

# BACHELOR OF SCIENCE IN MATHEMATICS (IMPACTED)

## Option in Mathematics Education

### Major Requirements Worksheet

#### 2017-2018 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. **Pre-Mathematics majors must complete their GE Foundation courses, and the highlighted areas below all with a "C" or better and a cumulative GPA of 2.5, by 60 units to be considered for the major.***

This option is for students preparing to teach mathematics at the secondary school level. Completion of this option meets subject matter competence requirements for the Single Subject Teaching Credential Mathematics. Consult the department's Mathematics Education Advisor early to plan the program.

Many prerequisites require a "C" or better, please check the catalog for grade requirements.

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 122 <sup>†</sup>	Calculus I (4)	Appropriate MDPT placement* or MATH 111 and 113
		MATH 123 <sup>†</sup>	Calculus II (4)	MATH 122
		MATH 224	Calculus III (4)	MATH 123
		MATH 233	Fundamental Concepts for Advanced Mathematics (3)	MATH 123
		MATH 247	Introduction to Linear Algebra (3)	MATH 123
		ENGL 300	Advanced Composition (3)	GE Foundation requirements and upper-division standing *
		ENGL 317	Technical Communication (3)	GE foundation requirements, upper-division standing, and a previous composition course*

\*See catalog for more detail

#### Choose ONE of the following groups:

Semester	Grade	Course #	Course Title	Prerequisites
		PHYS 151	Mechanics and Heat (4)	MATH 122
		PHYS 152	Electricity and Magnetism (4)	PHYS 151; Pre/corequisite: MATH 123

OR

Semester	Grade	Course #	Course Title	Prerequisites
		PHIL 170	Critical Reasoning (3)	GE A1 (Written English)
		PHIL 270	Symbolic Logic I (3)	None

#### OR 8 UNITS of a Foreign Language (must be the same foreign language)

Semester	Grade	Course #	Course Title	Prerequisites

## UPPER DIVISION COURSES (See major faculty advisor)

Take ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 310	History of Early Mathematics (3)	<i>Pre/corequisite:</i> A 200-level mathematics course
		MATH 341	Number Theory (3)	MATH 233
		MATH 355	College Geometry (3)	MATH 247
		MATH 380	Probability and Statistics (3)	MATH 224
		STAT 381	Mathematical Statistics (3)	MATH 247 and 380
		MATH 410	History of Modern Mathematics (3)	MATH 247, 310, and at least 3 of the following: MATH 233, 341, 355, 361A, 380.
		MATH 444	Introduction Abstract Algebra	MATH 233 and 247; and at least one of MATH 341 or 347.
		MTED 301	Computer Applications in Mathematics for Teachers (3)	1 year of HS geometry and 1 of MTED 110 or MATH 122
		MTED 411	Topics and Issues in Secondary School Mathematics (3)	MATH 310, 341, 355, 380, 444; EDSS 300M or consent of the instructor. <i>Pre/corequisite:</i> MATH 410
		EDSS 300M	Introduction to Teaching-Mathematics (3)	Advanced sophomore or junior standing

Choose ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 361A	Introduction to Mathematical Analysis I (3) <i>OR</i>	MATH 224, and MATH 233 or 247
		MATH 364A	Ordinary Differential Equations I (3)	MATH 224, <i>Pre/corequisite:</i> MATH 247

Choose 3 UNITS of additional upper-division mathematics:

These upper-division units can be mathematics or statistics, excluding: MATH 303, 309, 370A, 370B, 409.

Semester	Grade	Course #	Course Title	Prerequisites

### Single Subject Teaching Credential Mathematics

In addition to meeting the subject matter competence requirement for the Teaching Credential, prospective Math teachers are also required to complete 45 units of professional preparation in the Single Subject Credential Program, including student teaching. Students may begin the professional preparation courses as early as the junior year. With careful planning, it is possible to complete all of the credential program courses, except for student teaching, as an undergraduate. Courses may also be completed as a post-baccalaureate student. Refer to the Single Subject Teacher Education section of this catalog or the Single Subject Credential Program website ([www.ced.csulb.edu/single-subject](http://www.ced.csulb.edu/single-subject)) for a description of the professional preparation requirements, courses, and application procedures.