REQUIREMENTS FOR THE BACHELOR'S DEGREE

[See below for Specialization in Mathematics for Education.]

School Requirements: None.

Departmental Requirements

Lower-Division Requirements (for all Mathematics majors except those in the Education specialization):

A. Mathematics 2A-B, 2D (or H2D), 2E (or H2E), 2J, 3A, 3D.

B. Computing skills attained through either Information and Computer Science 21, Engineering E10, Engineering CEE10, Engineering EECS10, Engineering EECS12, Engineering MAE10, or Physics 53.

C. One three-quarter lecture course sequence selected from Chemistry 1A-B-C; Physics 7A-B-D, 7A-B-E, or 7B-D-E. (This also satisfies UCI breadth requirement category II if taken with the accompanying laboratories.)

Upper-Division Requirements (for Mathematics majors except those in the Economics concentration, Applied and Computational specialization, or Education specialization): Most of the upper-division Mathematics courses are organized into a series of Core Areas. The Core Areas are: Numerical Analysis (courses numbered 100-109); Applied Mathematics (110-119); Algebra (120-129); Probability and Statistics (130-139); Analysis (140-149); Logic (150-159); and Geometry/Topology (160-169). There are also non-Core-Area courses (170-189). Students are required to complete 15 upper-division one-quarter lecture courses in Mathematics (with associated laboratories when applicable) as follows. (Mathematics Honors Program students follow modified requirements, as explained in a later section.)

A. Mathematics 120A, 121A

B. Mathematics 140A-B

C. A third lecture course from the Algebra Core Area (120-129)

D. A third lecture course from the Analysis Core Area (140-149)

E. One additional lecture course from either the Algebra or the Analysis Core Area

F. Two lecture courses from a third Core Area

G. One lecture course from a fourth Core Area

H. Five additional lecture courses in Mathematics chosen from the Core Areas or from courses numbered 170-189

The Department offers one concentration and three specializations. Note that all require the completion of an application and an interview with an advisor. Mathematics 13 is strongly recommended for all Mathematics majors, as preparation for upper-division courses.

Concentration in Mathematics for Economics

Admission to this concentration requires approval in advance by the Mathematics Department. The admissions process begins with completing a form at the Department office, and includes an interview with the Department's advisor for the concentration. This approval should be applied for after the student has completed Economics 20A-B, but no later than the end of the junior year.

Upper-division requirements:

A. Twelve upper-division Mathematics lecture courses (plus any associated laboratories) including:

1. Nine courses: Mathematics 120A, 121A-B, 140A-B-C, 131A-B-C (same as Statistics 120A-B-C).

2. Three elective lecture courses chosen from Mathematics 105A-B (plus 105LA-LB), 107 (plus 107L), 112A-B-C, 118A-B-C, 130B-C, 171A-B, 176.

B. Eight Economics courses: Economics 20A-B, 105A-B-C, 123A-B-C.

Specialization in Applied and Computational Mathematics

Admission to this specialization requires approval in advance by the Mathematics Department. The admissions process begins with completing a form at the Department office, and includes an interview with the Department's advisor for the specialization. This approval should be applied for no later than the end of the junior year.

Upper-division requirements:

A. Thirteen upper-division Mathematics lecture courses (plus any associated laboratories) including:

1. Ten required lecture courses: Mathematics 105A-B, 107 (plus 105LA-LB, 107L), 112A-B-C, 115, 121A, 140A-B.

2. A two-quarter sequence chosen from: Mathematics 114A-B, 114A and 147, 118A-B, 120A-B, 130A-B, 131A-B, 140C-D, 162A-B, 171A-B.

3. One additional Mathematics course numbered 100-189.

B. Two approved 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.

Specialization in Statistics

Admission to this specialization requires approval in advance by the Mathematics Department. The admissions process begins with completing a form at the Department office, and includes an interview with the Department's advisor for the specialization.

All the requirements for the Mathematics major must be satisfied; in fulfilling requirements F and H, students must include the following courses: Mathematics 131A-B-C (or Statistics 120A-B-C), either 130B-C or 132B-C, and two additional courses approved in advance by the advisor for this specialization.

Specialization in Mathematics for Education

Admission to this specialization requires approval in advance by the Mathematics Department. The admission process begins with completing a form at the Department office, and includes an interview with the Department's Undergraduate Advisor and its Tutor Supervisor. This approval should be applied for no later than the end of the junior year.

This specialization helps to prepare students for teaching mathematics. Students wishing to go on and teach at the intermediate and high school levels should also consult with an academic advisor in the Department of Education. A California Commission on Teacher Credentialing (CCTC)-approved subject-matter program (SMP) in Mathematics can be easily satisfied in tandem with this specialization, and enables students to waive a subject matter exam for teachers. Specific SMP requirements and enrollment procedures are available from the Department of Education.

Lower-Division Requirements: The same as for other tracks except that Mathematics 13 may replace Mathematics 2E (or H2E).

Upper-Division Requirements:

A. Mathematics 120A-B, 121A, 124, 140A-B, 131A-B (or Statistics 120A-B), 150, 161, 180, 184; plus one additional Mathematics course numbered 100-189.

B. One quarter of Education 172B and two quarters of Mathematics 192.