

USC SCHOOL	Dornsife/Viterbi
ACADEMIC DEPARTMENT	Economics/Computer Science
GRADUATE PROGRAM	MS, Economics and Data Science
POST CODE	1996
TERM EFFECTIVE DATE	Fall 2025

PROGRAM DESCRIPTION

A brief description of the graduate program.

The Master of Science in Economics and Data Science combines core economic theory and econometric methods—at a relatively high level for a master’s program—with foundational instruction in computing skills for data science, including distributed data systems, machine learning, and large-scale data processing. The program equips students to apply modern empirical techniques and to exploit available large data sets to carry out sophisticated economic analyses of relevance to the public, private, and nonprofit sectors. At the same time, and perhaps more important, the program provides budding data scientists with the analytical power of economics to structure empirical projects.

COMMON BACHELOR DEGREE PROGRAM PATHWAYS

A list of common bachelor’s degrees that undergraduate students pursue in advance of pursuing a progressive degree option with this graduate program. Some programs are restricted to certain majors while others are open to all students.

BS, Economics and Data Science	
BS, Economics and Mathematics	
BA, Economics	
BA, Data Science	

PREPARATORY UNDERGRADUATE COURSES

A list of courses at the undergraduate level that prepare students for the graduate program. Required coursework is listed first, followed by recommended courses. If not applicable, this section will be blank.

Dept. Prefix - Course #	Course Title	Required or Recommended	Units
ECON 203	Principles of Microeconomics	Required	4
ECON 205	Principles of Macroeconomics	Required	4
ECON 317	Introduction to Statistics for Economists (or similar course)	Required	4
MATH 125	Calculus I	Required	4
MATH 126	Calculus II	Required	4
ECON 303	Intermediate Microeconomic Theory	Recommended	4
ECON 305	Intermediate Macroeconomic Theory	Recommended	4
MATH 225	Linear Algebra and Linear Differential Equations	Recommended	4

PRE-APPROVED ELECTIVE COURSEWORK

Elective coursework is approved at the discretion of the academic department. Note the following details about the total number and units required of elective coursework.

2	TOTAL ELECTIVE COURSES REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE
8	TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE

TOTAL UNIT COUNTS AND REQUIRED GRADUATE UNITS

32	TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE
8	TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)
32	MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE

NOTES FROM THE DEPARTMENT

This section highlights any unique considerations, exceptions, or requirements for the graduate program. If a program has specific restrictions (courses, majors, etc.), they are detailed below.

The degree requires 4 ECON courses and 4 DSCI courses.

ECON: ECON 570 is suggested for most students, although those with special interests may be allowed to substitute a second ECON elective for ECON 570. PDP students from ECDS will have taken ECON 460, which is very similar to ECON 570. These students will be allowed to waive 4 ECON units in the MECDS program. Other economics majors may substitute may waive 4 ECON elective units (with approval from the program director) if they have taken a suitable 400-level economics elective.

DSCI: Students with a computer science background will substitute DSCI 551/552/553 for DSCI 510/549/550. DSCI advisors will place admitted students into the appropriate sequence. PDP students who have completed ITP 115 or ITP 116 will be allowed to waive 4 DSCI units (DSCI 510).

George Ingersoll

10/18/2024

Name of Authorizing Master's Program Dean

Date Approved

Associate Dean of Master's and Professional Education

Authorizing Dean's Title