STAT 418 Probability and Stochastic Processes
Fall 2012

Instructor: Seonjin Kim  Office Hours: Thu: 1:30P-3:30P
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301 Thomas Building
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Lecture: MWF: 10:10-11:00P, 258 Willard Bldg

Web Page: Homework solutions and some other class materials will be posted on ANGEL (https://cms.psu.edu).


Topics:
1. Probability axioms, conditional probability, and combinatorics;
2. Discrete random variables
3. Random variables with continuous distributions
4. Jointly distributed random variables and random vectors
5. Sums of random variables and moment generating functions
6. The central limit theorem and applications
7. Stochastic processes including Poisson, Brownian motion, and Gaussian processes.

Required Work: weekly homework’s, 2 in-class midterms and one final.

Homework:
- Homework will be assigned after each class, and will be collected and graded roughly every week
- Due Fridays in class
- Late homework is NOT accepted
- The lowest homework will be dropped
- Credit for the homework is given based on HOW the problems are solved instead of a numerical answer.

Exams: Both the midterm and final exams are closed-book and in class, but you can bring one, 8.5x11(letter size) double-sided formula sheet.
Grading: The final course grades will be based upon:
   Homework: 30% (every Friday)
   1st Midterm: 20% (tentative date: Friday, Sep 28)
   2nd Midterm: 20% (tentative date: Friday, Nov 2)
   Final Exam: 30% (TBA)
   Participation and attendance: Extra points

The lower cut-off points for the grades are:

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<thead>
<tr>
<th>Grade</th>
<th>F</th>
<th>D</th>
<th>C</th>
<th>C+</th>
<th>B-</th>
<th>B</th>
<th>B+</th>
<th>A-</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points</td>
<td>0</td>
<td>60</td>
<td>65</td>
<td>70</td>
<td>75</td>
<td>80</td>
<td>85</td>
<td>90</td>
<td>93</td>
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Course Policies:

(1). If you have a University-approved conflict with any of the exams, you must let me know at least one week before the exam. A conflict exam will be scheduled to take place just before or just after the regularly scheduled exam.

(2). No make-up exams will be given.

(3). Attendance to each class meeting is required and beneficial. Students are responsible for all announcements and supplements given within each lecture and/or via course email.

Integrity:
All Penn State and Eberly College of Science policies regarding academic integrity apply to this course. See http://www.science.psu.edu/academic/Integrity/index.html for details.