SM313 PROBABILITY for ENGINEERS

Fall Semester 2012-2013

Textbook: 1. *Probability and Statistics for Engineers and Scientists*, 9th Ed., Walpole, Myers, Myers & Ye, Pearson/Prentice Hall, 2012.

At the start of the semester, your instructor will inform you of his policy regarding grading, homework, quizzes, tests, math tables and calculators. The final will be a common exam for the course. It is your responsibility to study the assigned sections and do the assigned problems from the texts.

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Lesson	Section	Topic	Date	Problems
1	2.1, 2.2	Sets, Sample Spaces & Set Operations	08/20 (MON)	p. 42 # 2.1, 2.2,2.3,2.4,2.14
2	2.2, 2.3	Set Ops, Events; Combinatorics	08/22	p. 42 # 2.8,2.15 p. 51 # 2.21,2.22,2.23
3	2.3,2.4	Permutations and Combinations (of distinct items); Probability Axioms	08/24	p. 51 # 2.26,2.30,2.32; p. 59 # 2.51, 2.52, 2.53
4	2.4,2.5	Probability and Additive Rules	08/27 (MON)	p. 59 # 2.54,2.58, 2.60,2.65 p. 69 # 2.81, 2.86, 2.94
5	2.6	Conditional Probability	08/29	p. 69 # 2.77, 2.78, 2.81
6	2.6,2,7	Independence, Tabular Venn Diagrams (TVD)	08/31	p. 69 # 2.83,2.86,2.94 p. 77 # 2.101,2.103 LABOR DAY MONDAY (09/03)
7	2.8,3.1	Bayes' by TVD RV's	09/04 (TU)	p. 77 # 2.105,2.108 p. 91# 3.1, 3.2

8	3.2	Discrete RV's : Prob. Mass Fcn (pmf) & CDF	09/05 (WEDS)	p. 91 # 3.3, 3.5, 3.11, 3.12, 3.13
9	3.3	Continuous RV's: PDF & CDF	09/07	p. 91 # 3.7,3.9,3.14, 3.21,3.29
10	4.1	Mean of a Discrete RV	09/10 (MON)	p. 107 # 4.6,4.7, 4.9
11	4.1	Mean of a Cont RV & of Fcns of a RV	09/12	p. 107 # 4.12,4.15, 4.17,4.20
12	4.2	Variance	09/14	p. 127 # 4.33,4.34, 4.37,4.43
13	4.3	Properties of Mean & Variance	09/17 (MON)	p. 137 # 4.51, 4.53, 4.55,4.56
14	5.1-5,3	Discrete uniform & Hypergeometric	09/19	p. 150 #5.1,5.2,5.3, p.157#5.29,5.31
15		**REVIEW**	09/21	
16	5.1-5.3	**EXAM 1**	09/24 (MON)	Start Academic Reserve
17	5.1-5.2	Continuous Uniform	09/26	p. 150 #5.8,5.10, p.185 #6.1,6.2,6.3
18	5.3	Binomial Distribution	09/28	p.150: 5.1,5.2,5.9
19	5.4	Binomial & Geometric Dist	10/01 (MON)	p. 164: 5.29, 5.31, 5.33
20	5.5	Geometric & Negative Binomial Dist	10/03	p. 165: 5.51, 5.53, 5.54, 5.51, 5.55,5.56
21	5.6	Poisson & Poisson	10/05	p. 165: 5.64, 5.65, 5.67,5.69

		Process		5.70 COLUMBUS DAY MON (10/08)
22	3.4	Joint PDFs Discrete	10/10 (WED)	p. 104: 3.37, 3.38, 3.39
23	3.5	Joint PDFs Continuous	10/12	p. 104: 3.40, 3.42
24	3.4-3.5	Joint PDFs	10/15 (MON)	p.104: 3.44, 3.47
25	6.2-6.3	Normal Distribution	10/19	p.185 #6.1,6.3,6.5, 6.7, 6.12, 6.14
26	6.3-6.4	Areas under the Normal Curve	10/21	p.185 # 6.20,6.21
27	6.4	Applications of the Normal Dist.	10/22 (MON)	p.185 # 6.22, p.193: 6.24
28	6.6	Exponential Dist	10/24	p. 206: 6.45,6.46,6.53
29		**REVIEW**	10/26	
30		**EXAM 2**	10/29 (MON)	Start Academic Reserve
31	8.1	Fcns of Random Variables	10/31	p.230: 8.1,8.2,8.6
32	8.2 -8.3	Fcns of Random Variables	11/02	p.230: 8.18, 8.19
33	7.3	Moments & Moment Generating Fcns	11/05 (MON)	p. 222: 7.1, 7.6, 7.20, 7.24

34	7.3	Moments & Moment Generating Fcns	11/07	p. 226: 7.20, 7.22
35		Chebyshev's Inequality	11/09	p. 134: 4.60, 4.61, 4.63 p. 205: 6.43
36		The Central Limit Theorem (CLT)	11/14 (WEDS)	p. 241: 8.18, 8.23, 8.24, 8.26 VETERAN'S DAY MON (11/12)
37		The Central Limit Theorem (sigma unknown)	11/16	p. 241: 8.28, 8.29
38		CLT & Confidence Intervals	11/19 (MON)	p. 285: 9.1, 9.2
39	8.1,8.2	Student's T-Distribution	11/21 Early Schedule	p. 265: 8.46, 8.47 THANKSGIVING (11/22-11/26)
40		**REVIEW**	11/26 (MON)	
41		**EXAM 3**	11/28	
42	8.1,8.2	Student's T-Distribution	11/30	p. 265: 8.48, 8.50
43		Some Important Statistics	12/03 (MON)	p. 234: 8.1, 8.2, 8.3
44		**REVIEW**	12/05	
45		**REVIEW**	12/07 (FRI)	Final Exams start TU (12/11-12/18)