Syllabus of SIE 330R
(Introduction to Design of Experiment)

Spring 2015

Prerequisites: SIE 305, or equivalent course on probability and statistics.

Contents:

• Random variables and their basic properties
• Interval estimation
• Hypothesis testing
• Linear regression
• ANOVA
• Factorial designs

Time & Location: Tu, Th 14:00 – 15:15 (Jan. 15 – May, 5, 2015), @Rm 404, Harvill Bldg.

Instructor: Yiwen Xu
Email: yxu32@email.arizona.edu
Office: Rm. 267, Old ENGR Bldg.
Office Hours: Tu 15:15 – 17:00 (or by appointment)

TA: Shanshan Hou
Email: shanshanh@email.arizona.edu
Office: Rm. 258, Old ENGR Bldg.
Office Hours: Fr 12:00 – 13:30

Main Material: Classnotes & slides.
Textbook:
D.C. Montgomery and G.C. Runger, *Applied Statistics and Probability for Engineers*, 5\textsuperscript{th} (or, 4\textsuperscript{th}, 6\textsuperscript{th}) edition, John Wiley & Sons Inc, New Jersey, 2011 (or, 2006, 2014).\footnote{The edition is not a big problem.}

Homework Policy:

1. Late homework will NOT be accepted (unless you have a proper reason, e.g., a medical excuse with doctors’ proof).

2. For most homework problems, you are supposed to finish INDEPENDENTLY. But for some problems you are allowed (or even encouraged) to discuss, in which I will particularly claim in the problems description.

3. You are expected to behave in accordance with the [Student Code of Conduct](#) and the [Code of Academic Integrity](#). Copying others’ homework is absolutely NOT ALLOWED.

4. All homework assignments are supposed to be submitted into the dropbox via the D2L system (before their deadlines). If you decide to scan (or photo) the paper-written homework, please make sure that your handwriting can be easily recognized before uploading. Otherwise, the TA has the right to refuse grading your homework.

Distribution of the Final Credit:

Homework (and quizzes): 40%  
Mid-term exam: 25%  
Final exam: 35%

Grading Policy:

Your final grade will be no lower than “X” if your final credit (might be curved) is in the corresponding interval of the following table:
<table>
<thead>
<tr>
<th>Interval</th>
<th>$X =$</th>
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<tbody>
<tr>
<td>credit $\geq 90$</td>
<td>A</td>
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<tr>
<td>$80 \leq$ credit $&lt; 90$</td>
<td>B</td>
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<td>$70 \leq$ credit $&lt; 80$</td>
<td>C</td>
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<td>$60 \leq$ credit $&lt; 70$</td>
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<td>$30 \leq$ credit $&lt; 60$</td>
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<td>credit $&lt; 30$</td>
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