ECONOMICS MA/STATISTICS MS DUAL DEGREE

Introduction

Graduate Advisors:
Economics - Ryan Brown
Applied Mathematics - Click here (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/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 Statistics. Students interested in completing the dual degree in economics and statistics 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 statistics 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 (https://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 (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/statistics-ms/) for admissions requirements for the MS program in Statistics.

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 Statistics 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 [1]	
or ECON 6054	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 one of the following MATH courses: [2]		**3**
MATH 5310	Probability	
MATH 5792	Probabilistic Modeling	
MATH 6380	Stochastic Processes	
Complete the following MATH courses:		**9**
MATH 5320	Statistical Inference	
MATH 5387	Applied Regression Analysis	
MATH 6330	Workshop in Statistical Consulting	
A final examination that satisfies the requirements of the MS in Statistics		
Complete three additional credits (typically, one course) from any ECON course numbered 5000 or highter.		**3**
Complete six additional credits (typically, two courses) from the following list: [1]		**6**
MATH 5337	Intro to Statistical and Machine Learning	
MATH 5388	Machine Learning Methods	
MATH 5792	Probabilistic Modeling	
MATH 6101	Uncertainty Quantification	
MATH 6380	Stochastic Processes	
MATH 6388	Statistical and Machine Learning	
MATH 7384	Mathematical Probability	
MATH 7386	Monte Carlo Methods	
MATH 7393	Bayesian Statistics	
MATH 7826	Topics in Probability and Statistics	
Completed 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**

[1] Students may complete a different course given prior approval by the student's advisor and the Director of the Program in Statistics.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/ms-applied-mathematics-program-goals-objectives).