Statistics

STAT 430  **Topics in Applied Statistics**  credit: 3 OR 4 hours.
Formulation and analysis of mathematical models for random phenomena; extensive involvement with the analysis of real data; and instruction in statistical and computing techniques as needed. 3 undergraduate hours. 4 graduate hours. May be repeated with approval. Prerequisite: STAT 410 or STAT 420; or consent of instructor.

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<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<tr>
<td>55664</td>
<td>Lecture-Discussion</td>
<td>AG</td>
<td>09:30 AM - 12:20 PM</td>
<td>T</td>
<td>126 - Grad Sch of Lib &amp; Info Science</td>
<td>He, J</td>
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Credit Hours: 4 hours
Introduction to Data Science
Restricted to students in the Statistics department.
Restricted to Graduate - Urbana-Champaign.
**TOPIC:** Introduction to Data Science This course introduces students to data science approaches that have emerged from recent advances in programming and computing technology. They will learn to collect and use data from a variety of sources, including the web, in a modern statistical inference and visualization paradigm. The course will be based in the programming language R, but will also use HTML, regular expressions, basic unix tools, XML, and SQL. Supervised and unsupervised statistical learning techniques made possible by recent advances in computing power will also be covered. For up-to-date information about statistics course registration, please see our registration update pages: go.illinois.edu/StatisticsRegistration

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Credit Hours: 3 hours
Introduction to Data Science
Restricted to Statistics or Statistics & Computer Science major(s). Restricted to Undergrad - Urbana-Champaign.
**TOPIC:** Introduction to Data Science This course introduces students to data science approaches that have emerged from recent advances in programming and computing technology. They will learn to collect and use data from a variety of sources, including the web, in a modern statistical inference and visualization paradigm. The course will be based in the programming language R, but will also use HTML, regular expressions, basic unix tools, XML, and SQL. Supervised and unsupervised statistical learning techniques made possible by recent advances in computing power will also be covered. For up-to-date information about statistics course registration, please see our registration update pages: go.illinois.edu/StatisticsRegistration

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<td>60255</td>
<td>Lecture-Discussion</td>
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<td>MWF</td>
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Credit Hours: 4 hours
Nonparametric Statistics
Restricted to students in the Statistics department.
Restricted to Graduate - Urbana-Champaign.
Topic: Nonparametric statistics. This course considers nonparametric methods of statistical analysis. Topics include smoothing and spline methods for estimation of probability density and regression functions, as well as resampling techniques for inference. Prerequisites: STAT 410 and STAT 425.

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71665  Online  OGR  ARRANGED -  -  Eddelbuettel, D

Credit Hours: 4 hours
DataScience ProgrammingMethods
Restricted to students in the Statistics department.
Restricted to Graduate - Urbana-Champaign.
This course provides the computational foundation for rigorous data science work, both applied and in research. Starting from key foundations (the shell, git, Markdown and SQL), we focus on a solid introduction to programming in R. Next we discuss keys to reproducible computing (R packages, Docker) as well as some computational and algorithmic foundations. Finally, we examine in some detail extensions for better performance, notably using C++ with R. Course Information: 3 undergraduate hours. 4 graduate hours. May be repeated with approval. Prerequisite: STAT 410, STAT 420, and STAT 425 or consent of instructor. Students who previously enrolled in STAT 385 should not register for this course. For Statistics course registration information: go.illinois.edu/StatisticsRegistration

71666  Online  OUG  ARRANGED -  -  Eddelbuettel, D

Credit Hours: 3 hours
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Restricted to Statistics or Statistics & Computer Science major(s). Restricted to Undergrad - Urbana-Champaign.
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