DUAL DEGREE IN ECONOMICS (M.A.) AND DATA SCIENCE (M.S.)

Requirements

The requirements for the Dual Degree in Economics (M.A.) and Data Science (M.S.) are as follows:

Course	Title	Credits
Economics Courses		
Core Courses		
ECON 6010	Microeconomic Theory I	3
ECON 6020	Macroeconomic Theory I	3
ECON 6910	Applied Econometrics	3
or ECON 6950	Financial Econometrics	
Economics Electives [1]		*9*
Three courses from any of the following areas:		
	Applied Microeconomics	
	Finance	
	Specialized Topics	
Data Science Courses		
Core Courses		
CISC 5790	Data Mining	3
CISC 5800	Machine Learning	3
CISC 5950	Big Data Computing	3
Data Science Electives [1]		*6*
One of the following options: [2]		*3*
	CISC 6080	Capstone Project in Data Science	
	CISC 6085 & CISC 6086	Master's Thesis in Data Science I and Master's Thesis in Data Science II	
	CISC 6081	Data Science Practicum (internship)	
Math Core		
ECON 5710	Mathematical Analysis in Economics	3
or CISC 5450	Mathematics for Data Science	
Free Electives [3]		**6**
Total Credits		**45**

[1] See below lists for courses that may fulfill this requirement. For students who did not complete an undergraduate major in economics and are pursuing this dual-degree program, ECON 5012 Foundations of Economics may also count as an economics elective.

[2] Students completing two semesters of data science thesis (6 credits) may complete one fewer 3-credit data science elective.

[3] Any course that counts as an economics or data science elective may fulfill this requirement.

Applied Microeconomics elective courses

Courses in this group have the EDAM attribute.

Course	Title	Credits
ECON 5105	Topics in Economic History	3
ECON 5260	Epidemics and Development Policy	3
ECON 5280	Urban Economics	3
ECON 5415	Gender & Economic Development	3
ECON 5590	Health Economics	3
ECON 5600	Health and Development	3
ECON 6440	Development Economics	3
ECON 6460	Agriculture and Development	3
ECON 6480	Environmental and Resource Economics	3
ECON 6970	Applied Microeconometrics	3

Finance elective courses

Courses in this group have the EDFI attribute.

Course	Title	Credits
ECON 5006	Programming Economics and Finance	3
ECON 6240	Financial Economics	3
ECON 6340	Financial Theory	3

Specialized Topics elective courses

Courses in this group have the EDST attribute.

Course	Title	Credits
ECON 5730	Econometrics and Finance Using R - Part I	3
ECON 5750	Game Theory	3
ECON 5760	Computational Macroeconomics/Finance	3
ECON 6310	Monetary Policy	3
ECON 6320	Monetary Theory	3
ECON 6470	Growth and Development	3
ECON 6510	International Trade	3
ECON 6530	International Economics of Growth and Development	3
ECON 6560	International Finance	3
ECON 6990	Topics in Econometric Theory	3

Data Science elective courses

Courses in this group have the EDDS attribute.

Course	Title	Credits
CISC 5500	Data Analytics Tools and Scripting	3
CISC 5550	Cloud Computing	3
CISC 5640	Nosql Database Systems	3
CISC 5835	Algorithms for Data Science	3
CISC 5900	Information Fusion	3
CISC 6000	Deep Learning	3
CISC 6210	Natural Language Processing	3
CISC 6525	Artificial Intelligence	3
CISC 6735	Wireless Networks	3
CISC 6745	Data Visualization	3