The Master of Science in Urban Analytics degree is designed to give graduates a core of computing, planning, and data analysis and visualization skills to identify, analyze, and solve urban problems; to integrate those skills in an interdisciplinary way that other, single-discipline-oriented urban analytics degrees might not; and to provide depth in urban problems that can be addressed through data analytics.

The program is interdisciplinary between the School of City and Regional Planning (SCaRP, within the College of Design), the Schools of Computational Science and Engineering and Interactive Computing (CSE and IC, both within the College of Computing), and the Stewart School of Industrial and Systems Engineering (ISyE, within the College of Engineering). Each of the four units (SCaRP, IC, CSE, and ISyE) provides expertise in a different facet of urban analytics, with interdisciplinary coordination achieved by having faculty cooperate on the development and revision of course content, especially in the core and required courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>CP 6552</td>
<td>Design of Smart Urban Systems</td>
<td>3</td>
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<tr>
<td>CP 8803</td>
<td>Special Topics in Transportation Planning (Introduction to Urban Analytics)</td>
<td>3</td>
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<tr>
<td>CP 6960</td>
<td>Urban Analytics Capstone Project</td>
<td>1</td>
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<tr>
<td>CP 6962</td>
<td>Urban Analytics Capstone Project</td>
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</tbody>
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### Courses in spatial analysis
- CP 6521 Advanced Geographic Information Systems
- CP 6570 Socioeconomic GIS
- CP 6541 Environmental Analysis Using GIS
- CP 6542 Transport & GIS

### Courses in computational statistics
- CSE 6010 Computational Problem Solving for Scientists and Engineers
- CSE 6040 Computing for Data Analysis: Methods and Tools
- CSE 6240 Web Search and Text Mining
- CSE 6740 Computational Data Analysis: Learning, Mining, and Computation
- ISYE 6416 Computational Statistics
- ISYE 6412 Theoretical Statistics
- ISYE 6414 Statistical Modeling and Regression Analysis

### Courses in modeling and visualization
- ISYE 6501 Intro Analytics Modeling
- CSE 6220 High Performance Computing
- CSE 6242 Data and Visual Analytics
- CS 6730 Data Visualization: Principles and Applications
- CS 7450 Information Visualization

Total Credit Hours: 30