PH.D. IN SPATIALLY INTEGRATED SOCIAL SCIENCE

The Spatially Integrated Social Science (SISS) Ph.D. Program is a multidisciplinary degree program offered jointly by a consortium of academic departments in the College of Languages, Literature and Social Sciences that include Geography and Planning, Economics, Political Science and Public Administration, and Sociology and Anthropology. This program is designed around the application of geographic information science, spatial statistics, spatial econometrics and spatial analysis to study the spatial dimension of human and social dynamics, including interaction of individuals and society, government, and market participants.

Students entering this program must have completed a master's degree, preferably in a Social Science discipline. In addition, all students admitted into the program must have completed two courses covering geographic information systems and one course in multivariate statistics. New graduate students who are deficient in these requirements must complete prerequisites prior to entering the program. All students seeking admission are required to provide transcripts, GRE scores, three academic letters of recommendation, and a statement of purpose. All students applying from universities outside of the U.S. are also required to submit TOEFL scores. Completion of the Ph.D. takes up to four years of study beyond the master's degree. The doctoral degree requires 60 semester hours beyond the Master's Degree with 36 course credits and 24 dissertation credits.

Course Work

The doctoral degree requires 72 semester hours beyond the Master's Degree with 30 course credits and 42 dissertation credits.

Code	Title	Hours
Mandatory Core Courses		
SISS 7010	Spatial Statistics	3
SISS 7020	GEOGRAPHICAL INFORMATION SCIENCE IN SISS	3
SISS 8010	FOUNDATIONS OF SPATIALLY INTEGRATED SOCIAL SCIENCE	3
SISS 8020	SISS THEORY	3
SISS 8030	ADVANCED SPATIAL DATA ANALYSIS	3
SISS 8040	Research Design	3
Elective Courses		
Select two courses within an allied social science department [1]		6
Additional Courses		
Select two courses from advanced seminar courses or electives		6
Dissertation		
SISS 8960	Doctoral Dissertation Research	42
Total Hours		**72**

[1] Selected within one of the allied social science departments participating in the program: Geography and Planning, Economics,

Political Science and Public Administration, or Sociology and Anthropology.

All courses must be approved by the program director or dissertation advisor. Enrollment for dissertation credit is reserved for the third and fourth years of the program after course work has been completed and the qualifying exam has been passed.

Comprehensive Examination

A comprehensive examination will be scheduled for the summer following the end of the first year of the graduate program and will cover material presented in the first five core courses of the program. To qualify, a student must have a "B" or better in all five core courses. Upon successful completion of the examination, the student can begin taking the advanced seminars and electives in the second year of residence.

Dissertation

In the Spring Semester of the second year of residence, students can begin to establish a Dissertation Advisory Committee. Students will also enroll in the final core course (SISS 8040 (https://catalog.utoledo.edu/search/?P=SISS%208040): Research Design). It is during this time that the student should begin to focus on establishing a dissertation topic. A Qualifying Exam will be administered at the end of the Fall Semester of the student's third year. The Qualifying Exam will test each student on the basis of their knowledge and skills in the area(s) of their dissertation topic. As part of the Qualifying exam, students shall also prepare and present a draft dissertation proposal to their Dissertation Advisory Committee. Upon successful completion of the Qualifying Exam, each student will work on their dissertation for the remainder of Year 3 and up to Year 4.

- PLO 1: Students will be able to identify the major epistemologies across the social sciences, explain the foundations of each epistemology and discuss the application of each in Spatially Integrated Social Sciences.
- PLO 2: Students will be able to construct arguments highlighting the ability of Spatially Integrated Social Science to contribute to knowledge in the social sciences through its emphasis on space and spatial analysis as an integrating theme in the social sciences.
- PLO 3: Students will identify leading spatial theorists, discuss key ideas in their work, and evaluate the significance of their contributions to Spatially Integrated Social Science.
- PLO 4: Students will understand and appropriately apply a broad range of basic spatial statistics to the analysis of discrete and continuous spatial data.
- PLO 5: Students will understand and manage the special issues posed by spatial data including spatial autocorrelation, the modifiable areal unit problem, and issues posed by spatial aggregation.
- PLO 6: Students will master the use of advanced multivariate spatial statistics in a GIS environment and apply them to the analysis of spatial data.
- PLO 7: Students will demonstrate an ability to use GIS software at an advanced level.
- PLO 8: Students will be able to articulate their understanding of the use of a range of remotely sensed imagery, and how that imagery might be analyzed within a GIS environment.

- PLO 9: Students will identify a set of fundamental concepts (scale, aggregation, orientation, etc.) of spatial analysis, how each of these concepts can be managed with a GIS, and evaluate the ways that these basic concepts may fundamentally alter outcomes of social science research.
- PLO 10: Students will be able to evaluate social science theories as they relate to space and spatial behavior, critique the theories, and identify and defend the strongest spatial social science theories.
- PLO 11: Students will demonstrate an ability to synthesize and evaluate research in a chosen area of study within the social sciences, identify pertinent research questions, develop hypotheses, and apply appropriate GI Science, remote sensing, spatial statistics and/or spatial autoregressive analysis to evaluate those hypotheses.