



Course	ENGR 3341 Probability Theory and Statistics (SYLLABUS 8/22/2016 Revision)
Professor	Lev D. Gelb
Term	Fall 2016
Meetings	Monday and Wednesday, 8:30 AM - 9:45 AM, CB2 1.204

Professor's Contact Information

Office Phone	972-883-5644
Office Location	RL 4.710
Email Address	lev.gelb@utdallas.edu
Office Hours	Monday 2:00 to 3:00 pm (held in RL lobby.)
TA	TBA

General Course Information

Prerequisites	Prerequisite: MATH 2419 or MATH 2414
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.
Learning Outcomes	<ol style="list-style-type: none">1. Understanding probability axioms, and calculating basic set probabilities2. Understanding random variables, and their probability distributions and densities3. Extending to two random variables, and finding the linear regression line4. Understanding the central limit theorem, and calculating confidence intervals
Required Texts and Materials	Pishro-Nik, "Introduction to Probability, Statistics, and Random Processes" ISBN-10: 0990637204. This textbook is also available free at www.probabilitycourse.com , but I recommend you get the printed version anyway (its very cheap.)

Schedule & Academic Calendar

Week	Dates	Topic
1	8/22, 8/24	Introduction
2	8/29, 8/31	Fundamentals of probability and combinatorics
3	9/7	(Chapters 1 and 2)
4	9/12, 9/14	Discrete random variables
5	9/19, 9/21	Continuous random variables
6	9/26, 9/28	(Chapters 3 and 4)
7	10/3, 10/5	Joint/multiple random variables (Chapters 5 and 6)
8	10/10, 10/12	
9	10/17, 10/19	
10	10/24, 10/26	
11	10/31, 11/2	Limit theorems and topics in statistical inference (Selections from Chapters 7-9)
12	11/7, 11/9	
13	11/14, 11/16	
14	<i>Winter break / Thanksgiving</i>	
15	11/28, 11/30	Cumulative Final Exam
16	12/5, 12/7	
	TBA	

Course Policies

Grading Criteria	<p>In-class quizzes: 60%</p> <p>Midterm exam: 15%</p> <p>Final exam: 25%</p> <p>The course grade will be based on weekly in-class quizzes (60% total), a midterm exam (15%) and a cumulative final exam (25%). The quiz contribution will be calculated by dropping the lowest two grades and averaging the rest.</p> <p>Quizzes and exams are closed-book and closed-notes. A scientific calculator may be used; no other electronic devices are allowed. Partial credit will be given only for significant progress in solutions and solely at the discretion of the instructor. Work must be shown in order to receive credit.</p> <p><u>In-class quizzes</u></p> <p>Quizzes of 20-25 minutes duration will be given on Wednesdays at the start of class. These determine the majority of your course grade. The lowest two in-class quiz scores will be dropped. If you have an <i>acceptable, documented reason</i> for having missed class (for instance, serious illness), your grade will be calculated based on a correspondingly reduced total number of quizzes. Otherwise-missed quizzes will receive a “zero” grade. There are no make-ups for missed quizzes.</p> <p><u>Midterm exam</u></p> <p>The midterm exam must be taken and cannot be replaced by any other grade.</p> <p><u>Final exam</u></p> <p>The final exam must be taken and cannot be replaced by any other grade. Don't miss it! No makeup final will be given.</p>
Homework	<p>Homework will be assigned weekly, but not collected or graded. <i>Do it anyway.</i></p> <p><i>Serious engagement with the homework is critical to your success in this class.</i></p> <p>Detailed solutions will be posted.</p>
Class Attendance	<p>Regular attendance is critical to your success in this class.</p>
Regrade Policy	<p>Requests to have one or more questions of a quiz/exam regraded must be made within one week of receiving the graded quiz/exam back. You must provide the original quiz/exam, unaltered, along with a clear explanation of how the problem was graded incorrectly. Unsubstantiated requests for additional partial credit will not be accepted. If you alter in any way the quiz/exam prior to returning it, it will be considered a violation of academic integrity and treated accordingly.</p>
Classroom Decorum	<p>Students should conduct themselves in a manner appropriate to a University classroom setting. Any behavior that is disruptive, inconsiderate, or offensive is subject to disciplinary action. Phones should be silenced during class. Computers may be used in class for the purposes of notetaking or other class-related activities, but should otherwise not be used.</p>

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 terms described in this syllabus are subject to change at the discretion of the Professor.