



**BACHELOR OF SCIENCE IN MATHEMATICS**  
**OPTION IN APPLIED MATHEMATICS**  
**(SUBOPTION II: APPLICATION IN ECONOMICS AND FINANCE)**  
**FOUR YEAR DEGREE WORKSHEET**  
**2019-2020 Catalog**

This degree worksheet is intended to help you develop a balanced course schedule while completing your degree within 4 years. The same sequence of courses (with fewer courses each semester) is also recommended for students completing their degree in 5 or 6 years. This worksheet is not intended to replace academic advising with your assigned advisor. Students should consult with their assigned advisor to determine the appropriate sequence of required courses and electives based on their academic goals. Please note that your Major Specific Requirements (MSRs) are **bolded** in the document and are also listed as an “MSR” in the notes column. These courses must be completed in order to declare your major. **All students must have a GPA of 2.5 or higher in the STEM MSR suite.**

Pre-Mathematics first-time freshmen must complete MATH 122 and MATH 123 with a cumulative GPA of 2.5 or higher.

CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.

**Year 1**

Semester	Course #	Course Title (Units)	Prerequisites	Notes
1	<b>MATH 122 (area B4)</b>	<b>Calculus I (4)</b>	<b>Appropriate placement, MATH 111 and either 112B or 113</b>	<b>MSR</b>
	<b>GE (area A2)</b>	<b>Written Communication (3)</b>		<b>MSR</b>
	GE (area C,D,E)	Other Explorations (3)		
	GE (area C,D,E)	Other Explorations (3)		
	NSCI 190A	Experience Success Program 1 (1)		Fall only
2	<b>MATH 123 (area B4)</b>	<b>Calculus II (4)</b>	<b>MATH 122</b>	<b>MSR</b>
	<b>ECON 100</b>	<b>Principles of Macroeconomics (3)</b>	<b>MATH 103 or higher</b>	<b>MSR</b>
	<b>GE (area A1)</b>	<b>Oral Communication (3)</b>		<b>MSR</b>
	<b>GE (area A3)</b>	<b>Critical Thinking (3)</b>		<b>MSR</b>
	GE (area B2)	Life Science (3-4)		B2 or B1 with lab

## Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	MATH 224	Calculus III (4)	MATH 123	
	ECON 101	Principles of Microeconomics (3)	MATH 103 or higher	
	CECS 174	Intro Programming and Problems Solving (3)	CECS 100 (A3); MATH 113, 122, or 123	
	GE (area C,D,E)	Other Explorations (3)		
	Elective	Elective (3)		
4	MATH 247	Introduction to Linear Algebra (3)	MATH 123	
	MATH 380	Probability and Statistics (3)	MATH 224	
	ECON 310; <b>OR</b> FIN 300	Microeconomic Theory (3); <b>OR</b> Business Finance (3)	ECON 100 and 101, MATH 115 or 119A or 122; <b>OR</b> none	
	GE (area B1)	Physical Science (3-4)		B2 or B1 with lab
	GE (area C,D,E)	Other Explorations (3)		

## Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	MATH 323	Introduction to Numerical Analysis (4)	MATH 224 and CECS 174	
	MATH 364A	Ordinary Differential Equations (3)	MATH 224, <i>Pre/Corequisite: 247</i>	
	ECON 311 (if ECON 310 taken); <b>OR</b> FIN 350 (if FIN 300 taken)	Macroeconomic Theory (3); <b>OR</b> Investment Principles (3)	ECON 100 and 101, MATH 115 or 119A or 122; <b>OR</b> FIN 300	
	GE (area C,D,E)	Other Explorations (3)		
	GE (area C,D,E)	Other Explorations (3)		

Semester	Course #	Course Title (Units)	Prerequisites	Notes
6	MATH 361A	Introduction to Mathematical Analysis I (3)	MATH 224 and 247	
	STAT 381	Mathematical Statistics (3)	MATH 247 and 380	
	ENGL 317	Technical Communication (3)	GE Foundation	
	Elective	Economics or Finance (3)		
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	

## Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	MATH 361B	Intro. to Mathematical Analysis II (3)	MATH 361A	
	MATH 474; <b>OR</b> MATH 485	Mathematics of Financial Derivatives (3); <b>OR</b> Mathematical Optimization (3)	MATH 380, and either 364A or 370A; <b>OR</b> MATH 247 and either 323, 347 or 380	474 is Spring only 485 is Fall only
	Upper Division Elective	MATH/STAT Elective (3)		
	Elective	Economics or Finance (3)		
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	8	Upper Division Elective	MATH/STAT Elective (3)	
	Upper Division Elective	MATH/STAT Elective (3)		
	Elective	Economics or Finance (3)		
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	Elective	Elective (1)		