The Hebrew University of Jerusalem

Syllabus

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

Last update 13-10-2021

HU Credits: 2

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Cornerstone program

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English

Campus: Mt. Scopus

Course/Module Coordinator: Ms. Dana Benshalom

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

Coordinator Office Hours:

Teaching Staff:

Ms. Dana Benshalom

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.
This course follows the first course in the series – "Intro to Innovation and Entrepreneurship". Note: completing the ladder is not a prerequisite. It dives into key elements in the innovation process and expands the perspective on the design tools available.
This course will benefit the entrepreneur but also any other professional practice.

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 brainstorms*
● *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.

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 20 %
Project work 40 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 40 %
Final assignment

Additional information: