

Seminar in Service Engineering

Winter 2009

Focus: **Healthcare** (Hospitals, ...) and **Tele-Services** (Phone, IVR, Internet, Chat...)

Instructor: Avishai Mandelbaum (avim@tx.technion.ac.il).

First meeting on Wednesday, November 12, 15:30-17:30, in Room 527 (Bloomfield).

Registration:

Honor undergraduate students can enroll in "Advanced Topics for Honor Students" 094194; All others should enroll in "Advanced Topics in Operations Research" 097330.

Grades:

The **final grade** will be based on a **lecture** about a paper(s) that students will choose or be assigned, plus (if appropriate) a **problem** associated with the paper(s).

Grading Scheme: ~80 for minimal, ~90 for maximal, ~100 for original.

Prerequisites:

Any undergraduate course in **Stochastic Processes**, which covers Poisson Processes and Markov Jump Processes (for example, IE&M 094314). Yet, it is **possible** for students **without** this prerequisite to take the course after consulting with me.

Goal:

Learn together about the theory behind Service Engineering, as applied mainly in healthcare (hospitals), and possibly in tele-services (eg. call centers). Of special interests are topics that are relevant and interesting for both applications. (One such example is the *staffing* problem, as it pertains to nurses in hospitals and telephone agents in call centers.)

In addition, students will be required to become familiar with the data resources of the SEE Laboratory, in ways that are hopefully relevant to their paper - see

<http://ie.technion.ac.il/Labs/Serveng>

Internet Resource: the following website (especially its References menu):

<http://ie.technion.ac.il/serveng>

I shall start the semester with some introductory lecture(s).

Then students will lecture on their work, which will be carried out either individually or in groups (depending on the number of participants).

Emphasis will be given to modeling/analysis (OR), inference (Statistics), information systems (MIS) and human resource management (HRM).

Students are encouraged to talk to me throughout the semester about topics that are relevant to the course material. Just let me know in advance. (As a default, I shall try to be available in my office during all/most of Wednesdays.)