

Bachelor of Science in Mathematics: Mathematics Education Option

The purpose of the Degree Roadmap is to serve as a guide for planning one's academic coursework required to complete a specific major semester by semester. Before enrolling, you can use the Degree Roadmap to get a feel for the courses you'll take in this major. After enrolling, refer to the University Catalog, Class Schedule and consult with your academic advisor each semester for advisement to specify which courses you will take to fulfill each graduation

requirement and are progressing toward graduation in a timely manner as possible. **The Degree Roadmap is subject to change and is NOT to be considered a replacement for advisement with an academic advisor.** See *University Catalog* for information on the Graduate Writing Assessment Requirement (GWAR). *See reverse side for General Education (GE) course requirements. **A minimum of 120 units are required for completion of degree.

Upper Division Transfer Requirements

- Complete a minimum 60 transferable semester (or 90 quarter) units with a 2.0 GPA (nonresidents require 2.4 GPA) and be in good standing at the last college or university attended. Within those 60 semester units, complete a minimum of 30 semester (or 45 quarter) units of General Education courses with a 2.0 GPA with a "C" grade or better, including Oral Communication, Written Communication (English Composition), Logic/Critical Thinking and Mathematics/Quantitative Reasoning.
- Complete and submit a CSU Application for Admission by the posted deadline through CSU Mentor at CSUMENTOR.EDU.
- Submit official transcripts from all colleges attended.
- Students applying to an impacted program may have to meet supplementary requirements.
- The following degree roadmap assumes you have junior standing (60 units) and have completed all lower division General Education Courses.
- Minimum of 120 units are required for completion of degree, 30 of which must be taken in residence at CSUDH.

First Semester		
Course		Units
MAT 143	Problem Solving in Mathematics	3
MAT 241	Programming and Technology in Secondary School Mathematics Teaching	3
MAT 271	Foundations of Higher Mathematics	3
GE D1*	Perspectives on Individuals, Groups, & Society area	3
GWAR	ENG 350 or GWE	0-3

Second Semester		
Course		Units
MAT 331	Linear Algebra	3
MAT 347	Modern Geometry	3
MAT 443	History of Mathematics	3
GE D2*	Global & Historical Perspectives area	3
GE D4*	Perspectives on U.S. and California Government area	3

Third Semester		
Course		Units
MAT 333	Abstract Algebra	3
MAT 401	Advanced Analysis I	3
MAT 447	Number Theory	3
MAT 489	Fundamental Math & Teaching in Secondary School	4
GE F2*	Studies in the Natural Sciences area	3

Fourth Semester		
Course		Units
MAT 411	Mathematical Modeling	3
MAT 490	Seminar in Mathematics Education	3
GE C2*	Humanities - Art Courses area	3
GE F1*	Studies in the Humanities area	3
GE F3/G*	Studies in Social Sciences area/Cultural Pluralism area	3

Total Units: 58-61**

NOTE: Upper division elective courses cannot double count for upper division GE courses. This is a single field major. No minor required.

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Learn More

- To learn more about the B.S. in Mathematics at CSUDH, call the Department of Mathematics at (310) 243-3378, visit NSM A-124, or visit **NBS.CSUDH.EDU**.
- For more information on applying to CSUDH, visit **CSUDH.EDU/FutureStudents**.
- Apply online at **CSUMENTOR.EDU**.
- Career information, visit **CSUDH.EDU/CareerCenter**.

Faculty

John Wilkins, Department Chair
Ph.D., University of California, Los Angeles

Jacqueline Barab, Associate Professor
Ph.D., Indiana University, Bloomington

Frederic Brulois, Associate Professor
Ph.D., Stanford University

George Jennings, Professor
Ph.D., University of California, Los Angeles

Matthew Jones, Associate Professor
Ph.D., University of California, Los Angeles

Wai Yan Pong, Associate Professor
Ph.D., University of Illinois, Chicago

Serban Raianu, Professor
Ph.D., University of Bucharest, Romania

Alexander Stanoyevitch, Professor
Ph.D., University of Michigan

Career Options

Many students are interested in passing their learning on to future generations through teaching. Others seek advanced degrees in mathematics or other sciences and pursue cutting-edge research. Some will pursue degrees in business or economics, where the ability to work with numbers can be a great advantage such as careers as business executives at major software companies, as analysts for stock trading companies, as actuaries and risk management experts for insurance companies and the health care industry, as scientists and data analysts in engineering and biotech firms, as software designers and programmers.

*General Education (GE) Requirements

A. **Basic Skills:**

Courses must be passed with a grade of "C" or higher.

GE A1: ENG 110, ENG 111 (both required)

GE A2: PHI 120 or PSY 110

GE A3: THE 120

GE A4: CSC 101 or LIB 150 (optional category)

B. **Area of the Natural Sciences and Quantitative Reasoning:**

Select one course from each category below. Category 4 courses must be passed with a grade of "C" or higher.

GE B1: CHE 102, EAR 100, GEO 200, PHY 100

GE B2: ANT 101, BIO 102

GE B3: BIO 103, EAR 101, CHE 103

GE B4: MAT 105, 131, 153, 171, 191, 193

C. **Area of the Humanities:**

Select one course from each category below.

In categories 2 and 3, select courses from different departments.

GE C1: HUM 200

GE C2: ART 100, ART 101, CHS 125, COM 130, DAN 130, MUS 101, MUS 110, THE 100, THE 160

GE C3: AFS 200, AFS 231, APP 101, CHS 100, CHS 205, ENG 230, FRE 220, HUM 212, PHI 101, PHI 102, SPA 151, SPA 221

D. **Area of the Social Sciences:**

Select one course from each category below.

In categories 1 and 2, select courses from different departments.

GE D1: AFS 212, AFS 220, ANT 100, APP 212, CHS 212, PSY 101, SOC 101, SOC 102, WMS 250

GE D2: AFS 201, ANT 102, CHS 200, GEO 100, HIS 120, HIS 121, POL 100

GE D3: HIS 101

GE D4: POL 101

E. **Objectives for Lifelong Learning and Self-Development:**

Select one course from the following.

GE E: HEA 100, HSC 201, KIN 235, REC 100, UNV 101

F. **Upper Division Integrative Studies:**

Select one course from each category. Courses in this category are to be taken after 60 semester units and ALL lower division General Education courses have been completed.

GE F1: HUM 310, 312, 314

GE F2: SMT 310, 312, 314, 416

GE F3: SBS 318¹

G. **Cultural Pluralism Requirement:**

Within their General Education selections or within other requirements, all students must take one course which addresses cultural pluralism (i.e. the impact of the integration of cultures).

GE G: ANT 312, 336, 337, 338, 339, 340, 342, 389, CHS 300, HIS 305, MUS 401, PHI 383, SBS 318, SOC 322, SOC 331, SOC 383

¹ SBS 318 satisfies both F3 and G areas. Students will receive only three units credit, but will have met both requirements.