ISyE 3104: Introduction to Supply Chain Modeling: Manufacturing and Warehousing  
Instructor: Spyros Reveliotis  
Spring 2013

Homework #1

Due Date: Thursday, 1/31/13

Reading Assignment

- The introductory set of PowerPoint slides presented in class, accessed at: http://www2.isye.gatech.edu/~spyros/courses/IE3104/Spring-13/course_materials.html
- Chapters 1, 2 and Section 4.1.1 from your textbook (some themes appearing in these chapters will be revisited and expanded upon as we move forward, but going through the relevant material will provide a first introduction).

Problem set:

A. Solve problems 1.1, 1.9, 1.14, 2.1, 2.3, 2.13, 2.16, 4.1, 4.2 and 4.4 from your textbook.

   Remark: For problem 1.9, just use your experience with these places, to come up with a flow diagram similar to that in Figure 1.6 of your textbook.

B. Also, answer the following questions:
   a. What are the three primary attributes that define the modern corporate competition from a strategic standpoint (in your textbook these attributes are referred as “measure of competitiveness”)? For each of these attributes, provide an example of a company that places its primary emphasis on that attribute (and explain your answer).
   b. Describe how Operations Management Strategy changes during the life cycle of any given product.
   c. For what reasons do domestic operations become international operations in the recent years?
   d. Explain and give an example of how product design should be (re-)considered when offering a product in a new local market.
   e. Research the concept of World Trade Organization and discuss how it relates to the themes and concepts that we discussed in class.
   f. What is the meaning of “combinatorial customization”? How is it facilitated in modern corporate operations and what challenges it poses for these operations?