Math 5651
Basic Theory of Probability and Statistics, Fall 2016, Section 4 (23886)

SYLLABUS

Time and Place:	4:40 pm - 6:35 pm TTh (09/06 - 12/13) – Vincent Hall 311
Text:	M.H. DeGroot, M.J. Schervish. Probability and Statistics. 2012 Addison-Wesley, Fourth Edition.
Instructor:	Sergey G. Bobkov
Office:	228 VinH (tel: 625-1840, email: bobkov@math.umn.edu)
Office hours:	3:35 pm - 4:25 pm T, 1:25 pm - 2:15 pm F

5651. **Basic Theory of Probability and Statistics**.
Elementary Probability: Basic concepts, classical probability, combinatorial methods, conditional probability, independent events, Bayes' theorem. Random variables: distribution, expectation, moments, variance, moment generating function. Random vectors: marginal distribution, functions of random variables. Special distributions. Poisson approximation. The law of large numbers. The central limit theorem.

WEEK	DATES	MATERIAL (preliminary distribution)
1	09-06 to 09-08	Introductory remarks, sections 1.4, 1.5
2	09-13 to 09-15	1.6, 1.7, 1.8
3	09-20 to 09-22	1.9, 1.10, 2.1
4	09-27 to 09-29	2.2, 2.3, 3.1
5	10-04 to 10-06	3.2, 3.3, 3.4
6	10-11 to 10-13	Tuesday: 3.5; Thursday: 1st Test
7	10-18 to 10-20	3.6, 3.7, 3.8
8	10-25 to 10-27	3.9, 4.1, 4.2, 4.3
9	11-01 to 11-03	4.4, 4.5, 4.6
10	11-08 to 11-10	4.7, 5.2, 5.3
11	11-15 to 11-17	Tuesday: 2nd Test; Thursday: 5.4, 5.5
12	11-22 to 11-24	Tuesday: 5.6, 5.7; Thursday: Thanksgiving
13	11-29 to 12-01	5.8, 5.9, 5.10, 6.2
14	12-06 to 12-08	6.3; Thursday: Review
15	12-13	Tuesday: 3rd Test

Midterm exams:	Thursday, October 13, 2016 Thursday, November 15, 2016 Tuesday, December 13, 2016
Composition of grade:	Midterm exams – 75% Homeworks – 25% (counting 5 best out of 6)
Homeworks:	You will have 6 homeworks due on September 27, October 11, 25, November 8, 22, and December 6, 2016. Every homework and every midterm exam is graded in the range of 25 points.

Fall 2016, Homework Assignments

1	Due on September 27	Section 1.4	7
		Section 1.5	3, 4, 9
		Section 1.6	1, 6
		Section 1.7	5, 7, 8
		Section 1.8	2, 4
		Section 1.9	2, 7
		Section 1.10	1, 5
2	Due on October 11	Section 2.1	4, 6
		Section 2.2	9, 12
		Section 2.3	3, 9
		Section 2.5	2, 3
		Section 3.1	2, 4
		Section 3.2	4, 5
		Section 3.3	4, 6
3	Due on October 25	Section 3.4	4, 5
		Section 3.5	2, 3, 10
		Section 3.6	3, 6
		Section 3.7	1
		Section 3.8	4, 8
4	Due on November 8	Section 3.9	4, 6
		Section 4.1	3, 8
		Section 4.2	3
		Section 4.3	7
		Section 4.4	3, 8
5	Due on November 22	Section 4.5	2, 3
		Section 4.6	12, 13
		Section 4.7	2, 7, 8
		Section 4.9	4
		Section 5.2	6, 8
		Section 5.3	4
		Section 5.4	8, 14
6	Due on December 6	Section 5.5	2, 6
		Section 5.6	1, 2, 11
		Section 5.7	2, 3, 4
		Section 5.8	5
		Section 5.9	6
		Section 6.2	6
		Section 6.3	2