

URP 535 / UT 402 Introduction to Urban Informatics

This course provides students an introduction to the technical, theoretical and practice-based dimensions of urban informatics, an interdisciplinary field of research and practice that uses data and information technology for the analysis, management, planning, inhabitation, and usability of cities. Situated at the intersection of digital technologies and the human environments, this course situates itself at the emergence of new disciplines— urban science, big data, smart cities, civic technologies among others. The course is centered around weekly lectures and programming-based technical labs grouped into four modules — urban and data frameworks, urban analytics (API, point of interests, spatial network, OpenStreetMap, visualization), smart cities & data governance, and synthesis. Students will also have an opportunity to develop their project—based on their research question—that combines these technical aspects in a final analysis and demonstration. Knowledge of a programming language and basic statistics are recommended but not required prerequisites for this course.