With urban spaces becoming data-rich environments, the goal of this minor is to provide students with the ability to use large-scale data from a variety of sources to understand and address real-world challenges in the urban context. In combining courses that address spatial analysis and mapping, data science, and social sciences, this minor provides the background necessary to investigate data-driven problems in relation to urban scenarios. A capstone project will provide students with the opportunity to address a real-world issue through focused study and applied research under the direction of a faculty member and in collaboration with stakeholders.

### Admissions & Policies

**Policies**

Eight credits of coursework must be unique to the minor. For policies governing all minors, see AP.5.3.4 Minors (http://catalog.gmu.edu/policies/academic/undergraduate-policies/#ap-5-3-4).

Students must complete all coursework with a minimum GPA of 2.00.

For policies governing all undergraduate programs, see AP.5 Undergraduate Policies (http://catalog.gmu.edu/policies/academic/undergraduate-policies/).

### Requirements

**Minor Requirements**

Total credits: 18

Students should refer to the Admissions & Policies tab for specific policies related to this program.

### Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CDS 303</td>
<td>Scientific Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>GGS 306</td>
<td>Urban Geography</td>
<td>3</td>
</tr>
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<td></td>
<td>Total Credits</td>
<td>6</td>
</tr>
</tbody>
</table>

### Electives

Select one course from each of the three groups below: 9

#### Spatial Analysis and Mapping Group

- GGS 300 Quantitative Methods for Geographical Analysis

#### Data Science Group

- CDS 201 Introduction to Computational Social Science
- CDS 292 Introduction to Social Network Analysis (Mason Core) (http://catalog.gmu.edu/mason-core/)
- CDS 302 Scientific Data and Databases

#### Social Science and Policy Group

- ANTH 382 Urban Anthropology (Mason Core) (http://catalog.gmu.edu/mason-core/)
- GOVT 464 Issues in Public Policy and Administration (With specific title "Urban Economic Development in the Smart Growth Era")
- SOCI 332 The Urban World (Mason Core) (http://catalog.gmu.edu/mason-core/)

### Capstone

Select one capstone course: 3

- GGS 415 Seminar in Geographic Thought and Methodology
- GGS 480 GGS Internship
- CDS 490 Directed Study and Research
- CDS 491 Internship

Total Credits: 3