

ECONOMICS MA/APPLIED MATHEMATICS MS DUAL DEGREE, WITH A FOCUS IN APPLIED STATISTICS

Introduction

Graduate Advisors:

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Applied Mathematics - Click here. (<https://clas.ucdenver.edu/mathematical-and-statistical-sciences/degree-requirements-dual-mams-economics-and-applied-mathematics/>)

The fields of mathematics and economics are inextricably linked. In economics, mathematics and statistics are used extensively in theory construction, tests of existing theories and discovery of regularities to inform new theories. Economics also gives mathematicians/statisticians new challenges, new outlets and new ideas to incorporate in mathematics. These complementarities have long been recognized and economics graduate students have always been advised to take advanced courses in statistics.

A "dual" degree means that students who complete the program earn two master's degrees: MA in economics and MS in applied mathematics. Students interested in completing the dual degree in economics and applied mathematics must apply separately to each program, meet the admission requirements of each program, and be accepted by each program. If one program accepts a student for the dual degree but the other program does not, then the student may not graduate under the dual degree program. Students may apply to both programs at the same time or apply to the economics program first, and then to the applied math program after their first semester, or vice versa. Both programs must be completed in the same semester to take advantage of the dual degree program. Further information about this program can be obtained from either the Department of Economics or the Math Department.

Click here (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/economics-ma/>) for admissions requirements for the MA program in Economics

Click here (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/applied-mathematics-ms/>) for admissions requirements for the MS program in Applied Mathematics

There are an increasing number of economics MA students wishing to obtain graduate training and a degree in statistics. Having an MA degree in economics and an MS degree in Applied Mathematics will make a student highly employable in the job market and provide them an edge in applying for elite PhD programs.

Graduate Education Policies and Procedures apply to this program.

Program Requirements

1. The requirements for the dual degree in economics and applied mathematics include completing 21 credit hours in ECON and 21 credit hours in MATH (42 total credit hours).
2. Students are expected to meet all course prerequisites. ECON 5803 Mathematical Economics is a prerequisite for ECON 5073

Microeconomic Theory and ECON 5813 Econometrics I. This prerequisite requirement is waived for students who are currently admitted to the MS Applied Mathematics program.

3. Students must complete all ECON and MATH credits at the graduate level (5000-level or higher).
4. Students must earn a minimum grade of B- (2.7) in all courses that apply to the degree and must achieve a minimum cumulative GPA of 3.0. Courses taken using P+/P/F or S/U grading cannot apply to program requirements. No course may be taken more than twice and only one attempt will retain the credit.
5. Students must complete all coursework with CU Denver faculty.

Code	Title	Hours
Complete the following required ECON courses:		18
ECON 5073	Microeconomic Theory	
ECON 5083	Macroeconomic Theory	
ECON 5813	Econometrics I	
ECON 5823	Econometrics II	
ECON 6053	Seminar In Applied Economics or ECON 605 Seminar In Applied Economics II	
ECON 6073	Research Seminar	
Students must successfully defend a capstone research paper that demonstrates their proficiency in the knowledge and skills comprising the MA degree in economics.		
Complete the following required MATH courses:		9
MATH 5387	Applied Regression Analysis	
MATH 5388	Machine Learning Methods	
MATH 5718	Applied Linear Algebra	
Complete one of the following courses from the following list:		3
MATH 5070	Applied Analysis	
MATH 6131	Real Analysis	
Complete one of the following courses from the following list:		3
MATH 5490	Network Flows	
MATH 5593	Linear Programming	
MATH 6595	Nonlinear Programming	
Complete one of the following courses from the following list:		3
MATH 5660	Numerical Analysis I	
MATH 5733	Partial Differential Equations	
MATH 6101	Uncertainty Quantification	
MATH 7386	Monte Carlo Methods	
MATH 7665	Numerical Linear Algebra	
A final examination that satisfies the requirements of the MS in Applied Mathematics		
Complete three additional credits (typically, one course) from any ECON course numbered 5000 or higher.		3
Three additional credits (typically, one course) from any MATH course numbered 5000 or higher except MATH 5010, MATH 5012-5015, MATH 5017, MATH 5198, and MATH 5830.		3
Total Hours		42

To learn more about the Student Learning Outcomes for the MS program in Applied Mathematics, please visit our website.

To learn more about the Student Learning Outcomes for the MA program in Economics, please visit our website (<https://clas.ucdenver.edu/economics/programs/master-arts-economics/>).