MATHEMATICS
Transfer Requirements

The following requirements for the major are subject to change. To assure accuracy of the information on this sheet, you should consult with the Mathematics counselor, or review articulation agreements via the Internet at WWW.ASSIST.ORG. Career information for the field of Mathematics is available in the El Camino College Career/Transfer Center.

AS-T Requirements: total units 24-25
Core Requirements: 15 units: Math 190, 191, 220;
List A: 5 units: Math 270
List B: 4 or 5 units from: Computer Science 1, 2, 3, Mathematics 150, 210, Physics 1A, 3A

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS (2013-2014) www.csudh.edu/math/
Requirements: Math 190, 191, 220, 210*; Computer Science 3*; Physics 1A, 1B, 1C, 1D or Physics 130, 132, & 134 at CSUDH or another year sequence in basic science recommended by a CSUDH advisor.
Math education: please refer to the single subject teaching credential guide sheet for additional information and requirements

CALIFORNIA STATE UNIVERSITY, FULLERTON (2013-2014) http://nsm.fullerton.edu
Required for all options: Math 190, 191, 220, 270; CS T; Each student is required to take one of the following cognates:
- Actuarial: no lower division courses
- Computer Science: add Computer Science 2 and 3
- Economics: add Economics 1 & 2
- Physics: add Physics 1A-1B-1C-1D
- Chemistry: Chemistry 1A – 1B
- Civil Engineering: Engineering 9 or EGCE 201 at CSUF
- Mathematics: no lower division courses
- Research: no lower division courses
Concentrations: Applied Mathematics, Pure Mathematics, Probability and Statistics Teaching
Math Education: please refer to the single subject teaching credential guide sheet for additional information and requirements

CALIFORNIA STATE UNIVERSITY, LONG BEACH (2013-2014) www.csulb.edu/depts/math
Mathematics: Math 190, 191, 220, 270, 210*; Computer Science 3; Physics 1A and 1B at ECC or Physics 151 at CSULB;
Applied Math (Science and Engineering): Math 190, 191, 220, 270; Computer Science 3; Physics 1A-1B-1C-(1D or Engineering 9)
Applied Math (Economics & Management): Math 190, 191, 220, 270; Computer Science 3; Economics 1 & 2
Statistics: Math 190, 191, 220, 270; Computer Science 3
Math Education: please refer to the single subject teaching credential guide sheet for additional information and requirements

CALIFORNIA STATE UNIVERSITY, LOS ANGELES (2013-2014) www.calstatela.edu/academic/math/
Requirements:
BA: English 1C; Computer Science 3*; Math 150, 190, 191, 210*, 220; Physics 1A
BS: English 1C; Computer Science 3*; Math 150, 190, 191, 210*, 220; Physics 1A
Options available in Applied Mathematics & Single Subject Teaching: please refer to the single subject teaching credential guide sheet for additional information and requirements
**CALIFORNIA STATE UNIVERSITY, NORTHRIDGE** (2013-2014) [www.csun.edu/math/](http://www.csun.edu/math/)

**Requirements:** Computer Science 1; Math 190, 191, 220; Physics 1A

**Options:**
- **BA:** Mathematics; Secondary Teaching: please refer to the single subject teaching credential guide sheet for additional information and requirements
- **BS:** Mathematics; Statistics; Applied Mathematical Sciences

**CALIFORNIA POLYTECHNIC UNIVERSITY, POMONA** (2013-2014) [www.csupomona.edu/~math/](http://www.csupomona.edu/~math/)

**Requirements for all students:** Computer Science 1; Math 190, 191, 220, 270; Physics 1A-1B-1C.

**Options available in Applied Mathematics, Statistics and Subject Matter Preparation Program for Secondary Teaching Credential**

**CALIFORNIA POLYTECHNIC UNIVERSITY, SAN LUIS OBISPO** (2012-2013) [www.calpoly.edu/~math/](http://www.calpoly.edu/~math/)

**Requirements:** Math 190, 191, 220, 270; Computer Science 1 or 3; Physics 1A-1C

**SAN DIEGO STATE UNIVERSITY** (2012-2013) [www.math.sdsu.edu](http://www.math.sdsu.edu)

**Requirements for the BA & BS Degrees:** Math 190, 191, 210*, 220, and 270

**BA in Liberal Arts and Science:** add Foreign Language through third college semester

**BS in Applied Arts & Science:**
- Emphasis: Applied Math: add Math 150 or Psychology 9A or Sociology 109
- Emphasis: Computational Science: add CS 2 and Math 150
- Emphasis: Science: add Math 150 or Psychology 9A or Sociology 109

**Math Education:** please refer to the single subject teaching credential guide sheet for additional information and requirements

**UNIVERSITY OF CALIFORNIA, BERKELEY** (2013-2014) [www.math.berkeley.edu](http://www.math.berkeley.edu)

**Requirements for degrees in Mathematics/Applied Mathematics:** Math 190-191-220-270; highly recommend Math 210. You **must** complete either: (1) UCB’s requirements (Reading & Composition, Foreign Language, and Quantitative Reasoning) or (2) IGETC by the end of the spring term that precedes fall enrollment at Berkeley.

**UNIVERSITY OF CALIFORNIA, IRVINE** (2013-2014) [www.math.uci.edu](http://www.math.uci.edu)

**Requirements for Mathematics:** Math 190, 191, 220, 270; Chemistry 1A & 1B or Physics 1A & 1C or 1A& 1B & 1D or 1A & 1B & 1C & 1D; One course from Computer Science 3 or 30*

**UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)** (2012-2013) [www.math.ucla.edu](http://www.math.ucla.edu)

**Mathematics B.S.:** Math 190, 191, 220, 270; Computer Science 1; Physics 1A; Two additional courses from Biology 101 and 102, Chemistry 1A, 1B, Physics 3B, 1C, 1D; Philosophy 8

**Applied Mathematics B.S.:** Math 190, 191, 220, 270; CS 1; Physics 1A, 1C; one course from Physics 1D or Chemistry 1A or 1B

**Mathematics/Applied Science B.S.:** Math 190, 191, 220, 270; Computer Science 1. Programs include actuarial plan, medical and life sciences plan, and history of science plan. You may combine the study of math with fields such as physics, biology, chemistry, biochemistry, economics, and geography. Consult [www.assist.org](http://www.assist.org) or the UCLA catalog for more information and requirements.

**Mathematics of Computation B.S.:** Math 190, 191, 220, 270, 210*; Physics 1A and 1C; Computer Science 1; one course from: Physics 1D or Chemistry 1A or 1B

**Mathematics/Economics:** Math 190, 191, 220, 270, 210*; CS 1; Economics 1, 2

**Financial Actuarial Mathematics B.S.:** Math 190, 191, 220, 270; Economics 1, 2; CS 1; Business 1A, 1B
Requirements for the BA & BS Degrees: Math 190, 191, 220, 270; Computer Science 1; one sequence from Chemistry 1A-1B or Biology 101-102 or Physics 3A-3B or 1A-1B-1C

**BS**: Recommended: Computer Science 30*. The B.S. in Math offers three tracks: (1) Pure Math (2) Applied Math (with options in Biology, Chemistry, Economics, Environmental Science, Physics and Statistics) (3) Computational Math. See [www.assist.org](http://www.assist.org) for additional requirements for each track.

*Note*: Students will need a 2.70 GPA in UC transferable course work for admittance to the major. Math majors will follow the College of Natural and Agricultural Science breadth requirements. IGETC is not accepted for this major. Transfer students who wish to supplement their lower division math and science preparation with humanities or social sciences are encouraged to follow the CNAS breadth pattern as described under the GE/Breadth on ASSIST.

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**UNIVERSITY OF CALIFORNIA, SANTA BARBARA** (2013-2014) [www.math.ucsb.edu](http://www.math.ucsb.edu)

Students are admitted to the **pre-major**.

**BA & BS**: Math 190, 191, 220, 270, 210*; Physics 1A or 2A or 3A; CS 1 and 40

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**UNIVERSITY OF CALIFORNIA, SAN DIEGO** (2013-2014) [http://math.ucsd.edu](http://math.ucsd.edu)

- **Applied Mathematics B.A.**: Math 190, 191, 220, 270; Highly recommended: Computer Science 3*
- **Mathematics/Applied Science B.A.**: Math 190, 191, 220, 270; Highly recommended: Computer Science 3*
- **Mathematics/B.A/B.S.**: Math 190, 191, 220, 270
- **Mathematics/Computer Science B.S.**: Math 190, 191, 220, 270; Computer Science 2, 3*
- **Mathematics/Secondary Education B.A.**: Math 190, 191, 220, 270
- **Mathematics/Scientific Computation B.S.**: Math 190, 191, 210*, 220, 270; Computer Science 3
- **Joint Major in Mathematics and Economics B.S.**: Math 190, 191, 220, 270; Economics 1 and 2
- **Probability and Statistics B.S.**: Math 190, 191, 220, 270; CS 3

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**BA/BS**: Math 190, 191, 220, 270: two courses from Physics 1A, 1C, CS 2, CS 3*, CS 4, Biology 101, 102; Chemistry 1A, 1B

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**UNIVERSITY OF SOUTHERN CALIFORNIA (USC)** (2013-2014) [http://math.usc.edu](http://math.usc.edu)

**BA**: Math 190, 191, 220, 270

**BS**: Math 190, 191, 220, 270; two additional courses from: Biology 101-102, Chemistry 1A-1B; Highly recommended: Physics 1A-1B-1C-1D

* Computer Science 3 is offered fall semester only; Math 210 & Computer Science 30 is offered spring semester only.

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Mathematics Major

Gaines, Key, OCampo-November 2013