Summer	
<input type="checkbox"/> <b>MATH 223</b> Vector Calculus	Fall, Spring, Summer	MATH 129†	<input type="checkbox"/> <b>LCEV 408</b> Structured English Immersion (SEI)	Fall, Spring, Summer	Contact College of Education if unable to enroll
<input type="checkbox"/> <b>MATH 313‡</b> Intro to Linear Algebra	Fall, Spring, Summer	MATH 129†	<input type="checkbox"/> <b>TLS 435</b> Content Area Literacy	Spring	
<input type="checkbox"/> <b>MATH 355</b> Analysis of Ord. Diff. Eq.	Fall, Spring	MATH 313	<input type="checkbox"/> <b>MATH 406A*(30 hrs FP)</b> Curriculum and Assessment in Secondary School Mathematics	Spring	MATH 205, EDP 301, MATH 330. MATH 315 & MATH 361 may be taken concurrently. GPA $\geq$ 2.5 in MATH 122A&B/125, 129, 223
<input type="checkbox"/> <b>MATH 361</b> Statistics for Teaching	Spring	MATH 223; 313 recommended	<input type="checkbox"/> <b>MATH 406B*(30 hrs FP)</b> Methods of Teaching Mathematics in Secondary Schools	Fall	MATH 406A GPA $\geq$ 2.5 in MATH 122A&B/125, 129, 223
<input type="checkbox"/> <b>MATH 330</b> Topics in Geometry	Fall	MATH 313	<input type="checkbox"/> <b>MATH 494C*(80 days FP)</b> Student Teaching	Fall, Spring	All mathematics content & pedagogy courses Overall GPA $\geq$ 2.0; Major GPA $\geq$ 2.0; Pedagogy GPA $\geq$ 2.5
<input type="checkbox"/> <b>MATH 315</b> Intro. to Number Theory and Modern Algebra	Spring	MATH 313	*Course has a Field Practicum (FP) and a Fingerprint Clearance Card (FCC) requirement from the AZ Dept. of Public Safety		
<input type="checkbox"/> <b>MATH 323</b> Formal Mathematical Reasoning	Fall, Spring, Summer	MATH 313**	†Grade of C or better required in this prerequisite. ‡MATH 313 has replaced 215; students with credit for 215 will satisfy this requirement and qualify for courses requiring 313 as prerequisite. **Students who earn a C in 313 must enroll in MATH 396L with 323. Students who earn a D in 313 need to take 315 prior to 323 + 396L.		
<input type="checkbox"/> <b>MATH 404</b> History of Mathematics	Fall	MATH 313	<b>Choose ONE option for AZ &amp; US Constitutions (for AZ Certification):</b>		
<input type="checkbox"/> <b>MATH 407</b> Synthesis of Mathematical Concepts	Fall	MATH 330, MATH 323 and (MATH 315 or MATH 415A)	<input type="checkbox"/> UA- <b>POL 210</b> <input type="checkbox"/> PCC- <b>POS 210</b> <input type="checkbox"/> Equivalent course from another institution <input type="checkbox"/> <b>AEPA</b> Exams – ( <a href="http://www.aepa.nesinc.com">http://www.aepa.nesinc.com</a> )		