

## BACHELOR OF SCIENCE IN MATHEMATICS

### Option in Mathematics Education

### Major Requirements Worksheet

### 2018-2019 Catalog

*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; the [CSULB Course Catalog](#) takes precedence in any conflict. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.*

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

#### Take ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 122	Calculus I (4)	Appropriate algebra/calculus placement; or MATH 111 and either MATH 112B or 113
		MATH 123	Calculus II (4)	MATH 122
		MATH 224	Calculus III (4)	MATH 123 or 222
		MATH 233	Fundamental Concepts for Advanced Mathematics (3)	MATH 123
		MATH 247	Introduction to Linear Algebra (3)	MATH 123

#### Take ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		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

#### Take ONE of the following groups OR 8 units of a Foreign Language (must be the same foreign language):

Semester	Grade	Course #	Course Title	Prerequisites
		PHYS 151 + PHYS 152	Mechanics and Heat (4); Electricity and Magnetism (4)	<i>Pre/Corequisite:</i> MATH 122 or 123 or 224; PHYS 151. <i>Pre/Corequisite:</i> MATH 123
		PHIL 170 + PHIL 270	Critical Reasoning (3); Symbolic Logic I (3)	<i>Pre/Corequisite:</i> GE A1 requirements; (none)

#### UPPER DIVISION COURSES (see major faculty advisor)

#### Take ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		EDSS 300M	Introduction to Teaching-Mathematics (3)	Advanced sophomore or junior standing

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 310	History of Early Mathematics (3)	<i>Pre/Corequisite:</i> MATH 224 or 233 or 247
		MATH 341	Number Theory (3)	MATH 233
		MATH 355	College Geometry (3)	MATH 247
		MATH 380	Probability and Statistics (3)	MATH 224
		MATH 444	Introduction Abstract Algebra	MATH 233 and 247; MATH 341 or 347
		MTED 301	Computer Applications in Mathematics for Teachers (3)	<i>Pre/Corequisite:</i> MTED 110 or MATH 122 or EDSS 300M
		MTED 371	Mathematical Modeling for Secondary Mathematics Teachers (3)	MATH 224 and 233 and 247
		MTED 411	Topics and Issues in Secondary School Mathematics (3)	MATH 310 and 341 and 355 and 380 and 410 and 444; EDSS 300M or instructor consent
		STAT 381	Mathematical Statistics (3)	MATH 247 and 380

**Take ONE of the following courses:**

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

**Take THREE units of additional upper-division mathematics:\***

Semester	Grade	Course #	Course Title	Prerequisites

\*Excludes: MATH 303, 309, 370A, 370B, 409.

## 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 for a description of the professional preparation requirements, courses, and application procedures.