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 Overall:	12
Minimum GPA:	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	
STAT 590	Individual Study and Research	
STAT 593	STAT Internship	

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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 skillful 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/)
PhD Program Director: Xiaofeng Shao (https://stat.illinois.edu/directory/profile/xshao/)
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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/)