Introduction
As we have been explaining, the key to cost modeling is the decomposition of the problem of manufacturing cost into problems of a far smaller scale, exploiting an understanding of the process technology and the engineering principles underlying it.

The process can be thought of as proceeding through the following steps:

1. What is the cost question? (cost of what; cost varying how; cost compared to what; cost when in the design/development cycle?)
2. Which elements of cost to consider? (e.g., materials cost - yes; advertising costs - no)
3. What elements of information do we know? (factor prices, process technology, engineering principles)
4. How to relate what we know (3) to the elements of cost we identified as needed (2)?
5. Finally, integrate all of these relations (4) in a coherent framework, ensuring consistency.

The last lecture went through some quite detailed discussions of how to accomplish step 4 listed above for injection molding, amplifying upon some of the information discussed during last week's lecture introducing cost modeling.

Your assignment, ultimately, is going to be to develop a cost model of a process of your choosing. Naturally, developing this model is going to take some time, and will probably continue through the term. You have some specific assignments now, however.

Thursday, October 1, 1998 Draft Model Proposal Summary Due
For the next class, we would like you to prepare a one-page summary, including the following information: (1) the name of the process that you are planning to model; (2) your answers (or likely sources of the answers) to questions 1, 2 and 3 above; and (3) a process flow sheet, describing as completely as possible the process you plan to model. We recognize that you will not be able to answer these questions completely, but the more thoroughly you answer, the more useful the October 1 workshop will be. The workshop/lecture on October 1 will be devoted to discussing the Step 4 issues that your processes pose for cost modeling.

Tuesday, October 6, 1998 Model Proposal Summary Due
This write up, of no more than three pages, should recapitulate upon the materials prepared for the October 1 class, amplified based upon the October 1 workshop proceedings.

Thursday, October 15, 1998 Draft Models Due
Tuesday, October 20, 1998 Receive Feedback From Instructors on Model
Friday, October 30, 1998 Final Model Due
You will be required to present a cost estimate, a plot of cost breakdowns at two different production volumes, and a plot of total cost versus production volume. More details, based upon the process that you select, will be defined over the course of the October 1 class.