Degree Requirements

Master of Arts in Statistics

The Master of Arts in Statistics is a 36-unit program that includes 15 units of required course work, 3 units of required thesis practicum, and 18 units of electives. Students may choose electives broadly from the list below, or they have the option of organizing elective course work and designing the required thesis practicum in one of these suggested tracks: Biology and Health, Business and Finance, or Engineering and Materials. Candidates for this degree will have completed the calculus sequence (differential, integral and multivariable) as well as an intermediate statistics course (e.g., Math 305) prior to beginning graduate study.

A maximum of 6 credits of related and comparable graduate-level course work may be transferred from another university or from a related graduate program at Washington University with the approval of the program director. These must be graduate-level credits not used to fulfill undergraduate degree requirements. Transfer credit may be granted only for authorized courses for which the student received a grade of B or higher.

Required Courses (15 Units)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td></td>
<td>Students must take one of the following two-course sequences:</td>
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<tr>
<td>Math 593</td>
<td>Probability</td>
<td>3</td>
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<tr>
<td>Math 594</td>
<td>Mathematical Statistics</td>
<td>3</td>
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<td>--or--</td>
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</tr>
<tr>
<td>Math 5061</td>
<td>Theory of Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>Math 5062</td>
<td>Theory of Statistics II</td>
<td>3</td>
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<td>They must also take all of the following courses:</td>
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<tr>
<td>Math 5291</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or Math 5392</td>
<td>Advanced Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>Math 539</td>
<td>Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>Math 575</td>
<td>Statistical Computation</td>
<td>3</td>
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</tbody>
</table>

In the case that an equivalent course has been taken and proficiency in the course material has been demonstrated, other 500-level electives may be substituted in consultation with the adviser.

Required Thesis Practicum (3 Units)

- Math 502 Statistics Practicum

Electives (18 Units)

Additional 500-level electives, selected from the list below, will be chosen by the student in consultation with University College to make up the 36 units. Other 500-level electives may be selected in consultation with an adviser. Students may choose elective courses broadly or follow one of the suggested tracks.

- U20 Math 5145 Advanced Theoretical Econometrics
- Math 5161 Applied Econometrics
- Math 520 Experimental Design
- Math 534 Survival Analysis
- U20 Math 538 Measurement and Latent Trait Models
- Math 549 Numerical Applied Mathematics
- U20 Math 551 Advanced Probability I
- U20 Math 552 Advanced Probability II
- Math 559 Bayesian Statistics
- Math 584 Multilevel Models in Quantitative Research
- Math 585 Stochastic Processes

Biology and Health Optional Track

- Math 520 Experimental Design
- Math 522 Biostatistics
- Math 534 Survival Analysis
- Other courses with authorization

Business and Finance Optional Track

- U20 Math 525 Multilevel Modeling
- Math 549 Numerical Applied Mathematics
- Math 559 Bayesian Statistics
- Other courses with authorization

Engineering and Materials Optional Track

- Math 549 Numerical Applied Mathematics
- Math 559 Bayesian Statistics
- Math 585 Stochastic Processes
- Other courses with authorization