MATHEMATICS - DATA SCIENCE OPTION, 4 +1 BS/ APPLIED MATHEMATICS, MS

Introduction

Please click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/) to see Mathematical and Statistical Sciences department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/#policiestext) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (https://catalog.ucdenver.edu/cu-denver/undergraduate/graduation/)
- CU Denver Core Curriculum (https://catalog.ucdenver.edu/cu-denver/undergraduate/graduation-undergraduate-core-requirements/)
- College of Liberal Arts & Sciences Graduation Requirements (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/#graduationrequirementstext)
- Click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/academic-policies-procedures/) for information about Academic Policies

Program Requirements for Mathematics BS

While students are completing a BS degree in Mathematics, with a Data Science Option, (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/mathematics-data-science-option-bs/) they may also complete some of the requirements for an MS degree in Applied Mathematics (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/applied-mathematics-ms/) by participating in the BS/MS program using the following guidelines:

1. The student must apply and be accepted for participation in the BS/MS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students should declare their intent to complete this program in their junior or senior year to the Director of the Program in Applied Mathematics after completing MATH 1401 Calculus I, MATH 2411 Calculus II, MATH 2421 Calculus III, MATH 3000 Introduction to Abstract Mathematics, MATH 3191 Applied Linear Algebra, MATH 3310 Introduction to Real Analysis I. A 3.0 grade point average (GPA) is required over all mathematics courses.
3. Students must complete a minimum of 54 credit hours, including a minimum of 42 MATH credit hours and a minimum of 9 credit hours in ancillary coursework.
4. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
5. Students must earn a minimum grade of C- (1.7) in all undergraduate courses applying to the major and must achieve a minimum cumulative undergraduate GPA of 2.25. Students must earn a minimum grade of B- (2.7) in all graduate courses taken at CU Denver and must achieve a minimum cumulative major GPA of 3.0, for all courses that will apply to the MS. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using pass/fail grading cannot apply to major or graduate requirements.
6. Students must complete a minimum of 15 upper-division level MATH credit hours and all graduate level credit hours with CU Denver faculty.
7. Up to 12 semester hours of graduate-level course work may be taken as an undergraduate and applied toward the MS degree.
8. Students will be advised to take MATH 4320 Introduction to Real Analysis II as an elective for the B.S.
9. In the semester in which the student intends to complete their BS, students must apply for admission into MS degree in Applied Mathematics (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/applied-mathematics-ms/). Students must complete either the requirements for the M.S. degree without concentration area or specific coursework requirements in one of the following areas: Applied Probability, Applied Statistics, Discrete Mathematics, Mathematics of Engineering and Science, Numerical Analysis, or Operations Research.
10. The following MATH courses will **not** count toward a graduate degree: MCKE 5000 Algebraic Patterns and Functions I-MCKE 5009 Math Modeling--Using and Applying Math, MATH 5010 History of Mathematics, MATH 5012 An Advanced Perspective on Number and Operation-MATH 5015 Capstone Course for Secondary Teachers, MATH 5017 Topics in Mathematics for Teachers, MATH 5198 Mathematics for Bioscientists, and MATH 5830 Applied Statistics.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/bachelors-degree-mathematics#bachelors_and_masters_in_mathematics_with_the_4_1-170).