

**CSUSB Department of Mathematics**  
**BS in Mathematics - Teaching Mathematics Concentration - FALL 2020**

<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>		
Group A		
MATH 5170 - Complex Analysis MATH 5300 - Advanced Real Analysis MATH 5310 - Advanced Linear Algebra MATH 5529 - Advanced Topics in Geometry MATH 5550 - Introduction to Topology MATH 5565 - Mathematical Statistics MATH 5600 - Group Theory		Math 557 Math 554 Math 531 Math 529 Math 555 Math 565 Math 545
Group B		
MATH 2270 – Differential Equations with Dynamical Systems I MATH 3140 - Introduction to Systems Modeling MATH 3320 - Mathematical Interest Theory MATH 3372 – Combinatorics MATH 3770 – Introduction to Graph Theory MATH 4320 - Introduction to Actuarial Modeling MATH 4360 - Linear Statistical Models MATH 4485 - Differential Geometry MATH 5510 - Topics in Advanced Mathematics MATH 5953 - Independent Study		Math 270 None Math 320 Math 372 None None None Math 485 Math 510 Math 595

**\*Note:** Students who are completing quarter requirements under semesters and 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