STATISTICS, PH.D.

The Ph.D. degree is designed to prepare the student to conduct independent research, to work as a lead statistician in business or industry, and/or to teach statistics at the collegiate level.

The profile of a successful Ph.D. applicant includes either a master's degree with excellent performance from an accredited institution, or post baccalaureate with an average GRE verbal in the 65th or higher percentile and an average GRE quantitative in the 80th or higher percentile with an average GPA of 3.30 or higher. He/she will also have a strong math background including 3 semester sequence in calculus, linear algebra, and often real analysis.

Learning Outcomes

1. The Ph.D. recipient should have solid knowledge of the advanced theory of statistics and probability.
2. The Ph.D. recipient should have the ability to substantially add to the body of knowledge in the field in statistics.
3. The Ph.D. recipient who desires a career in academia should have the ability to teach at the collegiate level.
4. Doctoral students should complete all required coursework, pass the qualifying exam at the Ph.D. level, then propose, write, and defend their dissertation in a timely manner.

Degree Requirements (60 Post-Baccalaureate Hours)

A minimum of 60 semester hours of approved course work built around a core of 10 three-credit courses. The remaining 30 credit hours must include 3 hours of Doctoral seminar, at least 12 hours of Dissertation Preparation and at least 12 hours of STAT elective courses at the 700+ level.

Core Courses (30 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 704</td>
<td>Data Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 705</td>
<td>Data Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>STAT 712</td>
<td>Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 713</td>
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<td>3</td>
</tr>
<tr>
<td>STAT 714</td>
<td>Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>STAT 740</td>
<td>Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td>STAT 810</td>
<td>Probability Theory I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 811</td>
<td>Probability Theory II</td>
<td>3</td>
</tr>
<tr>
<td>STAT 820</td>
<td>Advanced Statistical Inference I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 821</td>
<td>Advanced Statistical Inference II</td>
<td>3</td>
</tr>
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</table>

Total Credit Hours 30

Post Master's Degree Requirements (Minimum of 42 hours)

A minimum of 42 semester hours of approved course work built around a core of five three-credit courses. The remaining 27 credit hours are comprised of 3 hours of Doctoral seminar, 12 hours of Dissertation Preparation and 12 hours of STAT elective courses at the 700+ level. Some remedial coursework may be required by the Graduate Director (e.g., STAT 714 if you have not taken an equivalent course in your master's studies).

Core Courses (15 Hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>STAT 740</td>
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<tr>
<td>STAT 810</td>
<td>Probability Theory I</td>
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</tr>
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<td>STAT 811</td>
<td>Probability Theory II</td>
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</tr>
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<td>STAT 820</td>
<td>Advanced Statistical Inference I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 821</td>
<td>Advanced Statistical Inference II</td>
<td>3</td>
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</table>

Total Credit Hours 15

Doctoral Seminar (3 Hours)

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>STAT 890</td>
<td>Doctoral Seminar</td>
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</tr>
</tbody>
</table>

Total Credit Hours 3

Dissertation Preparation (12 Hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>STAT 899</td>
<td>Dissertation Preparation</td>
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</tbody>
</table>

Total Credit Hours 12

Note: The doctoral dissertation must be written in conjunction with the dissertation preparation (STAT 899).

At least 12 required elective credit hours must be from STAT courses at the 700+ level, and all elective credit hours must be approved by the Graduate Director. Credit hours used in fulfilling requirements for a previous degree may not be transferred.

Additional Requirements

The progression through the degree program involves three examinations: the admission-to-candidacy exam, usually taken after the first year of study; the comprehensive exam in the form of a dissertation proposal, usually completed near the end of required course work; and the dissertation defense.