



Math

Program description

The mathematics program is designed to provide a solid foundation in the theoretical and applied aspects of mathematics necessary for a variety of professional careers. The flexibility within the third and fourth years was established to enable mathematics majors to concentrate in areas of their interest. The computational mathematics option is designed for those seeking positions in industry or with the government. Students can choose their curricula so as to emphasize that role of mathematics which will be useful to them in later years, whether in secondary school teaching, graduate school, a career in the public or private sector, or graduate study in areas that emphasize math, such as economics and the sciences. Both a major (BA or BS) and a minor are offered.

Program courses

Both the Bachelor of Arts and Bachelor of Science degrees in Mathematics require completion of 120 credit hours of coursework. Visit <http://www.umassd.edu/cas/math/undergraduateprograms/> for detailed information about requirements. Common courses include:

First Year:

MTH 111, 112 Analytic Geometry and Calculus I & II
MTH 181, 182 Discrete Structures

ENL 101, 102 Critical Writing and Reading I & II

Second Year:

MTH 211 Analytic Geometry and Calculus III
PHY 113 Classical Physics I
MTH 212 Differential Equations

MTH 221 Linear Algebra
MTH 204 Experiments in Computational Mathematics
PHY 114 Classical Physics II

Third Year:

MTH 311 Advanced Calculus I
MTH 312 Advanced Calculus II

Mathematics Electives (see below)
Mathematics Electives (see below)

Fourth Year:

MTH 441 /442 Modern Algebra

Mathematics Electives (see below)

Mathematics Electives: Theory of Numbers, Modern Methods in Mathematics Teaching. Topics in Applied Math, Probability, Mathematical Statistics, Applied Linear Algebra, Numerical Analysis, Combinatorial Theory, Graph Theory, Complex Variables

University Studies Requirements: All math majors need to comply with the University Studies Requirements (<http://www.umassd.edu/generaleducation/universitystudies/>) and the College of Arts & Sciences Distribution Requirements (<http://www.umassd.edu/cas/commonresources/collegedistributionrequirements/>). A single course may be used to meet requirements in both areas. For more information contact the Mathematics Department at the website listed below.

Possible Careers

Research, teaching, algorithm design and development, computer information systems, data processing and analysis, software programming and testing in science and industries, such as mathematics, statistics, finance, insurance, government agencies, manufacturing and other engineering fields. For more information on career opportunities please visit: www.bls.gov/oco.

umassd.edu/cas/math