SPATIALLY INTEGRATED SOCIAL SCIENCES (SISS)

SISS 7010 Spatial Statistics
[3 credit hours]
The course deals with statistical theory and applied statistical techniques for spatial data analysis. Topics include descriptive statistics, statistical modeling and hypothesis testing for spatial dependence and spatial heterogeneity.
Term Offered: Spring, Fall

SISS 7020 GEOGRAPHICAL INFORMATION SCIENCE IN SISS
[3 credit hours]
The course emphasizes the fundamental elements of cartography, geodesy, statistics, mathematics and geo-computational methods that form the foundation for the development of GIS and spatial analysis tools.
Term Offered: Fall

SISS 8010 FOUNDATIONS OF SPATIALLY INTEGRATED SOCIAL SCIENCE
[3 credit hours]
This course will examine the historical development of the social sciences, their philosophical and methodological approaches to research, and the emergence of the spatial perspective in social science research.
Term Offered: Fall

SISS 8020 SISS THEORY
[3 credit hours]
Advanced study of SISS requiring preparedness in theoretical and methodological aspects of spatial analysis in social sciences focusing on the spatial organization of society and spatial human and social dynamics.
Prerequisites: SISS 8010 with a minimum grade of D-
Term Offered: Spring

SISS 8030 ADVANCED SPATIAL DATA ANALYSIS
[3 credit hours]
Examination of spatial processes: spatial autoregressive models, gaussian Markov random ¿eld models, auto-logistic models, spatial discrete choice models. The topics include spatial panel data models, their applications and estimation methods.
Prerequisites: SISS 7010 with a minimum grade of D-
Term Offered: Spring

SISS 8040 Research Design
[3 credit hours]
Introduces students to research and research technicalities, including what is research, how to write research papers and research proposals, and how to design and manage a research project.
Prerequisites: SISS 8010 with a minimum grade of B- and SISS 8020 with a minimum grade of B-
Term Offered: Spring

SISS 8150 ADVANCED QUALITATIVE ANALYSIS IN SISS
[3 credit hours]
Advanced qualitative analysis techniques and applications to a broad range of spatially oriented social science problems.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-

SISS 8170 SPACE AND SOCIETY CRITICAL THEORY IN SISS
[3 credit hours]
Critical examination of both the role of spatial inquiry and its limitations to the understanding of society and space.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-
Term Offered: Spring

SISS 8180 DISCRETE CHOICE SPATIAL PROCESS MODELING
[3 credit hours]
The study of the human factor in spatial processes with the aim to advance understanding of spatial aspects of social dynamics by modeling discrete choice spatial processes.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-

SISS 8200 SPATIAL PERSPECTIVES ON THE ENVIRONMENT
[3 credit hours]
Examination of the relationship between SISS approaches and human interaction with the natural environment.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-
Term Offered: Spring, Fall

SISS 8920 Directed Readings in SISS
[3 credit hours]
Independent study of research literature in Spatially Integrated Social Science and related fields.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-
Term Offered: Spring, Summer, Fall

SISS 8940 Seminar in Special Topics
[3 credit hours]
Discussion of the major advances in Spatially Integrated Social Science as presented in the primary research in a selected topic or set of topics.
Prerequisites: SISS 7010 with a minimum grade of D- and SISS 7020 with a minimum grade of D- and SISS 8010 with a minimum grade of D-
Term Offered: Spring, Summer, Fall

SISS 8960 Doctoral Dissertation Research
[1-12 credit hours]
Original research on a comprehensive topic of a spatial nature in the social sciences under the direction of a SISS faculty member. 18 credits in SISS core with grades of B or higher; 9 credits in advanced SISS seminars and 9 credits in SISS electives, all with grades of B or higher. Must pass dissertation qualifying exam within first semester of dissertation.
Term Offered: Spring, Summer, Fall

SISS 8980 Internship in SISS
[1-3 credit hours]
Professional internship opportunity for students in the SISS PhD program that will provide career related experiences intended to enhance student learning as related to knowledge and skills obtained connected to the program requirements and learning outcomes.
Term Offered: Spring, Summer, Fall