Due: Wednesday, March 2nd (at the start of class)

References are to the course textbook, except as noted.

Reminder

The first midterm exam will take place on Monday, February 22nd.

Reading

For Monday, February 15th, Sections 4.5 and 4.6.

For Wednesday, February 17th, Chapter 6.

For Wednesday, February 24th, Chapter 7.

For Monday, February 29th, Chapter 8.

For Wednesday, March 2nd, Chapter 9.

Assignment exercises to hand in

Questions 1 and 2 must be solved in a spreadsheet. To submit your answers, print the final spreadsheet and, list in writing the contents of any cells that have formulae in them along with the information entered into the "solver parameters" window.

1. Exercise 4.9.

2. Exercise 6.6.

Question 3 requires detailed written answers, typeset in LaTeX. You should also provide details of how you solved the problems, by spreadsheet or other means.

3. Case 11.3 from Hillier and Lieberman's "Additional Cases".

4. By now you should have chosen an interesting article that describes an application of operations research. You will write a brief summary of the article. The summary that you will produce should be at most 1200 words and fit on two pages (one double sided page) using reasonable margins and an 11- or 12-point font. It should describe the contents of the article **in your own words**.

Your review should be clearly organized, and should address the following issues:

1. What real-world problem is treated in the paper?

2. What type of mathematical (Operations Research) model is proposed to solve the problem?

3. What mathematical tools are used to solve the model? How well is it solved?

4. What are the limitations of the model?

5. How has the solution been implemented? What is the impact of the implementation?

6. What are possible future directions for this work? For instance, can the model be improved? Can it be applied elsewhere?

Particularly on points 4 and 6, you are encouraged to go beyond the contents of the paper, and include your own critical analysis.

A draft grading rubric is summarized on the back of this page to help guide your writing process.

Some other exercises you should try

Additional exercises from Chapters 4 and 6.

Draft grading rubric for article summary:

The problem is correctly identified and clearly presented. (15%)	
The mathematical model is identified, including descriptions of key variables (input) and predictions (outputs). (15%)	
There is a high-level explanation of how the model is solved. (10%)	
Limitations of the model (i.e. critical, and perhaps debatable assumptions) are explained. (15%)	
The implementation and impact are discussed. (10%)	
Recommendations for improvements and further work are proposed and worthwhile. (10%)	
Ideas are presented clearly and logically. (15%)	
Few grammatical, spelling and punctuation errors. (5%)	
The paper is well-formatted, including references. (5%)	