Syllabus

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

Last update 13-10-2021

<u>HU Credits:</u> 2

<u>Degree/Cycle:</u> 1st degree (Bachelor)

<u>Responsible Department:</u> Cornerstone program

<u>Academic year:</u> 0

<u>Semester:</u> 2nd Semester

<u>Teaching Languages:</u> English

<u>Campus:</u> Mt. Scopus

<u>Course/Module Coordinator:</u> Ms. Dana Benshalom

 <u>Coordinator Email:</u> design201@innovate.huji.ac.il

<u>Coordinator Office Hours:</u>

<u>Teaching Staff:</u>
 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: Mattelmлki, 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

<u>*Required Reading:*</u>
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: Mattelmⴖki, 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.

<u>*Additional Reading Material:*</u>
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.

<u>*Course/Module evaluation:*</u>
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

<u>*Additional information:*</u>