

**Master of Science in Computational and  
Applied Mathematics**

(This elevation was approved by the CSULB Academic Senate on March 15, 2023, approved by the President on March 15, 2023, and the CSU Chancellor's Office on May 18, 2023.)

Previous Option Title: MS in Mathematics, Option in Applied Mathematics

successfully model and solve math  
The degree is granted to students who  
pass two comprehensive examinations

**Prerequisites**

A bachelor's degree in mathematics  
upper division units in mathematics

A grade of "C" or better in the following  
Deficiencies will be determined by

- MATH 247 - Introduction
- MATH 323 - Introduction
- MATH 361A - Introduction
- MATH 361B - Introduction
- MATH 364A - Ordinary D
- MATH 380 - Probability a
- or their equivalents

**Advancement to Candidacy**

In addition to University requirements  
listed above, with no grade less than  
completion of at least six units of a  
study must be approved by the advisor  
in the College of Natural Sciences

## Requirements

### **A minimum of 30 graduate and upper division units**

A minimum of 30 graduate and upper division units approved by the Graduate Advisor, and including:

Three of the following courses:

- MATH 563 - Applied Analysis (3 units)
- MATH 570 - Partial Differential Equations (3 units)
- MATH 576 - Numerical Analysis (3 units)
- MATH 579 - Advanced Mathematical Modeling (3 units)

Three additional courses selected from the following courses:

- MATH 520 - Finite Element Method (3 units)
- MATH 521 - Matrix Method in Data Analysis and Pattern Recognition (3 units)
- MATH 564 - Applied Nonlinear Ordinary Differential Equations (3 units)
- MATH 573 - Advanced Scientific Computing (3 units)
- MATH 574 - Stochastic Calculus and Applications (3 units)
- MATH 575 - Calculus of Variations (3 units)
- MATH 577 - Numerical Solution of Partial Differential Equations (3 units)
- MATH 578 - Numerical Linear Algebra (3 units)
- and the course in the previous section not used to satisfy that requirement.

### **Complete one of the following culminating activities**

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most 6 units of MATH 698.

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**EFFECTIVE: Fall 2024**

Academic Plan Code MATHMS02PB

Career: Graduate

CIP: 27.0304

CSU Code: 17033

Concentration Code: 01

College: 65, Natural Science and Mathematics

Department Mathematics and Statistics

Delivery: Face-to-Face

STEM Eligible