Statistics

Information listed in this catalog is current as of 08/2018

http://www.stat.illinois.edu

Chair of the Department: Douglas G. Simpson
Director of Ph.D. Program: Xiaofeng Shao
Director of M.S. Program: Jeff Douglas
M.S. Advisor: David Dalpiaz
Contact: Aaron Thompson
101 Illini Hall
725 South Wright Street
Champaign, IL 61820
(217) 333-2167
stat-office@illinois.edu

Major: Statistics
Degrees Offered: M.S., Ph.D.
Graduate Minor: Statistics
Graduate Concentrations: Analytics (M.S. only), Applied Statistics (M.S. only)

Graduate Degree Programs

The Department of Statistics offers graduate study leading to the Master of Science in Statistics, the Master of Science in Statistics with specialization in various areas of application, and the Doctor of Philosophy in Statistics.

Admission

Graduate College admission requirements apply. Students are expected to have a strong undergraduate mathematics background, but need not have an undergraduate statistics or mathematics degree. Students may be admitted with deficiencies, which are to be removed during the first year of graduate work. A minimum Test of English as a Foreign Language (TOEFL) score of 590 for the paper-based test or 243 for the computer-based test is required for students whose native language is not English. The Graduate Record Examination (GRE) is required. The department offers Ph.D. admissions for the fall only.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in the Ph.D. program.

Financial Aid

Financial aid is available primarily in the form of teaching assistantships, research assistantships, and fellowships. For further information write to the Graduate Admissions Committee, Department of Statistics.

- Master of Science in Statistics (http://catalog.illinois.edu/graduate/graduate-majors/statistics/ms)
- Master of Science in Statistics, Analytics Concentration (http://catalog.illinois.edu/graduate/graduate-majors/statistics/ms-analytics-concentration)
- Master of Science in Statistics, Applied Statistics Concentration (http://catalog.illinois.edu/graduate/graduate-majors/statistics/ms-applied-statistics-concentration)

Doctor of Philosophy in Statistics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Equivalent Core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 424</td>
<td>Analysis of Variance</td>
<td>4</td>
</tr>
<tr>
<td>STAT 425</td>
<td>Applied Regression and Design</td>
<td>4</td>
</tr>
<tr>
<td>STAT 426</td>
<td>Sampling and Categorical Data</td>
<td>4</td>
</tr>
<tr>
<td>STAT 510</td>
<td>Mathematical Statistics I</td>
<td>4</td>
</tr>
<tr>
<td>Theory Core Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 511</td>
<td>Mathematical Statistics II</td>
<td>4</td>
</tr>
<tr>
<td>STAT 553</td>
<td>Probability and Measure I</td>
<td>4</td>
</tr>
<tr>
<td>STAT 575</td>
<td>Large Sample Theory</td>
<td>4</td>
</tr>
<tr>
<td>Select one Practicum Course:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 427</td>
<td>Statistical Consulting</td>
<td>4</td>
</tr>
<tr>
<td>STAT 593</td>
<td>STAT Internship</td>
<td></td>
</tr>
<tr>
<td>STAT 595</td>
<td>Preparing Future Faculty</td>
<td></td>
</tr>
<tr>
<td>Select one Computational Theory and Methods Course:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 428</td>
<td>Statistical Computing</td>
<td>4</td>
</tr>
<tr>
<td>STAT 525</td>
<td>Computational Statistics</td>
<td></td>
</tr>
<tr>
<td>STAT 530</td>
<td>Bioinformatics</td>
<td></td>
</tr>
<tr>
<td>STAT 542</td>
<td>Statistical Learning</td>
<td></td>
</tr>
<tr>
<td>Select one of the Stochastic Processes and Time Series Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 429</td>
<td>Time Series Analysis</td>
<td>4</td>
</tr>
<tr>
<td>STAT 433</td>
<td>Stochastic Processes (Stochastic Processes)</td>
<td></td>
</tr>
<tr>
<td>STAT 554</td>
<td>Probability and Measure II</td>
<td></td>
</tr>
<tr>
<td>STAT 555</td>
<td>Applied Stochastic Processes</td>
<td></td>
</tr>
<tr>
<td>Select at least 3 elective courses from a list within the department. At least two courses must be at the 500-level.</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Thesis and Individual Study Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 590</td>
<td>Individual Study and Research</td>
<td>0-32</td>
</tr>
<tr>
<td>STAT 599</td>
<td>Thesis Research (0 min applied toward degree)</td>
<td>0</td>
</tr>
<tr>
<td>Total Hours</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

Other Requirements

| Other requirements may overlap                     |       |
| Masters Degree Required for Admission to PhD?     | No, but Masters level requirements must be met (32 additional hours min) |
| Qualifying Exam Required                          | Yes   |
| Preliminary Exam Required                         | Yes   |
| Final Exam/Dissertation Defense Required          | Yes   |
| Dissertation Deposit Required                     | Yes   |
| Minimum GPA:                                      | 2.75  |

1 For additional details and requirements refer to the department’s Graduate Programs (http://www.stat.illinois.edu/students/graduates.shtml) and the Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook).

Graduate Minor in Statistics

The Graduate Minor in Statistics is designed for doctoral students pursuing degrees in other fields who wish to enhance their statistical knowledge and credentials. Students within the major cannot minor...
in the same program. The Minor is taken in conjunction with, and is intended to complement the student's work in their primary disciplines. Admission to the minor requires an application to the Department and admission to a PhD program (MS track to PhD cannot apply until they are in the PhD program) in another field at the University of Illinois. Applications for the Minor are submitted upon completion of the required courses. Approval is contingent on having grade point average of 3.0 or better in the Minor. A total of three courses, constituting 12 graduate credit hours, are required for the minor in Statistics degree. At least 8 credit hours must be taken at the 500 level. No course substitutions allowed.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>400-level Statistics coursework chosen from approved departmental list</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>500-level Statistics coursework chosen from approved departmental list</td>
<td>8</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Students wishing information beyond that provided here should contact the Director of MS Studies in Statistics.