

**CSUSB Department of Mathematics**  
**BS in Mathematics - Teaching Mathematics Concentration**

<b>BS – Teaching Mathematics Concentration Requirements</b>	<b>Units (63 – 64)</b>	<b>Quarter Equivalent</b>
<b>Lower Division Requirements</b>	26 – 27 total	
Select one of the following: CSE 1100 - Critical Thinking through Computer Programming CSE 1250 - Programming Basics CSE 2010 - Computer Science I	3 – 4	CSE 201
MATH 2210 - Calculus I	4	Math 211/212
MATH 2220 - Calculus II	4	Math 212/213
MATH 2265 - Statistics with Applications	3	Math 262
MATH 2310 - Applied Linear Algebra	4	Math 251/331
MATH 2320 - Multivariable Calculus	4	Math 252
MATH 2900 - Problem Solving and Mathematical Reasoning for Teachers I	4	Math 199/299
<b>Upper Division Requirements</b>	31 total	
MATH 3100 - Mathematical Thinking: Communication and Proof	4	None
MATH 3329 - Euclidean Geometry with Transformations	3	Math 329
MATH 3345 - Number Theory	3	Math 345
MATH 3460 - Probability Theory	3	Math 465
MATH 3480 - Topics in History of Mathematics	3	Math 480
MATH 4300 - Real Analysis	4	Math 553
MATH 4600 - Theory of Rings and Fields	4	Math 546*
MATH 4900 - Problem Solving and Mathematical Reasoning for Teachers II	4	Math 399/499
MATH 5900 - Senior Seminar for Future Mathematics Educators	3	Math 599
<b>Electives</b>	6 total	
<b>Two courses (6 units) selected from the following with at least one course from Group A.</b>		
<b>Group A</b>		
MATH 5170 - Complex Analysis		Math 557
MATH 5300 - Advanced Real Analysis		Math 554
MATH 5310 - Advanced Linear Algebra		Math 531
MATH 5529 - Advanced Topics in Geometry		Math 529
MATH 5550 - Introduction to Topology		Math 555
MATH 5565 - Mathematical Statistics		Math 565
MATH 5600 - Group Theory		Math 545
<b>Group B</b>		
MATH 2270 – Differential Equations with Dynamical Systems I		Math 270
MATH 3140 - Introduction to Systems Modeling		None
MATH 3320 - Mathematical Interest Theory		Math 320
MATH 3372 - Combinatorics		Math 372
MATH 3770 - Introduction to Graph Theory		None
MATH 4320 - Introduction to Actuarial Modeling		None
MATH 4360 - Linear Statistical Models		None
MATH 4485 - Differential Geometry		Math 485
MATH 5510 - Topics in Advanced Mathematics		Math 510
MATH 5953 - Independent Study		Math 595

**\*Note:** Students completing quarter requirements under semesters who need Math 545 should complete Math 4600 to substitute for Math 545. They can then take Math 5600 as an elective. If a student has completed Math 545 on quarters and needs an elective, they can take Math 4600 to substitute for the Math 546 elective