

CEE 678 – Introduction to Lean Construction (Spring 2006)

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Course Objective: *Introduce students to Lean Project Delivery theory, principles, and techniques.*

Course Materials: The Goal: A Process of Ongoing Improvement by Eliyahu M. Goldratt and Jeff Cox (any edition is OK), North River Press, 384 pages, ISBN : 0884271781.

The Machine That Changed the World by James P. Womack, Daniel T. Jones, Daniel Roos (any edition is OK), Harper Collins / Perennial, 336 pages, ISBN : 0060974176.

Course Packet at the UC Bookstore will include Chapters 1, 2, 3, 5, and 6 from *Engineered Quality in Construction: Partnering and TQM*, 1994 edition, by Michael T. Kubal. Reproduced with permission from McGraw-Hill, Inc.

Application of the New Production Philosophy to the Construction Industry by Lauri Koskela (1992) Technical Report No. 72, Center for Integrated Facilities Engineering, Dept. of Civil Engineering, Stanford University, CA, September, 75 pages.

GRADING	% of Final Grade
Class attendance – Tardiness of 10 minutes or more will result in reduction of 0.5%.	20 days @ 1% = 20%
Facilitate reading assignment discussion	2 times @ 10% = 20%
Weekly reflections	10 times @ 3% = 30%
Attendance of Dr. Glenn Ballard's presentation at Kingsgate on April 20, 2006	5%
Field Trip to Toyota Motor Manufacturing	10%
Final Exam	15%

Attendance Policy: You are allowed one unexplained absence. After that point, each absence will cost you 2% of your overall grade.

CEE 678 – Case Studies in Construction
Course Schedule (subject to adjustments based on course progress)

WEEK	READING ASSIGNMENT	MONDAY	WEDNESDAY
1	The Goal Chapters 1-20	Introduction	Game – Airplane Game (Day 1)
2	The Goal Chapters 21-40	Game – Airplane Game (Day 2) Lecture – Work Structuring example	Discussion – The Goal
3	Womack et al. Chapters 1-3	Game – Parade of Trades (Day 1)	Game – Parade of Trades (Day 2)
4	Womack et al. Chapters 4-5	Discussion – Womack et al. 1-3	Discussion with Dr. Glenn Ballard
5	Womack et al. Chapters 6-7	Discussion – April 20 th presentation Discussion – Womack et al. 4-5	Game – Origami Game (Day 1)
6	Kubal Chapters 1-3	Discussion – Womack et al. 6-7	Game – Origami Game (Day 2)
7	Kubal Chapters 5-6	Discussion – Kubal Chapters 1-3	Game – Origami Game (Day 3)
8	Delta Design Game	Discussion – Kubal Chapters 5-6	Lecture – Partnering example Game – Origami Game (Day 4)
9	Koskela Report	Game – Delta Design Game (Day 1)	Game – Delta Design Game (Day 2)
10	Group Project Presentations and Final Exam Review	Discussion – Koskela Report	Lecture – Boldt example
11		Final	