

STATISTICS

THE MAJOR

Mathematicians today are engaged in a wide variety of activities. Research mathematicians create new theories and techniques. Applied mathematicians use that theory and mathematical modeling to solve problems in economics, science, medicine, engineering, and management. Teachers of mathematics develop new ways to teach mathematical concepts to children and adults.

University-level mathematics involves more than algorithms and computational techniques. Mathematics majors also learn to construct proofs and how to approach a real life problem from a mathematical point of view.

CAREERS

Statisticians contribute to scientific inquiry by applying their mathematical and statistical knowledge to the design of surveys and experiments; the collection, processing, and analysis of data; and the interpretation of the results. Statisticians may apply their knowledge of statistical methods to a variety of subject areas, such as biology, economics, engineering, medicine, public health, psychology, marketing, education, and sports.

Many economic, social, political, and military decisions cannot be made intelligently without statistical techniques. Statisticians may work individually or as part of an interdisciplinary team, providing crucial guidance in determining what information is reliable and which predictions can be trusted. They often help search for clues to the solution of a scientific mystery, and sometimes keep investigators from being misled by false impressions.

Marketing, Engineering, Statistical Computing, Epidemiology, Public Health, Pharmacology, Genetics, Education, Government, Law, Consulting, Agriculture, Ecology, Science Writing & Journalism are some of the diverse fields that require mathematicians with statistics degrees.

For more information on the program, see the 2008-2010 University Catalog.

BACHELOR OF SCIENCE IN MATHEMATICS REQUIREMENTS

The Bachelor of Science in Mathematics degree is intended to give students a full preparation for future graduate work in Mathematics and Applied Mathematics.

LOWER DIVISION REQUIRED COURSES (23-24 UNITS)

MATH 150A	Calculus I	5
MATH 150 B	Calculus II	5
MATH 250	Calculus III	3
MATH 262	Linear Algebra	3
COMP 106/L	Computing In Engineering & Science/Lab	2/1 OR
COMP 110/L	Introductions to Algorithms & Programming/Lab	3/1
PHYS 220 A	Mechanics	3
PHYS 220 AL	Mechanics Lab	1

The student must complete the Lower-Division Core and one of the following Options, and must have a 2.0 grade point average for **all upper-division units required in the major.**

UPPER DIVISION REQUIRED COURSES (24 UNITS):

MATH 320	Foundations of Higher Mathematics	3
MATH 340	Introductory Probability	3
MATH 350	Advanced Calculus I	3
MATH 382/L	Intro Scientific Computing and Lab	2/1
MATH 351	Differential Equations	3
MATH 440A/B	Statistics	3
MATH 462	Advanced Linear Algebra	3
MATH 483	Mathematical Modeling	3
MATH 494	Practical Training	3

UPPER DIVISION ELECTIVES (9 UNITS)

Choose 9 units from among (i) all upper-division math courses (excluding MATH 310, 310L, 311, 312, 331, 391 and 490) and (ii) approved courses in other departments. At least 3 units must be in mathematics. Recommended courses are listed below:

MATH 480, 481 AB, 482, 540, 542 ABCD
PSY 420
SOM 465, 467, 591
COMP 426, 431, 595D
MKT 346

Note: For courses not in Mathematics, approval from the department involved may be required in order to waive listed prerequisite(s).

TOTAL UNITS IN THE MAJOR: 62-63

GENERAL EDUCATION (37 UNITS)

Basic Skills Mathematics and Lifelong Learning are satisfied by required courses in the major. PHYS 220A/L partially satisfies the Natural Sciences section.

ADDITIONAL UNITS: 20-21

TOTAL UNITS REQUIRED FOR THE B.S. DEGREE, OPTION I: 120

For information call: (818) 677-2721

Email: mathhtml@csun.edu

Visit our website: <http://www.csun.edu/math>