# 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.

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>60255</td>
<td>Lecture-Discussion</td>
<td>M1G</td>
<td>12:30 PM - 01:50 PM</td>
<td>TR</td>
<td>32 - Psychology Building</td>
<td>Park, T</td>
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</tbody>
</table>

Credit Hours: 4 hours

Applied Bayesian Methods
Restricted to Graduate - Urbana-Champaign.
Introduction to the concepts and methodology of Bayesian statistics, for students with fundamental knowledge of mathematical statistics. Topics include Bayes' rule, prior and posterior distributions, conjugacy, Bayesian point estimates and intervals, Bayesian hypothesis testing, noninformative priors, practical Markov chain Monte Carlo, hierarchical models and model graphs, and more advanced topics as time permits. Prerequisites: STAT 410 and knowledge of R. Early registration is restricted to Statistics Graduate Students. This restriction is expected to be removed sometime during the business day May 5, 2015. Some seats are reserved for incoming Statistics graduate students. If you receive a Reserved-Closed error, that means the course is full except for the reserved seats.

| 60257 | Lecture-Discussion | M1U     | 12:30 PM - 01:50 PM | TR   | 32 - Psychology Building      | Park, T    |

Credit Hours: 3 hours

Applied Bayesian Methods
Restricted to Undergrad - Urbana-Champaign.
Introduction to the concepts and methodology of Bayesian statistics, for students with fundamental knowledge of mathematical statistics. Topics include Bayes' rule, prior and posterior distributions, conjugacy, Bayesian point estimates and intervals, Bayesian hypothesis testing, noninformative priors, practical Markov chain Monte Carlo, hierarchical models and model graphs, and more advanced topics as time permits. Prerequisites: STAT 410 and knowledge of R. Early registration is restricted to students majoring in Statistics or Statistics & Computer Science. This restriction is expected to be removed sometime during the business day May 5, 2015.

| 55664 | Lecture-Discussion | S1G     | 03:00 PM - 03:50 PM | MWF  | 1090 - Lincoln Hall           | Douglas, J |

Credit Hours: 4 hours

Applied Multivariate Analysis
Restricted to Graduate - Urbana-Champaign.
Topics will include factor analysis, principal components analysis, cluster analysis, canonical correlation analysis, discriminant analysis, and other exploratory strategies for analyzing large multivariate data sets. Prerequisites: STAT 410 and MATH 415 Early registration is restricted to Statistics Graduate Students. This restriction is expected to be removed sometime during the business day May 5, 2015. Some seats are reserved for incoming Statistics graduate students. If you receive a Reserved-Closed error, that means the course is full except for the reserved seats.

| 55666 | Lecture-Discussion | S1U     | 03:00 PM - 03:50 PM | MWF  | 1090 - Lincoln Hall           | Douglas, J |

Credit Hours: 3 hours

Applied Multivariate Analysis
Restricted to Undergrad - Urbana-Champaign.
Topics will include factor analysis, principal components analysis, cluster analysis, canonical correlation analysis, discriminant analysis, and other exploratory strategies for analyzing large multivariate data sets. Prerequisites: STAT 410 and MATH 415
Early registration is restricted to students majoring in Statistics or Statistics & Computer Science. This restriction is expected to be removed sometime during the business day May 5, 2015.