ISM 105/205 MOT I: Homework 1

(Introduction, Problem Solving, Project Preparation)

Reading: Ulrich & Eppinger, “PDD”, Chapters 1-3; class handouts (Work on the homework problems and do the readings concurrently.)

Homework Problems (due Thursday, September 30)

Before “attacking” the readings and problems develop a plan and time-schedule for producing “high-quality” homework (your product) in an efficient manner and on time. Capture your plan/schedule in a table, and include additional columns in the table to keep track of your progress and the obstacles along the way. A good plan should be flexible and adaptable to challenges along the way.

For each problem proceed in the following structured manner: define the problem; plan the treatment of the problem; execute the plan; draw conclusions.

1. Structured Problem-Solving: Use the structured problem-solving approach to solve the following problem: “improve the existing cellular phone”.

2. Product Needs Analysis: This exercise is an important precursor to your project. Examine the following products: Cell Phones, I-Pod, and Notebook Computers. What are the basic customer and/or societal need(s) that these products and their associated technologies satisfy? Develop a set of criterion to evaluate these products, and then, using these criteria and an appropriate table (i.e., a matrix with rows and columns) evaluate each of these products. Later in the course, we will develop formal methods for assessing and comparing products and technologies. For now, I am interested in how you go about product assessment and selection.

3. (ISM 205 only) Attempt to develop an analytical function for assessing/comparing the products in Problem 2.

Project (this part is due on Thursday, September 30):

Preliminary Project Proposal (firming up a technology and product domain for your team project):
- Get to know your project partners, and agree on a weekly meeting schedule. If possible, do a team-building exercise.
- Use a structured brainstorming process to help decide on the technology/product domain that your team would like to work with. Make sure you identify real customer and/or societal needs (see Problem 2 above) that the proposed product will satisfy.
- Create and submit a well-structured project proposal by Thursday, September 30. (This document should, typically, be a few pages long, and should show the “end-results”, as well as the process by which these results were obtained.)