

	<b>Course</b>	<b>CS/STAT 6313: Statistical Methods for Data Science</b>
	<b>Professor</b>	Prof. Min Chen
	<b>Term</b>	Fall 2023
	<b>Meetings</b>	001: TTH 8:30am - 9:45am in ECSS 2.410

### Professor's Contact Information

<b>Office &amp; Email</b>	FO 3.704 H ( <a href="mailto:mchen@utdallas.edu">mchen@utdallas.edu</a> )
<b>Office Hours</b>	Tuesdays and Thursdays from 10AM-11AM
<b>Other Information</b>	eLearning at <a href="https://elearning.utdallas.edu/">https://elearning.utdallas.edu/</a> will be used for posting course materials.

### Teaching Assistant

<b>Name, Email, Office Hours</b>	Please login to eLearning to find details.
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### Course Modality and Expectations

<b>Instructional Mode</b>	The instructional mode for the course is face-to-face.
<b>Course Platform</b>	This course will be delivered in person.
<b>Expectations</b>	<ul style="list-style-type: none"> <li>• To submit your assignment on time.</li> <li>• To be engaged in class activities.</li> <li>• To spend an adequate amount of time on the homework each week, and to make an effort to solve problems in mini projects.</li> <li>• To engage with both the abstract and computational sides of the course material.</li> <li>• To seek help when appropriate.</li> </ul>

### Instructor Resources

[Registrar's Intranet](#): please log in with your UTD NetID and password to access this site. Information that faculty need about grading, scheduling, and other essential aspects of our responsibilities related to teaching are made available and updated regularly in the Registrar's Intranet. This source of information can only be accessed by logging in with your UTD NetID and password. Many important faculty questions are answered here, and this is information that faculty members are expected to know and understand.

[FERPA Guidelines](#): you will be asked to log in before you access the FERPA Faculty Guidelines webpage on the Registrar's Intranet. If faculty have additional questions about FERPA guidance, please contact the Office of the Registrar at [records@utdallas.edu](mailto:records@utdallas.edu) for the proper student consent forms and further instructions. NOTE: Class recordings from prior semesters may be used as long there are no identi-

able student information due to [FERPA](#) because instructors will need students' written consent first. Please review your previous class recordings for identifiable student information before using them in the current term. For additional guidance, contact the [Office of the Registrar](#).

[UT System Resources for Creating Accessible Course Content](#): designed to assist faculty with developing course content

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**Course Pre-requisites, Co-requisites, and/or Other Restrictions**  
CS/SE/STAT 3341 or equivalent.

**Course Description**  
Statistical Methods will be developed at an intermediate level.

**Student Learning Objectives/Outcomes**

- 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 Textbooks and Materials**

*Probability and Statistics for Computer Scientists*, 3<sup>rd</sup> edition, Michael Baron, CRC Press. Textbooks and some other bookstore materials can be ordered online or purchased at the [UT Dallas Bookstore](#).

**Suggested Course Materials**

- *simpleR – Using R for Introductory Statistics*
- *An Introduction to R*
- *Introduction to Probability and Statistics Using R* (The PDF files of these three books are available on eLearning)
- *Advanced R* (Its HTML file is available at <http://adv-r.had.co.nz>)

Textbooks and some other bookstore materials can be ordered online or purchased at the [UT Dallas Bookstore](#).

**Technical Requirements**

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](#) webpage.

**Course Access and Navigation**

This course can be accessed using your UT Dallas NetID account on the [eLearning](#) website.

Please see the course access and navigation section of the [Getting Started with eLearning](#) webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](#) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](#) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

### Academic Calendar

<b>Tentative Course Schedule</b>	Topics (Book Chapters)
2 weeks	Review of basic probability concepts and Monte Carlo simulations (Chapters 1-5)
4 weeks	Introduction to statistics, sampling distributions and point estimation (Chapter 8, Section 9.1)
2.5 weeks	Interval estimation (Sections 9.2, 9.3, 10.3)
2.5 weeks	Hypothesis testing (Section 9.4)
3 weeks	Regression and ANOVA (Chapter 11)
1 week	Chi-square tests (Section 10.1)
<b>Exam Schedule &amp; Mini Project Due Dates</b>	
Project 1	Sat 09/09
<b>Exam 1</b>	Thu 09/14
Project 2	Sat 09/30
Project 3	Sat 10/14
<b>Exam 2</b>	Thu 10/26
Project 4	Sat 11/04
Project 5	Sat 11/18
<b>Exam 3</b>	Thu 12/07
Project 6	Sat 12/09

### Course Policies

<b>Class Materials</b>	The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the <a href="#">Student Code of Conduct</a> .
<b>Class Attendance</b>	The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.
<b>Class Participation</b>	Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the <a href="#">Student Code of Conduct</a> .
<b>Class Recordings</b>	Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the <a href="#">Student Code of Conduct</a> .
<b>Grading (credit) Criteria</b>	<p>Exam 1: 20%, Exam 2: 20%, Exam 3: 25%, Participation 5%, Six mini-projects (each with 5% weight): 30% (Additional details will be provided later)</p> <ul style="list-style-type: none"> <li>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.</li> <li>For each exam, each student must bring a scantron score sheet, <b>FORM NO. F-1712-PAR-L</b>. 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.</li> <li>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.</li> <li>Homework will be assigned but will not be collected or graded. The exams are closed-book, closed-notes. A cheat sheet may be provided.</li> </ul>

<b>Tentative Grading Scheme</b>	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
<b>Make-up Exams</b>	No make-up work will be given unless there is a serious medical emergency and appropriate documentation is provided in a timely manner.
<b>Extra Credit</b>	No extra credit work will be assigned.
<b>Late Work</b>	No late work will be accepted. It may be possible to submit the work early.
<b>Special Assignments</b>	None.
<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>Academic Support Resources</b>	<i>The information contained in the following link lists the University's academic support resources for all students.</i>  <i>Please go to <a href="http://go.utdallas.edu/academic-support-resources">http://go.utdallas.edu/academic-support-resources</a>.</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. Please review the sections regarding the <a href="#">credit/no credit</a> grading option and withdrawal from class.</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.*