MASTER OF SCIENCE IN STATISTICS

The School of Mathematics offers the degree of Master of Science in Statistics (MS STAT) in cooperation with the School of Industrial and Systems Engineering. It is available for applicants having the BS in mathematics; students with engineering backgrounds should enter the same program through the School of Industrial and Systems Engineering. Prerequisites include work in probability, statistics, linear algebra, calculus, and optimization. The program requires 30 credit hours of coursework. There is no thesis option.

The School of Industrial and Systems Engineering (ISYE) offers eight master’s degrees:

- Master of Science in Industrial Engineering (MS IE);
- Master of Science in Operations Research (MS OR);
- Master of Science in Supply Chain Engineering (MS SCE);
- Master of Science in Statistics (MS STAT);
- Master of Science in Health Systems (MS HS);
- Master of Science in Quantitative and Computational Finance (MS QCF);
- Master of Science in International Logistics (MS IL) that is part of the executive program; and
- Master of Science in Computational Science and Engineering (MS CSE).

Three of these programs are interdisciplinary:

- MS QCF (joint with School of Mathematics, College of Business),
- MS STAT (joint with School of Mathematics) and
- MS SCE (joint with College of Computing, School of Mathematics).

All proposed master’s degree programs require thirty semester credit hours with the exception of MS IL and MS QCF (thirty-six credit hours) and MS HS (thirty-three credit hours). None of these MS programs contains a thesis option.

A student seeking a master’s degree must have a bachelor’s degree and typically one earned in engineering, science, mathematics, or some other field that provides an adequate background for the successful completion of one of ISyE’s programs. Students having backgrounds from unaccredited degree programs or in programs that are found lacking in relative substance can expect to first take preliminary coursework in order to elevate their preparation to the level required. The prerequisite coursework for the various master’s degrees includes strong performance in probability, statistics, linear algebra, and calculus.

Every MS curriculum is based on core classes offered from the School of ISyE, as well as electives offered by ISyE and other Georgia Tech schools in engineering and science. The MS SCE, MS QCF, and MS IL are professional degree programs with separate curriculums from the other regular MS degrees.

MS Human-Integrated Systems ([http://www.isye.gatech.edu/academics/graduate/masters.php#msie](http://www.isye.gatech.edu/academics/graduate/masters.php#msie))

MS Statistics ISYE ([http://www.isye.gatech.edu/academics/graduate/masters.php#msie](http://www.isye.gatech.edu/academics/graduate/masters.php#msie))

**Program of Study**

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<tr>
<th>Core Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MATH 4261</td>
<td>Mathematical Statistics I</td>
</tr>
<tr>
<td>MATH 4262</td>
<td>Mathematical Statistics I</td>
</tr>
<tr>
<td>ISYE 6413</td>
<td>Design and Analysis of Experiments</td>
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<tr>
<td>ISYE 6414</td>
<td>Statistical Modeling and Regression Analysis</td>
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**Statistics Electives (Select 5 courses)** 15

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MATH 4317</td>
<td>Analysis I</td>
</tr>
<tr>
<td>MATH 6262</td>
<td>Advanced Statistical Inference I</td>
</tr>
<tr>
<td>MATH 6263</td>
<td>Advanced Statistical Inference II</td>
</tr>
<tr>
<td>MATH 6266</td>
<td>Linear Statistical Models</td>
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<td>MATH 6267</td>
<td>Multivariate Statistical Analysis</td>
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<tr>
<td>ISYE 6402</td>
<td>Time Series Analysis</td>
</tr>
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<td>ISYE 6404</td>
<td>Nonparametric Data Analysis</td>
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<td>ISYE 6405</td>
<td>Statistical Methods for Manufacturing Design and Improvement</td>
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<td>ISYE 6412</td>
<td>Theoretical Statistics</td>
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<td>ISYE 6416</td>
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<td>ISYE 6421</td>
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<td>ISYE 6761</td>
<td>Stochastic Processes I</td>
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<tr>
<td>ISYE 6762</td>
<td>Stochastic Processes II</td>
</tr>
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<td>ISYE/ MATH 6781</td>
<td>Reliability Theory</td>
</tr>
<tr>
<td>ISYE/ MATH 6783</td>
<td>Statistical Techniques of Financial Data Analysis</td>
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</tbody>
</table>

| ISYE 6805 | Reliability Engineering                           |
| ISYE 7400 | Advanced Design of Experiments                     |
| ISYE 7401 | Advanced Statistical Modeling                      |
| ISYE 7405 | Multivariate Data Analysis                         |
| ISYE 7406 | Data Mining and Statistical Learning               |
| ISYE 7441 | Linear Statistical Models I                        |

**Free Elective** 3

Total Credit Hours 30

MS Statistics Math ([https://www.math.gatech.edu/ms-statistics/](https://www.math.gatech.edu/ms-statistics/))