SAE 551: LEAN OPERATIONS
Spring 2007 v.1.0

Instructor (Coach):

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Instructor (Assistant Coach)

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Texts:

1. Lean Enterprise Value, Murman, etal., Palgrave, 2002, ISBN 0-333-97697-5

2. Lean Thinking, Womack and Jones, Simon & Schuster, 2003, ISBN 0-684-81035-2.

3. The Toyota Way, Liker, Jeffrey K. McGraw-Hill, 2004, ISBN 0-07-139231-9

4. *The Goal,* Goldratt and Cox, North River Press, 2004, ISBN 0-88-427178-1
(reference - optional)

5. The Machine That Changed the World, Womack, Jones, and Roos, 1990, ISBN 0-89256-350-8
(reference - optional)

Papers and other documents will be provided.

Objective: To enhance the students' understanding and appreciation of the importance of lean operation concepts for manufacturing and service enterprises, their resources, the related challenges and problems, and the related tools and technologies. Systems thinking will be emphasized.

Description: Study of various aspects of integrated manufacturing and service enterprises including management, design and production functions, interfaces, and related resources and information systems.

Approach: This course introduces the role of lean thinking in the manufacturing or service enterprise and its connections with society, economy, and environment. Theoretical and applied aspects of the topics will be covered. Alternative views of lean operations will also be introduced. Students will be required to complete a term project which concerns the lean operations cycle for either product manufacturing or service delivery. To the extent possible the course will use a collaborative learning approach. The instructor will endeavor to function as a coach facilitating work by the students.

Schedule: (See attached.) (Timing is approximate and subject to change).

Submissions

Please submit homework and other documents for grading through the "Digital Dropbox" on the BlackBoard DEN site. Please submit your documents in the following manner:

Lastname_topic.doc (or xls or pdf or ppt)

(e.g., Trojan_HW1.doc)

Grading:

Homework and Evaluations	10%
Midterm Exam	30%
Final Project Report	40%
Project Presentation	20%
Total	100%

Academic Integrity:

All students at the University of Southern California have an inherent responsibility to uphold University principles of academic integrity and to support each other and the faculty in maintaining a classroom atmosphere that is conducive to orderly and honest conduct. You are expected to be familiar with the Academic Integrity guidelines found in the 2001-2002 SCampus. The guidelines presented in SCampus strictly apply to every course taught at USC. Note that copying of books is considered a violation of copyright laws and will not be tolerated.

Specifically, citation guidelines from the USC Writing Lab will be posted to BlackBoard in the Course Documents section.

Students with Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 am to 5:00 PM, Monday through Friday. The telephone number for DSP is (213) 740-0776.

Schedule

Week	20071	Topic	Reading	Due
1	1/11	Introduction to Course and Instructor, Lean Thinking, Historical Perspective	Syllabus	
2	1/18	Manufacturing Overview / Aerospace @ 100 EOQ, MRP, MRPII, ERP	Womack, see MRP in Index	Bio
3	1/25	Advanced Concepts in Inventory Systems		
4	2/1	Toyota Production System	Liker,	Process abstract
5	2/8	Toyota Production System	Liker,	
6	2/15	Ultraquality as a Prerequisite for Lean	Handout	
7	2/22	Lean Aerospace Engineering	Murman.	
8	3/1	Lean Aerospace Supply Chain	Murman,	Project Proposal
9	3/8	Midterm		
10	3/15	Spring Break		
11	3/22	Lean Services - Case Studies	Handout	
12	3/29	Lean – Change Management	Handout	
13	4/5	Lean – Alternative Views	Handout	
14	4/12	Service Oriented Architecture and Lean (software development)	Handout	
15	4/19	Student Presentations		Final Report Due -4/19
16	4/26	Course Wrap-up, Student Presentations Last Class		