University of Gaziantep - Industrial Engineering IE 359 Quantitative Methods for Healthcare Management Syllabus Assoc. Prof. Dr. Serap Ulusam Seçkiner

Description

Hospital productivity is critical to cost-effective health care. The course covers topics in improving operations, such as patient flow, supply chain and inventory management and process improvement. Students will become familiar with methods and resources for implementing change in a health care setting, such as a hospital or clinic.

Course Objectives

The course provides managers and engineers with skills to assess current hospital operations and to identify the appropriate tools to address various functional areas. Process improvement methods such as staff scheduling, surgery planning, lean thinking, six sigma, statistical tools, flowcharting, queuing models, heuristic techniques and others tools will be covered. Healthcare settings beyond the hospital, such as outpatient clinics, will be included. Emergency and disaster preparedness will be addressed.

Course Text: "Quantitative Methods in Healthcare Management", Yasar A. Ozcan, Ph.D., 2005, Jossey-

Bass/Wiley Publisher. Readings and cases: (Available from the Society for Health Systems (SHS), Healthcare Information Management and Systems Society (HIMSS), The Institute for Healthcare Improvement (IHI), American Society for Quality, AHRQ (Agency for Health Care Research & Quality, a part of the US Govt. Dept. of HHS), Healthcare Informatics online and others.

Relevant Websites will be helpful:

Epstein Department www.usc.edu/dept/ise

Wall Street Journal www.online.wsj.com/public/us

Society For Health Systems http://www.shsweb.org/

Health Care Mgmt. Science http://www.ingentaconnect.com/content/klu/hcms

Healthcare Information and Management Systems Society http://www.himss.org/

Institute for Health Information http://www.ihi.org/

And others identified during the semester.

Office Hours: Office hours will be Thursday between 13:30-16:30 and 19.45 and 22:45. Students may contact the instructor via e-mail using seckiner@gantep.edu.tr or by telephone through the IE main office 342-3172613.

Software: WinQSB, LINDO

Grading: Student grades will be based on the following breakdown of presentations; 30 %, midterm and final exams, 20% and 50% respectively.

All work is expected to have a professional appearance. All examinations are open note and open book. Materials such as homework, if submitted digitally, should include a filename with the student's name and identification of the homework. Such as: "IE359_HW1_surname".

About Presentations: After 2 hours presentations, last hour of course, groups will distribute mini-quiz paper in class (at least 15 test questions). I expect high quality quiz preparation!

Final Exam. The university schedules the final exam date and time. Please do not request an alternate date for exams, as none can be accommodated.

	Content	Assignments (Chapters in Ozcan)		Groups
1	Forecasting	2	Oct 3, 2013	
2	Decision Making in Health Care Facilities	3	Oct 10, 2013	
3	Facility Location and Facility Layout	4&5	Oct 17, 2013	
4	Productivity	9	Oct 24, 2013	
5	Resource Allocation	10	Oct 31, 2013	
6	Supply Chain and Inventory Management	11	Nov 7, 2013	
7	Queuing Models and Capacity Planning	14	Nov 14, 2013	
8	Midterm		Nov 21, 2013	
		Special Topics		
9	An approach to medical coding problem; what is medical coding, responsibilities, problems, softwares etc.		Nov 28, 2013	
10	Helpful Apps for Healthcare Managers and Top Healthcare Management Software Products		Dec 5, 2013	
11	Waste Management for Healthcare Systems; problems, methods, solutions etc.		Dec 12, 2013	
12	Health Care Risk Management; Concepts, Policies,		Dec 19, 2013	
13	Ergonomic solutions for patients; Examples, good practices, softwares, good stories etc.		Dec 26, 2013	
14	Final exam		Jan ?, 2014	