STAT 2220: Engineering Statistics

Assignment #1

Due at the beginning of the class on Friday, September 28, 2007

Assignments must be stapled, with Name and Student Number on all pages. Use letter size (11"×8.5") papers and write your solutions on one side only. Show all your work. Graphs and plots can be done either by hand or by any statistical software. No late assignments are accepted.

All questions are from the 4^{th} edition of the textbook. ***(The corresponding page and exercise numbers in the 3^{rd} edition are given in parentheses.)***

1. Page 25, Exercise 2-2. *(Page 22, Exercise 2-2.)*
2. Page 30, Exercise 2-12. *(Page 27, Exercise 2-10.)*
3. Page 31, Exercise 2-18. *(Page 27, Exercise 2-14.)*
4. Page 38, Exercise 2-32. *(Page 34, Exercise 2-27.)*
5. Page 58, Exercise 3-12. *(Page 53, Exercise 3-10.)*
6. Page 58, Exercise 3-14. *(Page 53, Exercise 3-12.)*
7. Page 59, Exercise 3-18. *(Not Available)*

Q7. Let X denote the number of patients who suffer an infection within a floor of a hospital per month with the following probabilities:

x	0	1	2	3
$p(X=x)$	0.7	0.15	0.1	0.05

Determine the following probabilities:

(a) Less than one infection

(b) More than three infections

(c) At least one infection

(d) No infections