### Core Requirements for All Mathematics

A. Math 2A, 2B, 2D/H2D, 3A, 3D, 13

B. Math 9

C. One of the following sequences:
   - Chem 1A, B, C
   - Physics 7C, D, E

Upper-div: Math 120A, 121A, 130A, 140A, 140B

### No specialization/concentration (Pure Mathematics)

Core requirements for all Mathematics Majors plus:

- Math 2E/H2E
- Math 120B, 121B, 147

Five additional 4-unit math courses (100-189):

### Specialization in Mathematical Biology

Core requirements for all Mathematics Majors plus:

- Math 2E/H2E
- Bio Sci 93, 94
- Two courses selected from:
  - Chem 1A, B
  - Physics 2, 7C, 7D

A. All of the following:

B. Two elective courses (at least one from Math 100-189). The second may be either upper-division Math or a 4-unit upper-division Biological Sciences course with advanced approval from the advisor for this specialization.

### Specialization in Data Science

Core requirements for all Mathematics Majors plus:

- Math 2E/H2E

Replace Item C in the Core Requirements with the following:

A. All of the following:
   - Math 105A/LA, 105B, 121B, 130B, 110A, 110B

B. Three elective courses from:
   - Stats 110
   - I&C Sci 105
   - Math 115, 117, 118, 130C
   - Math 133A, 133B, 140C
   - Math 162A, 162B, 173A, 173B
   - Math 175, 176
   - CompSci 171, 172B, 177
   - Math 178, 179, 183
   - Math 184A, 184C

### Concentration in Mathematical Finance

Core requirements for all Mathematics Majors plus:

- Math 2E/H2E, 133A, 133B

B. Three elective courses from:
   - Math 130C, 133C, 140C, 176

C. Eight required economics courses:
   - Econ 20A, 20B
   - Econ 105A, 105B, 105C
   - Econ 122A OR 123A
   - Econ 132A
   - Econ 143A

### Specialization in Mathematics for Education/Secondary Teaching

Admission requires approval in advance. The admission process begins with completing an Intent form at the CalTeach Resource and Advising Center.

Core requirements for all Mathematics Majors plus:

- Math 8

A. All of the following:
   - Math 105A/LA, 120B, 130B, 150, 161, 180A
   - Math 184, 184L AND
   - One additional math course numbered 100-189:

B. Three elective courses from:
   - Phy Sci 5, 105
   - Chem/Physics 193
   - Educ 55, 109, 143A, 143B, 148
   - Two quarters of Educ 158

This concentration allows students to earn a bachelor’s degree and complete the required coursework and field experience for a California Preliminary Single Subject Teaching Credential at the same time.

**NOTE:** Students must pursue either the concentration in Mathematics for Education/Secondary Teaching Certification OR the specialization in Mathematics for Education, but not both.

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### Additional Notes

- **For ALL Specializations/Concentrations EXCEPT CalTeach**
  - An application should be completed at least 3 quarters prior to graduation. **Admission into a concentration or specialization is not guaranteed.** The department may limit the number of students admitted into this concentration during impacted years.

- **Three elective courses from list provided. At least one of the electives must be from outside the Mathematics department.**

Effective Fall 2019