**Design Thinking**

**IBLC 124**

**Syllabus**

**Course Objectives**

This course is about ***design thinking***. You will learn how to improve productivity, the psychology behind successful ***team-work*** and what makes great companies great. This is an inter-disciplinary course that explores topics on psychology, operations management and history of business. It is hands-on course and we use the case study method. Along the way, you will learn about topics such as Workshops, Lean Operations, Six Sigma, and the Toyota production system and about the success stories of Zara, Sony, Apple, Tesla Motors, Fast-fashion and much more!

**Course Outline**

The course is divided in self-contained“sessions”

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| --- | --- | --- |
| **Module** | **Key concepts / Learning Goals** | **Release time** |
| 0. Introduction | 1. Overview of the course. Introduction to the Marshmallow project video.  2.The Marshmallow workshop | Week 1 |
| 1. Psychology of Team Work | 3. IDEO Tom Kelley on self-efficacy + IDEO post-it method. Recycle Awareness workshop w/ post-it. Video: Building creative confidence: David Kelley at TED2012 + ABC shopping cart design.  4. Group presentation of mock proposal to go on recycle awareness and discussion. Introduction to the IDEO toolkit for product design. | Week 2 |
| 2. Toolkits for Design Thinking | 5. David Kelley: The future of design is human-centered. Video: TED 2007. Workshop on using the toolkit, who to write each section step by step.  5. The Wind car workshop.  6. A3 Toyota reporting with PDCA case study and ValueStream Maps | Week3-6 |
| 3. Fashion Industry | 7. Zara cs | Week 7 |
| 4. Animation Industry | 8. Pixar cs | Week 8 – 10 |
| 3: Productivity in Factory | 9. 5s in classroom desks  Kanban Origami Cell production workshop | Week 11-12 |
| 4: Responsiveness | 10. Waiting time analysis  Line balancing  Root cause analysis The KitKat case study | Week 13- 14 |
| 5: The Fashion industry | 11.Vogue | Week 15 |
| 6: Strategy Consulting | 12. Auction in electric markets case study  Publishing root cause analysis case  Antofagasta copper mine case | Week 16 |
| 7: Design thinking flavours | 13. Sony case study  Lego case study  Amazon case study | Week 16 - 18 |

**Textbook & Media**

*Cachon, G. P. & Terwiesch, C. Matching supply with demand: An introduction to operations management 3nd Ed. Boston, MA: McGraw Hill.*

[Amazon link to the book](http://www.amazon.com/Matching-Supply-Demand-Introduction-Operations/dp/0073525200/ref=dp_ob_image_bk%0D%0A)

IDEO

* D. Kelley on self efficacy - <http://www.youtube.com/watch?v=eXndL3TNCmo>
* Michigan workshop <http://www.youtube.com/watch?v=2gHTdUQBkcg&list=PL7CC483C64B1257A9>
* ABC TV shopping cart ideo <http://www.youtube.com/watch?v=M66ZU2PCIcM\>
* Inside IDEO <http://www.youtube.com/watch?v=eXndL3TNCmo>
* More IDEO http://www.youtube.com/watch?v=oggMSPCHNtw

TPS Toyota the Global History

* <http://www.youtube.com/watch?v=HJq5O1MVBoI>
* <http://www.youtube.com/watch?v=3D9xDIJ4zrM>

Toyota as Lean Manufacturing

* jidouka <http://www.youtube.com/watch?v=c6KVeDbgRgU>
* Taichii Ohno http://www.youtube.com/watch?v=6vmdVR9dzPM

Lean Production Systems

* 5S http://www.youtube.com/watch?v=c0Q-xaYior0
* Learn How to Deal with the 7 Deadly Wastes (non added value cocnept) http://www.youtube.com/watch?v=SU01D-jTZcE \*
* Kitchen 5s example <http://www.youtube.com/watch?v=E6rRHqb5MV0>
* 5S in the office home video <http://www.youtube.com/watch?v=QdNq1_c7T8M>
* Why the order is important in 5s http://www.youtube.com/watch?v=BqIOnpJ\_crI

Cell / Kanban

* U cell production video <http://www.youtube.com/watch?v=AUPji7L9aSs>
* kanban <http://www.youtube.com/watch?v=tum1lLwy6gE>
* demo kanban http://www.youtube.com/watch?v=ZIv2e61SH1A \*\*
* 4. Lean Uk perspective http://www.youtube.com/watch?v=wfsRAZUnonI

Inspiring Change Stories

* TESLA @ Bloombergtv http://www.youtube.com/watch?v=CTJt547--AM

Factory tours

* TESLA S factory <http://www.youtube.com/watch?v=VUgDcA1pZAM>
* TESLA NUIMMI <http://www.youtube.com/watch?v=NAxtOwo8S8w>
* http://www.youtube.com/watch?v=hg5RlapdEtE Toyta
* http://www.youtube.com/watch?v=l6AE0gF79VA Merceds

VOGUE MAGAZINE (Fashion & Focus) CASE STUDY

* Anna Winthour <http://www.youtube.com/watch?v=iU9p-wIgXwY>
* September issue <http://www.youtube.com/watch?v=YozX0v7NGws>
* Game changers Anna Winthour <http://www.bloomberg.com/video/68252862-anna-wintour-revealed-bloomberg-game-changers.html>
* http://www.youtube.com/watch?v=w3Ud7pEhpQM lego demo kanban

ZARA

* Planet Zara video (Muzzly) case study with subtitles. <http://www.youtube.com/watch?v=EbMoYFgB9tU>

PIXAR

* http://www.youtube.com/watch?v=oggMSPCHNtw

**Grading Policy**

Each student's final numerical score for this course is based on the following items and weights:

-              Homework assignments (3 homework assignments with 10 points each).

-              Midterm exam (30 points).

-              Final exam (40 points).

I will add up the points from these grading ingredients to compute a total score. According to the scores you achieved, you qualify for the following badges of achievement:

|  |  |  |
| --- | --- | --- |
| **Certificate** | **How it is earned** | **What you get** |
| Course completed | Obtain 70% or more on each homework as well as the final exam | Statement of accomplishment |
| Design Thinking Expert | Obtain 90% or more on each homework as well as the final exam | Statement of accomplishment |
| Excellence Award | Top 1% in total score | Potential invitation to collaborate on future course development |

 **Office hours**

Office hours : by appointment only via email [jose@uaeu.ac.ae](mailto:jose@uaeu.ac.ae)

Or phone: 0502624155

Office : Medialab / CIT building 3rd floor male side

Created Mon 25 Jun 2012 10:48:56 AM PDT  
Last Modified Fri 9 Feb 2013 3:48:12 PM PST