

MATHEMATICS

Bachelor of Arts degree

with a major in Mathematics—

option available in applied mathematics

Minor in Mathematics

Minor in Applied Mathematics

For a minor in biometrics, see Biometrics.

For a master of science degree with an option in mathematical modeling, see Environmental Systems.

Department Chair

Howard Stauffer, Ph.D.

Department of Mathematics

Library 58

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www.humboldt.edu/~math

The Program

Mathematics students find an active and supportive department atmosphere that provides relevant preparation for mathematics related careers and/or excellent mentorship for graduate studies. To complement their studies, students have access to several campus computer labs, including one dedicated to mathematical applications. Students are active in the Math Club and there is a weekly Math Colloquium series.

Endowments honoring Michael Tucker and Harry Kieval enable the mathematics department to award a total of \$2500 in scholarships to two or three outstanding math majors each year. The Harry S. Kieval endowment also provides for guest lecturers twice each year and for an annual scholarship (\$300 per student) for one or

two students transferring to Humboldt State University with the intention of majoring in mathematics.

Potential careers: systems analyst, statistics methods analyst, teacher, demographer, economic analyst, mathematics consultant, statistician, applied science programmer, financial investment analyst, actuary, and mathematician.

Preparation

Take math courses every year in high school. Creative writing, reading, art, and computer programming are also helpful.

REQUIREMENTS FOR THE MAJOR

A minimum grade of C- is required for all courses in the major (all options).

Lower Division

CS 131 Intro to Computer Science
or CIS 130 Intro to Programming, and
CIS 230 C++ Programming
or an approved course in computer programming

MATH 109 Calculus I
MATH 110 Calculus II
MATH 210 Calculus III
MATH 240 Introduction to Mathematical Thought
MATH 241 Elements of Linear Algebra

Upper Division

MATH 313 Ordinary Differential Equations
MATH 343 Introduction to Algebraic Structures
MATH 415 Introduction to Real Analysis

Plus one of the following:

MATH 344 Linear Algebra
MATH 413 Advanced Ordinary Differential Equations
MATH 416 Introduction to Real Analysis
MATH 443 Advanced Algebraic Structures

Plus one of the following:

MATH 351 Introduction to Numerical Analysis
MATH 361 Introduction to Mathematical Modeling
STAT 323 Probability & Mathematical Statistics I

Plus an approved program of upper division and graduate math courses to bring the total units at or above the 300 level to 26.

Applied Mathematics Option

This option provides a theoretical foundation and skills necessary to apply mathematics or mathematical computing to problems encountered in other disciplines.

Lower Division

Same as the major in mathematics

Upper Division

MATH 313 Ordinary Differential Equations
MATH 351 Introduction to Numerical Analysis
MATH 361 Introduction to Mathematical Modeling
STAT 323 Probability & Mathematical Statistics I
MATH 315 Advanced Calculus or
MATH 415 Introduction to Real Analysis

Plus an approved program of upper division and graduate math courses to bring the total units at or above the 300 level to 26. Note that the combined package of upper division courses must include at least one 400-level course.

REQUIREMENTS FOR THE MINORS

Mathematics Minor

Lower Division

CS 131 Intro to Computer Science
or CIS 130 Intro to Programming, and
CIS 230 C++ Programming
or an approved course in computer programming

MATH 109 Calculus I
MATH 110 Calculus II
MATH 210 Calculus III
MATH 240 Introduction to Mathematical Thought
MATH 241 Elements of Linear Algebra

Upper Division

MATH 343 Introduction to Algebraic Structures or
MATH 340 Number Theory
Plus approved courses to bring the total to 10 upper division units.

Applied Mathematics Minor

Lower Division

CS 131 Intro to Computer Science
or CIS 130 Intro to Programming and
CIS 230 C++ Programming
or an approved course in computer programming

- STAT 108 Elementary Statistics or
- BIOM 109 Introductory Biometrics

Plus either of the following groups:

- MATH 109 Calculus I
MATH 110 Calculus II
MATH 210 Calculus III
MATH 241 Elements of Linear Algebra

OR

- MATH 105 Calculus for the Biological Sciences & Natural Resources (NR)
MATH 205 Multivariate Calculus for the Biological Sciences & NR
MATH 241 Elements of Linear Algebra

Upper Division

MATH 313 Ordinary Differential Equations or
MATH 361 Introduction to Mathematical Modeling

Plus approved courses to bring the total to 10 upper division units.

