

	Course	CS/STAT 6313.001: Statistical Methods for Data Science
	Professor	Min Chen
	Term	Spring 2019
	Meetings	TR 10:00AM-11:15AM (ECSN 2.110)

Professor's Contact Information

Office & Email	FO 3.704 H (mchen@utdallas.edu)
Office Hours	TR 11:30AM – 12:30 PM or by appointment
Other Information	eLearning at https://elearning.utdallas.edu/ will be used for posting course materials.

General Course Information

Pre-requisites, Co-requisites, & Other Restrictions	CS/SE/STAT 3341 or equivalent.
Course Description	Statistical Methods will be developed at an intermediate level.
Learning Outcomes	<ul style="list-style-type: none"> Students will be able to analyze data using basic statistical methods. Students will be able to use a statistical software package for data analysis.
Required Texts & Materials	<i>Probability and Statistics for Computer Scientists</i> , 2 nd edition, Michael Baron, CRC Press, 2014
Suggested Texts, Readings, & Materials	<ul style="list-style-type: none"> <i>simpleR – Using R for Introductory Statistics</i> <i>An Introduction to R</i> <i>Introduction to Probability and Statistics Using R</i> (The PDF files of these three books are available on eLearning) <i>Advanced R</i> (Its HTML file is available at http://adv-r.had.co.nz)
Teaching Assistant	Roy Akash (Akash.Roy@utdallas.edu), Office hour:

Academic Calendar

Tentative Course Schedule	
	Topic (Book Chapters)
1 week	Review of basic probability concepts and Monte Carlo simulations (Chapters 1-5)
3 weeks	Introduction to statistics, sampling distributions and point estimation (Chapter 8, Section 9.1)
2 weeks	Interval estimation (Sections 9.2, 9.3, 9.5, 10.3)

3 weeks	Hypothesis testing (Section 9.4, 9.5)
1 week	Chi-square tests (Section 10.1)
1 week	Nonparametric tests (Section 10.2)
3 weeks	Regression and ANOVA (Chapter 11)
1 week	Additional topics if time permits
Exam Schedule & Mini Project Due Dates	
Project 1	Jan 31
Exam 1	Feb 7
Project 2	Feb 21
Project 3	Mar 7
Exam 2	Mar 28
Project 4	Apr 4
Project 5	Apr 18
Project 6	May 2
Exam 3	May 2

Course Policies

Grading (credit) Criteria	<p>Exam 1: 20%, Exam 2: 20%, Exam 3: 30%</p> <p>Six mini-projects (each with 5% weight): 30% (Additional details will be provided later)</p> <ul style="list-style-type: none"> The first two exams will be based on a specified range of course content to be announced in the class. The last exam is comprehensive. The use of a basic calculator is required. For each exam, each student must bring a scantron score sheet, FORM NO. F-1712-PAR-L. The scantron sheets should be <u>clean</u> and <u>not bent or mutilated</u>. These are available in the bookstore. Each student must also bring a <i>No. 2 pencil</i> with a good eraser for use with the scantron sheet. The instructor will NOT be providing any of these. Incomplete grade is possible only in the case of a documented serious medical emergency near the end of the semester, with at least 70% of work completed at an on-going passing grade. Homework will be assigned but will not be collected or graded. The exams are closed-book, closed-notes. A cheat sheet may be provided.
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Tentative Grading Scheme	93 or higher: A [90, 93): A- [87, 90): B+ [83, 87): B [80, 83): B- [75, 80): C+ [70, 75): C Lower than 70: F
Make-up Policy	No make-up work will be given unless there is a serious medical emergency and appropriate documentation is provided in a timely manner.
Extra Credit	No extra credit work will be assigned.
Late Work	No late work will be accepted. It may be possible to submit the work early.
Class Attendance	Although attendance is not mandatory, you are encouraged not to miss any class as the course will move at a fast pace. The instructor will not make any accommodations for missing a class.
Electronic Devices	<i>The use of any electronic devices (except a basic calculator) is prohibited.</i> For any exception from this rule, ask the instructor for permission. On certain days (announced in advance), the instructor may encourage to bring a laptop.
Comet Creed	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: “As a Comet, I pledge honesty, integrity, and service in all that I do.”
Campus Carry	The University's concealed handgun policy is posted on the campus carry website: https://www.utdallas.edu/campuscarry/ .
UT Dallas Syllabus Policies and Procedures	The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to http://go.utdallas.edu/syllabus-policies for these policies.

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