Computer Science

CS 361  **Probability & Statistics for Computer Science**  credit: 3 hours.
Introduction to probability theory and statistics with applications to computer science. Topics include: visualizing datasets, summarizing data, basic descriptive statistics, conditional probability, independence, Bayes theorem, random variables, joint and conditional distributions, expectation, variance and covariance, central limit theorem. Markov inequality, Chebyshev inequality, law of large numbers, Markov chains, simulation, the PageRank algorithm, populations and sampling, sample mean, standard error, maximum likelihood estimation, Bayes estimation, hypothesis testing, confidence intervals, linear regression, principal component analysis, classification, and decision trees. Same as STAT 361. Credit is not given for both CS 361 and ECE 313. Prerequisite: MATH 220 or 221; credit or concurrent registration in MATH 225. For majors only.

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<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<td>Discussion/Recitation</td>
<td>ADA</td>
<td>10:00 AM - 10:50 AM</td>
<td>R</td>
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<td>Barber, R</td>
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<td>MW</td>
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Restricted to Undergrad - Urbana-Champaign.

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<td>CSP</td>
<td>ARRANGED -</td>
<td>B - Illini Center</td>
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Restricted to O/C Engineering City Scholars students.