

#### 4.) **GIS and Spatial Modeling**

Planners increasingly make use of a wide variety of planning tools and technologies, including Geographic Information Systems (GIS) software, urban visualization and simulation software, forecasting methods, and other interactive information techniques. This specialization prepares students to understand and use these tools, with special emphasis on their applications to planning decision making.

#### **Curriculum (4 courses are required to complete the specialization)**

##### **Intro Course (required)**

PD 569 GIS Applications

##### **Methods Course (required)**

PD 601 Advanced GIS Applications

##### **Elective Courses (minimum two)**

PD 571 3D Visualization and Urban Simulation

PD 602 Planning Support System

DMS 541 - Advanced 3d Modeling

GEO 506 Geographical Information Systems

GEO 520 Transportation and Spatial Information

GEO 550 Intro to Graduate Cartography

GEO 551 Cartography and Geographic Visualization

GEO 553 Remote Sensing

GEO 559 GIS for Environmental Modeling

GEO 574 Transportation and Land Use Modeling

GEO 575 Landscape Modeling W. GIS

GEO 595 Database Design for Geographic Information Systems

GEO 597 Geostatistics

GEO 605 Spatial Statistics

GEO 774 Seminar in Land Use Analysis

MGS 613 Database Management Systems

##### **Culminating Exercise (choose one)**

- Thesis on GIS and Planning Technologies
- Professional Project on GIS and Planning Technologies

#### **Interim Specialization Director**

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