

USC SCHOOL	Dornsife
ACADEMIC DEPARTMENT	Spatial Sciences Institute
GRADUATE PROGRAM	Spatial Economics and Data Analysis
POST CODE	1723
TERM EFFECTIVE DATE	Spring 2021

PROGRAM DESCRIPTION

A brief description of the graduate program.

The M.S. in Spatial Economics and Data Analysis (SEDA) combines the curriculum of an MA in Economics with a core MS in Data Science curriculum, linked by spatial sciences curriculum. In this joint program with the Dornsife Department of Economics administered by the Dornsife Spatial Sciences Institute, students work with members of both faculties and staff in a rigorous quantitatively-based course of study that innovatively applies economic, data science, and spatial science principles to current societal challenges.

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.

Geodesign	Human Security and Geospatial Intelligence
Economics	Data Science
Economics/Mathematics	Mathematics
Business Administration	International Relations and the Global Economy

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
SSCI 301L	Maps and Spatial Reasoning	Recommended	4
SSCI 382L	Geographic Information Science: Spatial Analytics	Recommended	4
ECON 203	Principles of Microeconomics	Recommended	4
ECON 303	Intermediate Microeconomic Theory	Recommended	4
ECON 305	Intermediate Macroeconomic Theory	Recommended	4
ECON 318	Introduction to Econometrics	Recommended	4
ECON 317**	Introduction to Statistics for Economists	Recommended	4
SSCI 381**	Statistics for Spatial Sciences	Recommended	4

UNDERGRADUATE COURSES USED TO REDUCE GRADUATE LEVEL UNITS

A list of undergraduate level courses that may be used to reduce the number of graduate level units required for the graduate program. If there are none, that is specified instead.

Dept. Prefix - Course #	Course Title	Units
SSCI 301L	Maps and Spatial Reasoning	4
SSCI 382L	Geographic Information Science: Spatial Analytics	4

CORE GRADUATE PROGRAM REQUIREMENTS (# units required)

A list of all required graduate courses for the graduate program. None of these courses may be used toward satisfying undergraduate degree requirements.

If special exceptions for any of these courses are made by the academic department, the course # is marked with an asterisk () and the exception is explained in the "Department Notes" section at the end of this course plan template.*

Dept. Prefix - Course #	Course Title	Units
SSCI 574	Spatial Econometrics	4
SSCI 581*	Concepts for Spatial Thinking	4
SSCI 583	Spatial Analysis	4
ECON 500	Microeconomic Analysis and Policy	4
ECON 513	Practice of Econometrics	4
ECON 570	Big Data Econometrics	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
4	TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)
28	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.

*Students who complete SSCI 301L: Maps and Spatial Reasoning and SSCI 382L: Geographic Information Science: Spatial Analytics may be waived from SSCI 581: Concepts for Spatial Thinking and reduce the total number of units from 32 to 28.

**It is recommended that students have a foundation in statistics and could take either ECON 317: Introduction to Statistics for Economists *OR* SSCI 381: Statistics for Spatial Sciences.

In addition to the required courses listed above, students must choose one SSCI elective (4 units) and one ECON elective (4 units) from the following list:

SSCI 575: Spatial Data Science (4 units)

SSCI 582: Spatial Databases (4 units)

SSCI 589: Cartography and Visualization (4 units)

ECON 506: Field Experiments (4 units)

ECON 587: Urban Economics (4 units)

ECON 584: Economic Consulting and Applied Econometrics (4 units)

Steven Finkel

4.8.2021

Name of Authorizing Master's Program Dean

Date Approved

College Dean of Graduate and Professional Education

Authorizing Dean's Title