

# BACHELOR OF SCIENCE IN MATHEMATICS

## Option in Applied Mathematics (*Suboption I Application in Science and Engineering*)

### Major Requirements Worksheet

### 2012-2013 Catalog

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

*Note: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.*

Grade	Course #	Course Title	Semester	Prerequisites (All prerequisite courses must have a "C" or better)
	MATH 122	Calculus I (4)		Appropriate MDPT placement* or MATH 111 and 113 or MATH 117
	MATH 123	Calculus II (4)		MATH 122
	MATH 224	Calculus III (4)		MATH 123 or 222
	MATH 247	Introduction to Linear Algebra ( 3)		MATH 123 or 222
	CECS 174	Introduction to Programming and Problem Solving (3)		CECS 100 and MATH 113 (or equivalent)
	PHYS 151	Mechanics and Heat (4)		MATH 122 (pre/Corequisite)
	PHYS 152	Electricity and Magnetism (4)		PHYS 151; MATH 123 (pre/Corequisite)

**Take ONE of the following**

	ENGL 101	Composition (3) OR		ENGL 100
	ENGL 317	Technical Communication (3)		GE foundation requirements, upper-division standing, and a previous composition course*

**Take ONE of the following courses**

	PHYS 254	Applied Modern Physics (3) OR		PHYS 152 or EE 210; Pre/Corequisite: MATH 224
	EE 211	Electric and Electronic Circuits (3) OR		EE 210/210L or PHYS 152 and MATH 123 or equivalent
	CE 205	Analytical Mechanics I (Statics) (3)		PHYS 151; MATH 123 (pre/Corequisite)

**Upper Division:** (see major advisor for all upper-division advising). **Take ALL of the following courses:**

	MATH 323	Introduction to Numerical Analysis (4)		MATH 222 or 224, and a course in computer programming
	MATH 361A	Introduction to Mathematical Analysis I (3)		MATH 222 or 224, and MATH 233 or 247
	MATH 361B	Introduction to Mathematical Analysis II (3)		MATH 361A
	MATH 364A	Ordinary Differential Equations I (3)		MATH 222 or 224, and Pre/Corequisite MATH 247
	MATH 364B	Ordinary Differential Equations II (3)		MATH 364A or 370A
	MATH 380	Probability and Statistics (3)		MATH 222 or 224
	MATH 470	Introduction to Partial Differential Equations (3)		MATH 364 A or 370A

A minimum of **9 units** from the following: MATH 423, 461, 463, 472, 473, 474, 479, 485; STAT 381, 482


A minimum of **9 units** from **ONE** of the following groups (see catalog for the prerequisites\* for the courses below):

<b>Group A</b> PHYS 310, 340A, 340B, 350, 410, 422, 450	<b>Group B</b> EE 310, 370, 382, 411, 460, 482	<b>Group C</b> CE 335, 359, 437 438, 458; MAE 371, 373
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