



Course ENGR 3341 Probability Theory & Statistics (**updated syllabus**)
Professor Aria Nosratinia
Term Spring 2020
Meetings Online, recorded lectures on e-learning collaborate

Professor's Contact Information

Office Phone N/A due to campus closure
Office Location ECSN 4.504
Email Address aria@utdallas.edu
Office Hours By email request, on e-learning collaborate
Other Information TA Office hours on elearning collaborate

General Course Information

Pre-requisites, Co-requisites, & other restrictions Pre-requisite: MATH 2419 (Calculus II)

Course Description Axioms of probability, conditional probability, Bayes theorem, random variables, probability density/mass function (pdf/pmf), cumulative distribution function, expected value, functions of random variables, joint, conditional and marginal pdfs/pmfs for multiple random variables, moments, central limit theorem, elementary statistics, empirical distribution correlation.

Learning Outcomes

1. Understanding probability axioms, calculating basic set probabilities
2. Random variables, probability distributions and densities
3. Extension to two random variables, linear regression
4. Central Limit Theorem and finding confidence intervals

Required Texts & Materials Pishro-Nik, "Introduction to Probability, Statistics, and Random Processes," ISBN 978-0-9906372-0-2
Suggested Texts, Readings, & Materials Course Notes, Yates and Goodman, "Probability and Stochastic processes," John Wiley

Assignments & Academic Calendar

[Topics, Reading Assignments, Due Dates, Exam Dates]

Week 1-3 Sets, Probabilities, and Their Properties
Week 4-6 Discrete Random Variables
Week 7-9 Continuous Random Variables
Week 10-12 Pairs of Random Variables
Week 13 Sums of random variables, MGF
Week 14 Central Limit Theorem
Week 15 Elements of Statistics: point estimation & confidence intervals
PDF of functions of a continuous random variable are removed from the syllabus.

Exam Date(s), Time(s) Exam dates and times unchanged. Exams will be posted online. Students will print the exam papers, write their answers on printed exam papers, scan into pdf and upload into elearning.

Course Policies

Grading (credit) Criteria	Midterms 50%, Final Exam 40%, Quizzes 5%, class participation 5% Partial credit will be given only for significant progress in solutions and will be solely at the discretion of the instructor. Grading unchanged in update.
Make-up Exams	No makeup exams will be given. In the event of unavoidable medical emergencies (see below) the credit for an exam or quiz will roll over to the next exam or quiz.
Extra Credit	N/A
Late Work	N/A
Special Assignments	N/A
Class Attendance	No attendance required. Lectures will be made available in recorded format.
Classroom Citizenship	N/A after moving to online format.
Field Trip Policies	N/A
Comet Creed	<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>
UT Dallas Syllabus Policies and Procedures	<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 http://go.utdallas.edu/syllabus-policies for these policies.</i>

These descriptions and timelines are subject to change at the discretion of the Professor.