# Foundations of Data Science (MS): Statistics Concentration

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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<tbody>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
<td></td>
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</tr>
<tr>
<td>Statistics Core</td>
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<tr>
<td>ST 503</td>
<td>Fundamentals of Linear Models and Regression</td>
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<tr>
<td>ST 517</td>
<td>Applied Statistical Methods I</td>
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<tr>
<td>Mathematics Core (choose two of the following)</td>
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<tr>
<td>MA 523</td>
<td>Linear Transformations and Matrix Theory</td>
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<tr>
<td>MA 540</td>
<td>Uncertainty Quantification for Physical and Biological Models</td>
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<tr>
<td>MA 542</td>
<td>Convex Optimization Methods in Data Science</td>
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<tr>
<td>Computer Science core</td>
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<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
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<td>CSC 540</td>
<td>Database Management Concepts and Systems</td>
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<tr>
<td>Machine Learning core (choose one of the following)</td>
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<tr>
<td>ST 563</td>
<td>Introduction to Statistical Learning</td>
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<tr>
<td>CSC 522</td>
<td>Automated Learning and Data Analysis</td>
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<td><strong>Concentration Electives</strong></td>
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<td>A minimum of 9 hours of elective courses must be taken from the following courses:</td>
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<td>ST 534</td>
<td>Applied Time Series</td>
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<td>ST 537</td>
<td>Applied Multivariate and Longitudinal Data Analysis</td>
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Total Hours: 30