



**BACHELOR OF SCIENCE IN MATHEMATICS  
OPTION IN APPLIED MATHEMATICS  
(SUBOPTION I: APPLICATION IN SCIENCE AND ENGINEERING)  
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>	Calculus I (4)	<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>	Calculus II (4)	<b>MATH 122</b>	<b>MSR</b>
	<b>PHYS 151</b>	<b>Mechanics and Heat (4)</b>	<b>MATH 122,123, or 224</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>

## Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	MATH 224	Calculus III (4)	MATH 123	
	PHYS 152	Electricity and Magnetism (4)	PHYS 151 and MATH 123	
	CECS 174	Intro Programming and Problems Solving (3)		
	GE (area C,D,E)	Other Explorations (3)		
	GE (area C,D,E)	Other Explorations (3)		
4	MATH 247	Introduction to Linear Algebra (3)	MATH 123	
	MATH 364A	Ordinary Differential Equations I (3)	MATH 224, <i>Corequisite: 247</i>	
	PHYS 254; <b>OR</b> EE 211; <b>OR</b> CE 205	Applied Modern Physics (3); <b>OR</b> Electric and Electronic Circuits (3); <b>OR</b> Analytical Mechanics I (3)	PHYS 152 or EE 210; <b>OR</b> PHYS 152 or EE 210 and 210L, MATH 123; <b>OR</b> PHYS 151, <i>Pre/Corequisite: MATH 123</i>	
	GE (area C,D,E)	Other Explorations (3)		
	GE (area C,D,E)	Other Explorations (3)		

## Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	MATH 380	Probability and Statistics (3)	MATH 224	
	MATH 323	Introduction to Numerical Analysis (4)	MATH 224 and a course in computer programming	CECS 174
	Upper Division Elective	MATH/STAT (3)		
	GE (area B2)	Life Science (3)		B2NL is okay
	GE (area C,D,E)	Other Explorations (3)		

Semester	Course #	Course Title (Units)	Prerequisites	Notes
6	MATH 361A	Intro. to Mathematical Analysis I (3)	MATH 224 and 247	
	MATH 364B	Ordinary Differential Equations II (3)	MATH 364A	
	ENGL 317	Technical Communication (3)	GE Foundation	
	Elective	Science or Engineering (3)	Keep with theme (PHYS, EE, or CE)	
	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	Introduction to Mathematical Analysis II (3)	MATH 361A	
	MATH 470	Introduction to Partial Differential Equations (3)	MATH 364A	Fall only
	Elective	Science or Engineering Elective (3)	Keep with theme (PHYS, EE, or CE)	
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	Elective	Elective (3)		
8	Upper Division Elective	MATH/STAT (3)		
	Upper Division Elective	MATH/STAT (3)		
	Elective	Science or Engineering (3)	Keep with theme (PHYS, EE, or CE)	
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	Elective	Elective (2)		