

**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?