

URBAN ANALYTICS AND GEODESIGN (MS)

Contacts

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Campus: East Falls

Program Website (<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/urban-analytics-geodesign-ms.html>)

Program Description

The MS in Urban Analytics & Geodesign provides students with interdisciplinary urban research and design, incorporating spatial data science, urban informatics, geospatial technology, and sustainability. This 30-credit, STEM-designated MS program leverages data-driven technologies in identifying and addressing major issues our cities continue to face, such as urbanization, climate change, inequality, and resource depletion.

Collaboration with the Jefferson Institute for Smart and Healthy Cities offers students unparalleled opportunities for research and industry experience. Addressing climate change, public health, pandemics and other challenges by incorporating urban analytics, computational design, and smart technologies into urban environments is the next frontier within the profession.

In this highly innovative program, next-generation designers and researchers of the built environment learn through a combination of advanced urban analytics, spatial data science and geospatial technologies. Students work on real projects in a highly-collaborative fast-paced, hands-on learning environment. Upon graduation, students will have the skill sets necessary to address complex design and planning problems with powerful data-driven analytical and visualization tools that foster interdisciplinary collaborations.

Learning Goals/Outcomes

- Review and critically analyze original research in urban Analytics and geodesign as related to the allied design disciplines
- Apply and synthesize data driven research
- Conduct cutting-edge, applied urban analytics and geodesign research that contributes to the body of knowledge
- Demonstrate expertise within the interdisciplinary field of urban analytics and geodesign
- Demonstrate professional presentation and communication skills
- Demonstrate the integration of knowledge, analysis and research through final small group research-based planning/design projects

Curriculum: 2 Year, 30 Credits

Course	Title	Credits
First Year		
GEOD 600	3D Modeling for Geodesign	3
GEOD 615	Adv GIS:Urbn Spctl Anlytcs 1	3
GEOD 625	Inter GIS Tech for Design &Dev	3
SDN 601	Princ & Methods of Sust Design	3

Course	Title	Credits
General Elective		
		3
Credits		15
Second Year		
GEOD 616	Information Modeling	3
GEOD 617	Adv GIS: Urb Sprial Anlytcs II	3
MUD 604	Emerg Dsgn &Tech Future Cities	3
GEOD XXX		3
General Elective		
		3
Credits		15
Total Credits		30