



Deploying the LAI Lean Academy as a Special Elective

Lean Educator Conference
April 25, 2008

- **Desire: Find a way to expose MIT students to lean concepts while they're at school**
- **Options**
 - **Create a new regular length course on lean**
 - **Scatter lean concepts throughout existing classes**
 - **Offer a Lean Academy during the January period between semesters**

Undergraduate Value Stream

Notional Based on MIT Calendar



**HS
Grad**



Freshman Year



Sophomore Year



Junior Year



Senior Year

**Univ
Grad**



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Lean Academy IAP Offering

- **Elective course for 2 units of Pass/Fail credit**
- **3 consecutive days in January, 8am-5:30pm**
- **25 students total**
 - 13 grad, 12 undergrad
 - 20 Aero/Astro Engineering, 3 Engineering Systems, 1 Mechanical Engineering, 1 Management
- **Recruited through flyers, emails, announcements in sophomore course**

Everything you didn't learn in Unified...

This intensive three day course will provide practical insight into Lean Six Sigma principles used throughout the aerospace industry and government sector.

These principles come alive through a plant tour and interactive game. The knowledge gained will provide you a competitive edge for internships and future employment.



What: 16.687/16.983, 2 units of P-D-F

When: Wednesday Jan 23-Friday Jan 25

Instructors: Earl Murman, Annalisa Weigel, Allen Haggerty and speakers from industry

Enrollment is limited to 30 students.

Email Prof. Murman, murman@mit.edu, by December 21 to reserve your spot in this popular course.

...but need to succeed in the aerospace industry.

	Wed Jan 23	Thu Jan 24	Fri Jan 25
8:00	Why Am I Here? (with continental breakfast) - 45 min	Icebreaker & Day 1 Recap	Icebreaker & Day 2 Recap
8:30		Enterprise Simulation - Segment I - 90 min	Accounts Payable VSM - 60 min
9:00	Break - 15 min		
9:30	The Start of Your Lean Journey - 60 min		Break - 15 min
10:00		Break 15 min	Variability Simulation - 45 min
10:30	Break - 15 min	Lean Supply Chain Basics - 45 min	Break - 15 min
11:00	Northrop Grumman Talk - 45 min	Enterprise Simulation II - Lean Thinking Refresh and Change Planning - 75 min	Quality Tools Part 1 - 45 min
11:30	Break - 15 min		Break - 15 min
12:00	Lean Thinking - 60 min		Quality Tools Part 2 - 45 min
12:30		Lunch - 45 min	Lunch - 45 min
1:00	Break - 15 min	Enterprise Simulation - Segment II - 60 min	Pratt & Whitney Talk - 30 min
1:30	New Balance Plant Tour, Lawrence MA Lunch on Bus Schedule 12:30 -1:15 - Travel 1:15-1:30 - Check in 1:30-2:30 - Intro and Tour 2:30-2:50 - Q&A, refreshments 2:50-3:00 - Board bus 3:00-3:45 - Travel		Break - 15 min
2:00		Lean Engineering Basics - 45 min	People - 75 min
2:30		Break 15 min	
3:00		Enterprise Simulation III - Refresh and Change Planning - 60 min	Break - 15 min
3:30			Lean Implementation - 90 min
4:00	Break - 15 min	Enterprise Simulation - Segment III - 45 min	
4:30	Video - 30 min		
5:00	Break - 15 min	Accounts Payable I-15 min	
	VSM Exercise - 45 min	Wrap up - 15 min	Wrap up - 15 min
		Case Study Homework	Graduation

Student Feedback

- **A real success!**
- **Positive**
 - Plant tour and seeing lean in “real life”
 - Lego simulation to bring theoretical concepts to life
- **Constructive**
 - Spread over 4 days (or more) instead of 3 – too much information in too short a time
 - Volume of PowerPoint charts was overwhelming

Date: February 11, 2008 4:54:56 PM PST
To: Earll Murman <murman@mit.edu>
Subject: Lean Academy Class

Prof. Murman,

I wanted to thank you one more time for having the lean class as an undergraduate offering last IAP. Last week at the career fair, I was able to talk about it and it really got the employers' attention. One person from Boeing told me to write it in a bigger font on my resume. Hope everything is well in Seattle.

Sincerely,
-Dember

1. The Lego simulation opened my eyes to the value of lean thinking.

I think this seminar was extremely valuable and gave me an advantage when I go back into industry next year.

“What value did you get from this course?”
Write your answer on an index card, and hand it to the Department Head (who paid for this course) when he shakes your hand at graduation.

The lean course was extremely useful for me. I had heard about these topics but the speakers, plant tour and simulation made the learning real. I immensely enjoyed the enterprise simulation. The course will prove useful to me in my job search and future employment.

Future Plans?

- **Offer the Lean Academy during the January period in 2009**
 - **Seek Department sponsorship to cover expenses**
- **In discussions with other units about tailored offerings**