

CS/STAT 6301.5U1 – Advanced Computational Methods for Data Science

Course Information

Course Number/Section	CS/SE 6301.5U1
Course Title	Advanced Computational Methods for Data Science
Term	Summer 2016
Days & Times	MW 5:00 – 7:45pm
Location	ECSN 2.126

Seats are limited for this course, so the following policy is being enforced: If a student does not show up for class during the first week (May 23-25), the student will be dropped from the course on the morning of May 26 to allow another student to take their seat.

Professor Contact Information

Instructor	Dr Bill Semper
E-Mail	WJS130130@utdallas.edu
Office hours	MW 3:00 - 4:00 pm, ECSS 4.706
Phone	972-883-4139
Website	www.utdallas.edu/~wjs130130/

Course Pre-requisites, Co-requisites, and/or Other Restrictions:

Prerequisites: CS/SE/STAT 6313 or 6375.

Course Description

Introduction to statistical learning, including linear regression, classification, resampling, model selection, nonlinear methods, tree-based methods, support vector machine, unsupervised learning. Course will be taught using the R language.

Student Learning Objectives/Outcomes

Students will learn the basics of statistical learning and gain experience applying various modeling techniques to data sets using the R language.

Textbooks and Materials:

Material will be used from multiple sources (which will be noted in class). One good source is: *An Introduction to Statistical Learning (ISLR)*, James, Witten, Hastie, Tibshirani. The textbook and many other resources are available [here](#). We will use the 6th printing, available [here](#).

Academic Calendar: *These descriptions and timelines are subject to change at the discretion of the Professor.*

Date	Topic
May 23	Classes Begin
June 27	Mid-Term Exam
August 8	Classes End
August 9-10	Final Exam

Grading Policy

Weekly Projects	50%
Midterm Exam	25%
Final Exam	25%

Please note: No extra credit assignments will be given.

Grading will be on a curve, with the median point for the class being used as the B+/A- cutoff point. Cutoffs for A and B+ grades will be roughly 2% from the median. If the median score is above 90%, the following scale is used:

$92 \leq score \leq 100$	A
$90 \leq score < 92$	A –
$88 \leq score < 90$	B +
$82 \leq score < 88$	B
$80 \leq score < 82$	B –
$score < 80$	C

The instructor reserves to the right to assign B- grades to students with final scores less than 2 standard deviations below the median score. The instructor reserves the right to assign C grades to students who score less than 50% on the final.

For detailed information about University policies and procedures related to this syllabus, please refer to <http://go.utdallas.edu/syllabus-policies>.