

Math 5651

Basic Theory of Probability and Statistics, Fall 2019, Section 2

SYLLABUS

Time and Place: 10:10 am - 12:05 pm TTh – Appleby Hall 219
Text: M. H. DeGroot, M. J. Schervish. Probability and Statistics.
2012 Addison-Wesley, Fourth Edition.
Instructor: Sergey G. Bobkov
Office: 228 VinH (email: bobkov@math.umn.edu)
Office hour: 12:20 pm - 1:10 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	01-22 to 01-24	Introductory remarks, sections 1.4, 1.5
2	01-29 to 01-31	1.6, 1.7, 1.8, 1.9
3	02-05 to 02-07	1.10, 2.1, 2.2, 2.3
4	02-12 to 02-14	3.1, 3.2, 3.3
5	02-19 to 02-21	3.4, 3.5, 3.6
6	02-26 to 02-28	Tuesday: 3.7; Thursday: 1st Test
7	03-05 to 03-07	3.8, 3.9, 4.1
8	03-12 to 03-14	4.2, 4.3, 4.4
	03-19 to 03-21	(Spring break)
9	03-26 to 03-28	4.5, 4.6, 4.7
10	04-02 to 04-04	Tuesday: 5.2, 5.3; Thursday: 2nd Test
11	04-09 to 04-11	5.4, 5.5, 5.6
12	04-16 to 04-18	5.7, 5.8, 5.9
13	04-23 to 04-25	5.10, 6.2, 6.3;
14	04-30 to 05-02	Tuesday: Review; Thursday: 3rd Test

Tests: Thursday, February 28, 2019

Thursday, April 04, 2019

Thursday, May 02, 2019

Homeworks: You will have 6 homeworks due on February 12, 26,

March 12, April 2, 16, 30

Composition of grade: Tests – 75%, homeworks – 25% (counting 5 best out of 6).

Every homework and test is graded in the range of 25 points.

Spring 2019, Homework Assignments

1	Due on February 12	Section 1.4 Section 1.5 Section 1.6 Section 1.7 Section 1.8 Section 1.9 Section 1.10	7 3, 4, 9 1, 6 5, 7, 8 2, 4 2, 7 1, 5
2	Due on February 26	Section 2.1 Section 2.2 Section 2.3 Section 2.5 Section 3.1 Section 3.2 Section 3.3	4, 6 9, 12 3, 9 2, 3 2, 4 4, 5 4, 6
3	Due on March 12	Section 3.4 Section 3.5 Section 3.6 Section 3.7 Section 3.8	4, 5 2, 3, 10 3, 6 1 4, 8
4	Due on April 2	Section 3.9 Section 4.1 Section 4.2 Section 4.3 Section 4.4	4, 6 3, 8 3 7 3, 8
5	Due on April 16	Section 4.5 Section 4.6 Section 4.7 Section 4.9 Section 5.2 Section 5.3 Section 5.4	2, 3 12, 13 2, 7, 8 4 6, 8 4 8, 14
6	Due on April 30	Section 5.5 Section 5.6 Section 5.7 Section 5.8 Section 5.9 Section 6.2 Section 6.3	2, 6 1, 2, 11 2, 3, 4 5 6 6 2