Ever wondered how neighborhoods affect health?

How residential segregation affects health, crime, or economic well-being?

How socio-economic and environmental context impacts asthma? Cholera? Autism?

Whether environmental hazards are disproportionately located in poor areas?

If the physical and built environment affect obesity or food security?

And what is spatial demography?

This seminar surveys current topics in health and population research with a focus on spatial statistical methods such as spatial regression, geographically weighted regression, spatial multilevel modeling and cluster analysis. Throughout the seminar we will review the broad field of spatial data analysis. We will read and discuss selections from the current public health, sociology and demography literature and critique how spatial data and statistical methods are being integrated into population and health research. The course is hands-on and students will have plenty of opportunity to work with and analyze real world spatial data!

By the end of this course, students will be able to: a) critique spatial analytic methods in selected papers, b) recognize the complexities inherent in using spatial data and choose appropriate methods for data analysis, c) find resources for spatial data and structure datasets for spatial analysis, and d) implement spatial statistical methods using demographic and health datasets.

Prerequisite: A statistics class that covered multivariate regression analysis techniques.