# Computer Science

## CS 446  Machine Learning  
credit: 3 OR 4 hours.

Principles and applications of machine learning. Main paradigms and techniques, including discriminative and generative methods, reinforcement learning: linear regression, logistic regression, support vector machines, deep nets, structured methods, dimensionality reduction, k-means, Gaussian mixtures, expectation maximization, Markov decision processes, and Q-learning. Application areas such as natural language and text understanding, speech recognition, computer vision, data mining, and adaptive computer systems, among others. Same as ECE 449. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; One of MATH 225, MATH 415, MATH 416 or ASRM 406; One of CS 361, ECE 313, MATH 461 or STAT 400.

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<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<td>Lecture</td>
<td>D3</td>
<td>12:30 PM - 01:45 PM</td>
<td>WF</td>
<td>1404 - Siebel Center for Comp Sci</td>
<td>Koyejo, O</td>
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Credit Hours: 3 hours
Restricted to Undergrad - Urbana-Champaign.
For up-to-date information about CS course restrictions, please see the following link: http://go.cs.illinois.edu/csregister

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Credit Hours: 4 hours
Restricted to Computer Science or Bioinformatics major(s). Restricted to Graduate - Urbana-Champaign. Not intended for MCS:Computer Sci Online -UIUC, MCS:Computer Sci Online -UIUC, or NDEG:Computer Science Onl-UIUC.
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