



**Course** CS 6375.501 – Machine Learning  
**Professor** Dr. Anurag Nagar  
**Term** Spring 2016  
**Meetings** TTh 5:30 – 6:45 PM CN.102

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### Professor's Contact Information

**Office Phone** TBA  
**Office Location** ECSS 4.403  
**Email Address** axn112530@utdallas.edu  
**Office Hours** MW 2:30 – 3:45 PM  
**Other Information** Walk-in during office hours is encouraged. At other times, email is the best method of contact.  
**Mid-Term** Thursday March 3, 2015  
**Final** TBA

### General Course Information

**Pre-requisites, Co-requisites, & other restrictions** CS5343 Algorithm Analysis and Data Structures.  
You are expected to have basic programming skills as well as knowledge of elementary data structures and probability theory

**Course Description** The main objective of this course is to introduce students to machine learning, the study of computer systems that improve their performance *automatically* through experience. Students will learn the latest machine learning algorithms and models that constitute typical machine learning systems. They will also gain the necessary foundations and background to both build practical machine learning systems and conduct research in machine learning.

**Learning Outcomes** Ability to understand and apply basic learning algorithms  
Ability to understand and apply computational learning theories  
Ability to understand and apply advanced learning algorithms

**Texts & Materials** [Machine Learning](#) by Tom Mitchell.  
[Machine Learning: a Probabilistic Perspective](#) by Kevin Murphy.  
[Pattern Recognition and Machine Learning](#) by Christopher M. Bishop.

**Suggested Texts, Readings, & Materials** [Pattern Classification, 2nd Edition](#) by Richard O. Duda, Peter E. Hart, David G. Stork.  
[The Elements of Statistical Learning: Data Mining, Inference, and Prediction](#) by Trevor Hastie, Robert Tibshirani and Jerome Friedman.  
[Data Mining: Practical Machine Learning Tools and Techniques \(Third Edition\)](#) by Ian H. Witten, Eibe Frank and Mark A. Hall.  
[Principles of Data Mining \(Adaptive Computation and Machine Learning\)](#) by David J. Hand, Heikki Mannila and Padhraic Smyth.

## Assignments & Academic Calendar

Assignments will be through eLearning.

For academic calendar see:

<https://www.utdallas.edu/academiccalendar/files/AcademicCalendarSpring2016.pdf>

## Course Policies

<b>Grading (credit) Criteria</b>	35% Homework, 10% Project, 20% Midterm, 25% Final, 10% Quizzes and Class Participation. In order to obtain an “A” or “A-” grade, a student must perform well in the examinations, as well as in the assignments, and project. This is the minimum requirement, and satisfying this requirements does not guarantee an A or A- grade.
<b>Late Work</b>	5% penalty for each late day
<b>Class Attendance</b>	Voluntary, but strongly recommended.
<b>Make-up Exams</b>	Make-up examinations will be offered only if the student has a valid medical reason and produces a doctor’s letter. If a student misses an examination or quiz without prior notice, the student will forfeit the right to take a make-up examination or quiz at a later date. Exceptions will be made in rare situations, and entirely at the discretion of the instructor. Any request for such make-up examination should be accompanied by supporting document, e.g. a doctor’s note.
<b>Classroom Citizenship</b>	Please be considerate of fellow students and the instructor. Please turn off all electronic devices during class hours. Participate actively in classroom and online (through eLearning) discussion.
<b>Comet Creed</b>	<i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i>  <i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i>
<b>UT Dallas Syllabus Policies and Procedures</b>	<i>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.</i>  <i>Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.</i>

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***