

Spring Semester 2021

COURSE TITLE:

GIS Research

COURSE NUMBER:

URBN 3998 01

SECTION TIMES/DAYS:

Wednesday 6:30-9:30pm

INSTRUCTOR:

Brianne Gilbert

COURSE DESCRIPTION/PRINCIPAL TOPICS:

This course looks at research through the lens of GIS (geographic information systems) and spatial analysis. Whether it is building on students' existing GIS knowledge or developing skills from a students' mere interest in the field, this course aims to help students in five areas:

- 1) develop spatially-driven research questions,
- 2) establish a methodology to solve their questions,
- 3) find or create datasets to analyze their research questions,
- 4) analyze their findings, and
- 5) visualize their results.

Each class session will be divided into two parts: 1) lesson and discussion, and 2) hands-on application and practice. Application areas covered in this course will be tailored to the students' interests. Possible areas include city and regional planning, economic development, education, elections, and environmental studies, transit and transportation, land use, crime analysis, public works utilities, census population and demographic studies, and business applications, including marketing, advertising, and site selection.

STUDENT LEARNING OUTCOMES:

Three major learning outcomes guide the course: 1) students will practice communicating their GIS knowledge in written, oral, and visual form, 2) students will incorporate spatial thinking and GIS technologies in their research design and analysis, and 3) by the end of the semester, students will conduct and present a research project using GIS.

PREREQUISITES/RECOMMENDED BACKGROUND:

None, although general computer literacy and GIS familiarity will be a strong asset

REQUIRED TEXTS:

None required for purchase (all materials will be available for free online)

COURSE WORK/EXPECTATIONS:

This course requires a significant amount of hands-on work since students will be developing a technical skill. There will be a midterm project evaluation, final project/storymap, and presentation in addition to weekly assignments. Weekly participation in class is expected.