STATISTICS, MS

for the degree of Master of Science in Statistics

Graduate Degree Programs in Statistics

- Statistics, MS (p. 1)
  - concentrations:
    - Analytics (http://catalog.illinois.edu/graduate/las/statistics-ms/analytics/)
    - Applied (http://catalog.illinois.edu/graduate/las/statistics-ms/applied/)
- Statistics, PhD (http://catalog.illinois.edu/graduate/las/statistics-phd/)
  - optional concentrations for the PhD:
    - Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
    - Data Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/data-science-engineering/)
- Graduate Minor in Statistics (http://catalog.illinois.edu/graduate/las/minors/statistics/)

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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/).

**Code** | **Title** | **Hours**
---|---|---
STAT 510 | Mathematical Statistics | 4

Select one of the following:

- STAT 425 Statistical Modeling I | 4
- or STAT 527 Advanced Regression Analysis

Select one of the following: | 4
- STAT 424 Design of Experiments
- STAT 426 Statistical Modeling II
- STAT 429 Time Series Analysis
- STAT 431 Applied Bayesian Analysis
- STAT 433 Stochastic Processes
- STAT 528 Advanced Regression Analysis II
- STAT 533 Advanced Stochastic Processes
- STAT 556 Advanced Time Series Analysis

Five elective courses from Departmental List (See Course List Tab) | 20

- STAT 427 Statistical Consulting (or experience in applied statistics) | 0-4
- or STAT 593 STAT Internship
- or STAT 443 Professional Statistics
- STAT 410/MATH 464 Statistics and Probability II (or equivalent proficiency - may be waived with approval) | 0-4

Total hours | 32-36

**Other Requirements**

**Requirement** | **Description**
---|---
Other Requirements may overlap | A concentration is not required.
Minimum 500-level Hours Required | 12
Overall: | 2.75

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**Code** | **Title** | **Hours**
---|---|---
Statistics Departmental Course List
STAT 424 | Design of Experiments | 
STAT 426 | Statistical Modeling II | 
STAT 427 | Statistical Consulting | 
STAT 428 | Statistical Computing | 
STAT 429 | Time Series Analysis | 
STAT 430 | Topics in Applied Statistics | 
STAT 431 | Applied Bayesian Analysis | 
STAT 432 | Basics of Statistical Learning | 
STAT 433 | Stochastic Processes | 
STAT 434 | Survival Analysis | 
STAT 440 | Statistical Data Management | 
STAT 443 | Professional Statistics | 
STAT 447 | Data Science Programming Methods | 
STAT 448 | Advanced Data Analysis | 
STAT 458 | Math Modeling in Life Sciences | 
STAT 480 | Big Data Analytics | 
STAT 511 | Advanced Mathematical Statistics | 
STAT 525 | Topics in Computational Statistics | 
STAT 528 | Advanced Regression Analysis II | 
STAT 530 | Bioinformatics | 
STAT 533 | Advanced Stochastic Processes | 
STAT 534 | Advanced Survival Analysis | 
STAT 538 | | 
STAT 542 | Statistical Learning | 
STAT 545 | Spatial Statistics | 
STAT 546 | Machine Learning in Data Science | 
STAT 551 | Theory of Probability I | 
STAT 552 | Theory of Probability II | 
STAT 553 | Probability and Measure I | 
STAT 554 | Probability and Measure II | 
STAT 555 | Applied Stochastic Processes | 
STAT 556 | Advanced Time Series Analysis | 
STAT 571 | Multivariate Analysis | 
STAT 575 | Large Sample Theory | 
STAT 576 | Empirical Process Theory and Weak Convergence | 
STAT 578 | Topics in Statistics | 
STAT 587 | Hierarchical Linear Models | 
STAT 588 | Covar Struct and Factor Models | 

Information listed in this catalog is current as of 02/2024
Statistics, MS

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<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>STAT 590</td>
<td>Individual Study and Research</td>
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<tr>
<td>STAT 593</td>
<td>STAT Internship</td>
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Statistics students in the MS program will:

1. Acquire a solid foundation in mathematical statistics and learn how it applies to data analysis;
2. Develop strong communication abilities in writing and orally that will allow them to work effectively in diverse teams;
3. Become skilled in statistical computing, data management, and statistical software;
4. Be knowledgeable of the most modern techniques in statistical methodology and data science, especially data analysis techniques associated with statistical learning and machine learning;
5. Develop an understanding and gain experience in applying methodology learned in the classroom to real problems in science and industry.

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Statistics Department
Department Chair: Bo Li (https://stat.illinois.edu/directory/profile/libo/)
Associate Department Chair: Jeff Douglas (https://stat.illinois.edu/directory/profile/jeffdoug/)
MS Program Director: Darren Glosemeyer (https://stat.illinois.edu/directory/profile/glosemey/)
MS advisors: Alexandra Chronopoulou, Hyoeun Lee (https://stat.illinois.edu/academics/advising/)
Graduate Contact: Asraa Ibrahim (stat-grad@illinois.edu)
Statistics Department website (http://www.stat.illinois.edu/)
Computing Applications Building, 605 E Springfield Ave, Champaign, IL 61820
(217) 333-2167
Statistics email (stat-grad@illinois.edu)

College of Liberal Arts & Sciences
College of Liberal Arts & Sciences website (https://las.illinois.edu/)

Admissions
Statistics Department Admissions Info & Requirements (https://stat.illinois.edu/admissions/prospective-graduate-students/)
Graduate College Admissions & Requirements (https://grad.illinois.edu/admissions/apply/)

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