### Core Requirements for All Mathematics

- **A.** Math 2A
  - Math 2B
  - Math 2D/H2D
  - Math 3A
  - Math 3D
  - Math 13

- **B.** Math 9

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

- **Upper-div:** Math 120A
  - Math 121A
  - Math 130A
  - Math 140A

- **Math 140B
  - Math 112A
  - Math 112B
  - Math 112C
  - Math 113A
  - Math 113B

- **Math 115
  - Math 110A
  - Math 110B

- **Math 118
  - Math 130B
  - Math 130C

- **Math 119
  - Math 117
  - Math 118
  - Math 130C

- **Math 133A
  - Math 133B
  - Math 133C

- **Math 140
  - Math 140C
  - Math 140L

- **Math 141C
  - Math 141D

- **Math 147
  - Math 148

- **Math 180A
  - Math 180B

- **Math 184A
  - Math 184C

### Concentration in Data Science

**Core requirements for all Mathematics Majors plus:**

- Math 2E/H2E

**Replace Item C in the Core Requirements with the following:**

- Math 10
- Stats 7
- Physics 7C

**A.** All of the following:

- Math 105A
- Math 105B
- Math 121B
- Math 130B
- Math 110A
- Math 110B

**B.** Three elective courses from:

- Stats 110
- Math 162A
- Math 162B
- Math 173A
- Math 173B
- CompSci 171
- CompSci 172B
- Physics 178
- Physics 179
- Math 184A
- Math 184C

### Concentration in Mathematical Finance

**Core requirements for all Mathematics Majors plus:**

- Math 2E/H2E

**Replace Item C in the Core Requirements with the following:**

- Math 10
- Stats 7
- Physics 7C

**A.** All of the following:

- Math 105A
- Math 105B
- Math 121B
- Math 130B
- Math 110A
- Math 110B

**B.** Three elective courses from:

- Math 105A
- Math 105B
- Math 121B
- Math 130B
- Math 110A
- Math 110B

**C.** Eight required economics courses:

- Econ 20A
- Econ 20B
- Econ 105A
- Econ 105B
- Econ 105C
- Econ 122A
- Econ 123A
- Econ 134A

### Specialization in Applied and Computational Mathematics

**Core requirements for all Mathematics Majors plus:**

- Math 2E/H2E

**Replace Item C in the Core Requirements with the following:**

- Bio Sci 93
- Bio Sci 94

**Two courses selected from:**

- Chem 1A
- Bio Sci 97
- Physics 2

**7C
- 7D

**A.** All of the following:

- Math 105A/LA
- Math 105B/LB
- Math 112A
- Math 112B
- Math 115
- Math 117
- Math 118
- Math 130C
- Math 133A
- Math 133B
- Math 133C
- Math 140C
- Math 175
- Math 176
- CompSci 171
- CompSci 172B
- Physics 178
- Physics 179
- Math 184A
- Math 184C

**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.

**Elec. #1:**

**Elec. #2:**

### Concentration in Mathematics for Education/Secondary Teaching Certification

**Admission requirements:**

- Approval must be obtained in advance from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization.

- Math 10
- Stats 7
- Physics 7C

- All of the following:

- Math 105A/LA
- Math 105B/LB
- Math 112A
- Math 112B
- Math 115
- Math 121B
- Math 130B
- Math 133A
- Math 133B
- Math 133C
- Math 140C
- Math 175
- Math 176

**Two approved upper-division courses in an area of application outside of Mathematics. Approval must be obtained in advance from the advisor for this specialization. The student is responsible for satisfying any prerequisites for these courses.

**Elec. #1:**

**Elec. #2:**

### Specialization in Mathematics for Education

**Core requirements for all Mathematics Majors plus:**

- Math 8

**A.** All of the following:

- Math 105A/LA
- Math 105B/LB
- Math 112A
- Math 112B
- Math 115
- Math 121B
- Math 130B
- Math 133A
- Math 133B
- Math 133C
- Math 140C
- Math 175
- Math 176

**B.** Three elective courses from:

- Math 107/107L
- Math 110
- Math 112C
- Math 117
- Math 130B
- Math 130C
- Math 133A
- Math 140C
- Math 176

**Two approved upper-division courses in an area of application outside of Mathematics. Approval must be obtained in advance from the advisor for this specialization. The student is responsible for satisfying any prerequisites for these courses.

**Elec. #1:**

**Elec. #2:**

**Note:** Students may 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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1. For all Specializations/Concentrations EXCEPT CalTeach.

2. Replacement approval from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization.

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.

3. Replacement approval from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization. Approval must be obtained in advance from the advisor for this specialization.