Syllabus for Math 411  
Mathematical Probability  
Summer 2016  
Section 100

Instructor: Volodymyr Nekrashevych  
Office: BLOC 513c  
Office hours: Office hours: Tuesday, Wednesday, Thursday from 2 to 3 pm or by appointment.  
e-mail: nekrash@math.tamu.edu  
Home-page: http://www.math.tamu.edu/~nekrash

Class hours:  
10:00–11:35 BLOC 164  

MATH 411 web page: The web page of the course is  
http://www.math.tamu.edu/~nekrash/teaching/16E/M411.html


Topics covered. Probability spaces, discrete and continuous random variables, special distributions, joint distributions, expectations, law of large numbers, the central limit theorem. Prerequisite: MATH 221 or equivalent.

Grading. Your grade will be determined by homework, two midterm exams and a cumulative final exam. The weights of each of these are as follows.

<table>
<thead>
<tr>
<th>Homework</th>
<th>Exam I</th>
<th>Exam II</th>
<th>Final Exam</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>weekly</td>
<td>June 9</td>
<td>June 21</td>
<td>July 5, 10:30–12:30</td>
<td>100</td>
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<tr>
<td>20 pt</td>
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I may curve any grade and will then compute the course grade by the following rule: A for at least 90 points, B for at least 80 points, C for at least 70 points, D for at least 60 points and F for less than 60 points.
Plan of lectures.


6/1  1.3 Conditional Probability.

6/2  1.4. Total Probability and Bayes’ Rule.

6/3  1.5. Independence.

6/6  2.1-2.2. Discrete Random Variables. PMF.

6/7  2.3. Functions of Random Variables.

6/8  2.4. Expectation, Mean, and Variance.

6/9  Exam I

6/10 2.5–2.6. Conditioning and Independence.

6/13  3.1. Continuous Random Variables and PDFs.

6/14  3.2. Cumulative Distribution Functions.


6/16  3.4. Joint PDFs of Multiple Random Variables.

6/17  3.5. Conditioning


6/21  Exam II


6/23  4.2. Covariance and Correlation.


6/28  5.4. The Central Limit Theorem.

6/29  5.5. The Strong Law of Large Numbers.
Make-up policy: Make-ups for missed quizzes and exams will only be allowed for a university approved excuse in writing. Wherever possible, students should inform the instructor before an exam or quiz is missed. Consistent with University Student Rules, students are required to notify an instructor by the end of the next working day after missing an exam or quiz. Otherwise, they forfeit their rights to a make-up.

Scholastic dishonesty: Copying work done by others, either in-class or out of class, is an act of scholastic dishonesty and will be prosecuted to the full extent allowed by University policy. Collaboration on assignments, either in-class or out-of-class, is forbidden unless permission to do so is granted by your instructor. For more information on university policies regarding scholastic dishonesty, see University Student Rules.

Remember the Aggie Code of Honor: “An Aggie does not lie, cheat, or steal or tolerate those who do.”

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