



The Hebrew University of Jerusalem

Syllabus

Design Driven Innovation: Methodologies & skills for meaningful insights - 11161

Last update 03-09-2024

HU Credits: 2

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Cornerstone program

Academic year: 0

Semester: 1st and/or 2nd Semester

Teaching Languages: English

Campus: Mt. Scopus

Course/Module Coordinator: Sharon Levite-Vakin

Coordinator Email: design201@innovate.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Ms. SHARON LEVITE

Course/Module description:

An online, asynchronous course designed for an interdisciplinary academic environment.

Previous knowledge and/or experience in design is not required in this course.

Bachelor students from the Hebrew University, Bezalel Academy of Art and Design and Azrieli College of Engineering will co-learn core design methodologies that can be implemented in product and venture creation processes.

The learning process in the course is built in a structure that brings together theory and real world practice.

Participants will enjoy an interactive, "hands-on" practice of design research tools, step into the designer's shoes and use their unique attitude to problem solving, human-needs-centered-design and product oriented design.

The aim: Explore new ideas and discover meaningful needs and opportunities.

Course/Module aims:

- *Broaden the student's perception on what "a product" is (artifact, process, service, interaction, experience, workflow) and exercise the ability to identify a product's territory.*
- *Introduce the students to hands-on design research methodologies, product specs and visual thinking - useful skills for innovation processes.*
- *Introduce the students to design thinking theories from a critical point of view, and encourage them to adapt and reform the diagrams to their personal perspective and practice.*
- *Familiarize the students with the industrial design process, expose students to the designer's mindset and highlight the relevance and importance of this mindset to problem solving and everyday innovative thinking.*
- *Shrink the gap between the student and his/her future customers/users (physically and mentally)*

Learning outcomes - On successful completion of this module, students should be able to:

- *Articulate meaningful insights about the user and his/her known needs, unmet needs and hidden needs, by using hands-on design research methodologies.*
- *Identify the emotional value of a product and the potential contribution of this identification to the innovative process.*
- *Engage with their surroundings and the end users in the innovation process.*
- *Collect and analyze data using visual thinking tools.*
- *Articulate the impact everyday innovation can have on the world - socially,*

environmentally, economically.

● Gain new user and product based perspectives from which students can innovate within their practice

Attendance requirements(%):

100

Teaching arrangement and method of instruction: The course is digital and asynchronous, with content being updated on a weekly basis. Therefore, there will be no roll call and there is no attendance requirement.

Course/Module Content:

Unit 1 Introduction:

The need of a human-centered design approach to any product, service or experience in the world

- Building a design mindset: Introduction to the course
- Why do we need to think like designers?
- How does good and bad design affect us all?
- The complexity of the devices and services in our everyday lives
- Design & human behaviour: Affordances and signifiers in product design
- How to design for human intuition
- A first attempt to solve a failed design

Reading materials: Norman, D. (2013). *The Design of Everyday Things*. Basic Books. pg. 4-9

Unit 2

Product Based Perspective:

Broaden the personal and professional perspective on what a product is, and learn about the necessity of emotional value when designing a good product

- Introduction: Design and emotions - the hidden side of product value
- Case study: Stairs - their functions and how they make us feel
- Case study: Emotional design and the chronicles of the progression bar
- Let's define a product: Product Design, Experience Design, Interaction Design
- The Emotional sides of traveling experiences: Air BNB, souvenirs and authenticity
- How it's made: product specs anatomy
- Journey mapping and user stories
- Is it a function or a feature? Defining the difference

Reading materials: Norton, M. I., Mochon, D., Ariely, D., *The "IKEA Effect": When Labor Leads to Love*, *Journal of Consumer Psychology*, Volume 22, Issue 3, 2012,

Pages 453-460

Unit 3 Human Centered Design Research:
Learning to empathize and ask questions

- Introduction to human-centered design: Designing for people
- Design thinking by Tim Brown (IDEO)
- First steps to empathy: How to actively engage with the user, gain meaningful insights and understand his/her needs?
- Case study: Innovation in healthcare & nurses hackathons
- Qualitative research & human needs: Asking the right questions
- Field exercise: Revisiting bicycle lanes (part 1: interviews)

Reading materials: Lupton, E., Carpentier, T., Lambert, T. (2014). *Beautiful Users: Designing for People*. Princeton Architectural Press. pg. 18-24

Unit 4 User Centered Design Research:

Learning to document and analyze the scene - visually

- The job of the industrial designer & the need for an interconnective mindset
- Introduction to visual thinking: Left brain-Right Brain and the benefits of visual maps as tools for creative thinking
- Why do detectives use investigation boards?
- Visual research and meaningful insights: Visual thinking and observational studies in the design process - from moodboards to brainstorming
- Introduction to cultural probes as means of visual field research
- Field exercise: Revisiting bicycle lanes (part 2: Visual documentation)

Reading materials: Mattelmäki, T. *Design Probes*. Publication Series of the University of Art and Design Helsinki pg. 39-45

Unit 5-6 User Centered Design Research:

Learning to immerse with the user and the scene, and come back with meaningful insights

- Immersivity in the design research process
- The difference between passive and active first hand user research
- What are hidden needs and where we might find them?
- How to Identify market pains by BEING the user?
- Field exercise: Revisiting bicycle lanes (part 3: Being cyclists)
- Building the foundation for your own project

Unit 7

Designing Beautiful Solutions:

The difference between decoration and designing beautiful solutions

- Introduction to beauty and why it is important in design
- Beauty in nature: Symmetry, beauty & the survival of the fittest
- Shape and color as means of communication and information in nature
- Simplicity in design: How beauty and simplicity connected?

Unit 8 Everyday Futures:

Implementing the product-based and the user-centered perspectives on everyday life and needs within a future context

- *Everyday Futures by Nick Foster (Google X)*
- *Our user-centered and product based perspectives on everyday futures*
- *Identify the 'background talents' in the scene - from a product based perspective*
- *Design fiction with everyday objects: Building a tangible 'set' to a possible future*
- *Case study 1 - How small things can change the world: the hyperlink*
- *Case study 2 - How small things express big changes - the disposable coffee cup lid*
- *Case study 3 - COVID19: How a virus changed the world and the way we design products?*
- *Summary: Everyday innovation - Third world fundamental challenges solved by design of everyday things (Cola Life and Q-drum)*
- *Assignment: Your offering for everyday innovation*

Reading materials: Foster, N. (2013). The Future Mundane. Core 77.

Unit 9-11

Implementation

Implementation

- *Implementing the design research methodologies learned into one personal project within your own practice, using:*
 - *Qualitative research*
 - *Visual research*
 - *Immersive research*
 - *Journey mapping and user stories*
- *Final assignment submission: articulating an innovative original idea based on the research findings:*
 - *A research summary*
 - *One pager of top insights: Analysing problems, unmet and hidden human needs*
 - *Final offering*
 - *Evaluation- Peer assessment*

Unit 12 Final assignment submission:

A critical understanding of Design Thinking models

- *Design thinking theories and thinking like designers*
- *My takeaways*
- *Final offering submission*

Unit 13 Summary and evaluation

- *What have we learned? How can we practice the design perspectives? How can we observe the world, what should we look for when developing a new 'product'*

and why shouldn't we look the other way?

- Final offering peer assessment

Required Reading:

1. Unit 1: Norman, D. (2013). *The Design of Everyday Things*. Basic Books. pg. 4-9
2. Unit 2: Norton, M. I., Mochon, D., Ariely, D., *The "IKEA Effect": When Labor Leads to Love*, *Journal of Consumer Psychology*, Volume 22, Issue 3, 2012, Pages 453-460
3. Unit 3: Lupton, E., Carpentier, T., Lambert, T. (2014). *Beautiful Users: Designing for People*. Princeton Architectural Press. pg. 18-24
4. Unit 4: Mattelmäki, T. *Design Probes*. Publication Series of the University of Art and Design Helsinki pg. 39-45
5. Unit 8: Foster, N. (2013). *The Future Mundane*. Core 77.

Additional Reading Material:

1. *Design Series by Design Council*
2. Cross, N. (1982). *Designerly Ways of Knowing*, *Design Studies* 3(4), pp. 121-227
3. Cross, N., (2011). *Design Thinking: Understanding How Designers Think and Work*. Berg Publishers.
4. Brown, T. (2019). *Change by Design, Revised and Updated: How Design Thinking Transforms Organizations and Inspires Innovation*. Harper Business.
5. McKim, R. H.(1980). *Experiences in Visual Thinking*. Cengage Learning.

Grading Scheme:

- Essay / Project / Final Assignment / Home Exam / Referat 40 %
- Active Participation / Team Assignment 30 %
- Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 30 %

Additional information:

The course includes work on a weekly basis including 5 exercises within the semester. It is not possible to work on this course in "one shot".