

**CSUSB Department of Mathematics  
BA in Mathematics Program**

<b>BA Requirements</b>	<b>Units (58 – 61)</b>
<b>Lower Division Requirements</b>	25 – 26 total
Select one of: CSE 1100 - Critical Thinking through Computer Programming CSE 1250 - Programming Basics CSE 2010 - Computer Science I	3 – 4
MATH 2210 - Calculus I	4
MATH 2220 - Calculus II	4
MATH 2265 - Statistics with Applications	3
MATH 2270 - Differential Equations with Dynamical Systems I	3
MATH 2310 - Applied Linear Algebra	4
MATH 2320 - Multivariable Calculus	4
<b>Upper Division Requirements</b>	18 total
MATH 3100 - Mathematical Thinking: Communication and Proof	4
MATH 3329 - Euclidean Geometry with Transformations	3
MATH 3345 - Number Theory	3
MATH 4300 - Real Analysis	4
MATH 4600 - Theory of Rings and Fields	4
<b>Electives</b>	15 total
<b>Five courses (15 units) selected from the following courses with at least one course from each of Group A, Group B, and Group C. At least two of the five elective courses must be at the 4000-level or above.</b>	15-17 total
<b>Group A</b>	
MATH 3372 - Combinatorics MATH 3770 - Introduction to Graph Theory	
<b>Group B</b>	
MATH 3320 - Mathematical Interest Theory MATH 3460 - Probability Theory MATH 4270 - Differential Equations with Dynamical Systems II MATH 4455 - Partial Differential Equations & Fourier Analysis	
<b>Group C</b>	
MATH 4485 - Differential Geometry MATH 5170 - Complex Analysis MATH 5310 - Advanced Linear Algebra MATH 5529 - Advanced Topics in Geometry MATH 5550 - Introduction to Topology	
<b>Group D</b>	
Math 2900 - Problem Solving and Mathematical Reasoning for Teachers I Math 4900 - Problem Solving and Mathematical Reasoning for Teachers II MATH 3480 - Topics in History of Mathematics MATH 4320 - Introduction to Actuarial Modeling MATH 4360 - Linear Statistical Models MATH 5510 - Topics in Advanced Mathematics MATH 5300 - Advanced Real Analysis MATH 5565 - Mathematical Statistics MATH 5580 - CSUSB to PhD Bridge MATH 5600 - Group Theory MATH 5953 - Independent Study PHIL 3560 - Philosophy of Logic and Mathematics	

**Note:** Students pursuing a career in education are strongly encouraged to consult a faculty advisor when selecting their elective coursework (Math 3460, Math 2900, and Math 4900 should be included).