THE UNIVERSITY OF TEXAS AT DALLAS
MATHEMATICAL SCIENCES DIVISION
FALL 2005 STAT 5351-501 & STAT 4V97-501

COURSE TITLE	PROBABILITY AND STATISTICS	STAT 5351-501 & 4V97-501
ROOM	FN 2.104	CLASSROOM MAY CHANGE
INSTRUCTOR	YULY KOSHEVNIK	
TIME	TUESDAY & THURSDAY 5:30 – 6:45 PM	
OFFICE HOURS	TUESDAY & THURSDAY 3:30 – 5:00 PM	
OFFICE	FO 2.614	THE ROOM WILL CHANGE SOON
CONTACT INFORMATION:	972-883-2161 (VOICE MAIL) 214-402-0226 (CELL)	Email: Yuly.Koshevnik@utdallas.edu

PREREQUISITE: CALCULUS III

COURSE GOALS: INTRODUCE THE BASIC CONCEPTS OF PROBABILITY THEORY.
PREPARE STUDENTS FOR A COURSE IN MATHEMATICAL STATISTICS.

TEXTBOOK: MILLER AND MILLER: J. FREUND'S MATHEMATICAL STATISTICS, 7TH EDITION, PEARSON PRENTICE HALL, 2004

ADDITIONAL SOURCES:

1. CASELLA, G. AND BERGER L. (1990) STATISTICAL INFERENCE. – WADSWORTH AND BROOKS/COLE, PACIFIC GROVE, CA *(MORE ADVANCED THAN THE TEXT)*
2. PARZEN E. (1960) MODERN PROBABILITY THEORY, WILEY, NEW YORK *(MORE ADVANCED THAN THE TEXT; PROBABILITY ONLY)*
3. DE GROOT M. H. (1970) OPTIMAL STATISTICAL DECISIONS. MCGRAW-HILL, NEW YORK *(MORE ADVANCED THAN THE TEXT. GOOD FOR DECISION THEORY)*
4. KELLY D. G. (1994) INTRODUCTION TO PROBABILITY. MCMILLAN PUBLISHING COMPANY, NEW YORK *(RELATIVELY SIMPLE BOOK THAT EMPHASIZES BASIC NOTIONS)I*

EVALUATION PROCEDURES	
STUDENTS IN STAT 5351 WILL TAKE **EXAMS** AND **QUIZZES** DIFFERENT FROM THOSE IN STAT 4V97	
THE LOWEST **TWO QUIZ SCORES** WILL BE DROPPED. NO MAKE-UP QUIZ IS ALLOWED.	
HOMEWORK WILL BE ASSIGNED **WEEKLY, WITH NO GRADE** – AS PREPARATIONS TO QUIZZES AND TESTS.	
TWO MIDTERM TESTS	CONTRIBUTE **25%** EACH
QUIZZES (TENTATIVELY **ONCE A WEEK**)	CONTRIBUTE ALTOGETHER **20%.**
FINAL EXAM	CONTRIBUTES **30%**
IF YOU ARE GOING TO MISS A TEST, PLEASE **NOTIFY ME IN ADVANCE** AND **ARRANGE A MAKE-UP TEST.**	

WITHDRAWAL POLICY
LAST DAY TO DROP A CLASS **WITHOUT A "W" – FRIDAY, SEPTEMBER 2**
LAST DAY TO WITHDRAW **WITH** AN AUTOMATIC "**W**" – **TUESDAY, NOVEMBER 1**

TENTATIVE COURSE OUTLINE			
WK	**TUE**	**THU**	**TOPICS AND SECTIONS**
1		AUG 18	INTRODUCTION TO PROBABILITY (2.1 – 2.5)
2	AUG 23		
		AUG 25	COMBINATORIAL ANALYSIS, CONDITIONAL PROBABILITIES (1.1 – 1.3 AND 2.6)
3	AUG 30		
		SEPT 1	LAWS OF PROBABILITY, BAYES THEOREM, INDEPENDENCE (2.7 – 2.8)
4	SEPT 6		
		SEPT 8	RANDOM VARIABLES, DENSITY AND DISTRIBUTION FUNCTIONS (3.1 – 3.4)
5	SEPT 13		
		SEPT 15	COMMON DISTRIBUTIONS – EXAMPLES
6	SEPT 20		**MIDTERM TEST 1**
		SEPT 22	MULTIVARIATE DISTRIBUTIONS, MARGINAL AND CONDITIONAL DISTRIBUTIONS (SEC. 3.5 – 3.7)
7	SEPT 27		
		SEPT 29	EXPECTATIONS AND MOMENTS OF RANDOM VARIABLES (4.1 – 4.3)
8	OCT 4		
		OCT 6	PROBABILITY INEQUALITIES MOMENT GENERATING FUNCTIONS (4.4 – 4.5)
9	OCT 11		
		OCT 13	PRODUCT MOMENTS AND CORRELATION (4.6 – 4.7)
10	OCT 18		
		OCT 20	CONDITIONAL EXPECTATIONS (4.8)
11	OCT 25		**MIDTERM TEST 2**
		OCT 27	COMMON PROBABILITY MODELS (5.1 – 5.8, 6.1 – 6.7)
12	NOV 1		
		NOV 3	FUNCTIONS OF RANDOM VARIABLES (7.1 – 7.4)
13	NOV 8		
		NOV 10	MOMENT GENERATING FUNCTIONS (7.1 – 7.4) CONVERGENCE IN DISTRIBUTION (7.5) CENTRAL LIMIT THEOREM (8.2)
14	NOV 15		
		NOV 17	
15	NOV 22		FINAL REVIEW
		DEC 1	**FINAL EXAM AT 5 PM**

GRADING SCALE:						
[97, 100]	**[93, 97)**	**[90, 93)**	**[87, 90)**	**[83, 87)**	**[80, 83)**	**[77, 80)**
A+	**A**	**A –**	**B+**	**B**	**B –**	**C+**
[73, 77)	**[70, 73)**	**[67,70)**	**[63,67)**	**[60, 63)**	**[0, 60)**	
C	**C –**	**D+**	**D**	**D –**	**F**	