DESIGN METHODOLOGY

IE University
Professor: **VALENTÍN GARCÍA ALCOCER**

E-mail: vgarciaa@faculty.ie.edu

Academic year: 22-23
Degree course: SECOND
Semester: 1º
Category: COMPULSORY
Number of credits: 3.0
Language: English

PREREQUISITES

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SUBJECT DESCRIPTION

This Design Methodology course provides the student with the basic knowledge to introduce her/himself to the project culture of the design discipline. During the different sessions some methodological approaches and creative techniques will be explored. The main goal of the course is to provide future designers with the necessary resources and tools to approach all kind of projects in an organized, structured and creative way.

OBJECTIVES AND SKILLS

Objectives:

- To understand the creative process methods relevant to the resolution of problems in an innovative way.

- To acquire basic notions of design methodology, both theoretical and practical.

- To understand the processes behind the design practice.

- To be able to structure design projects, selecting the methodology, methods and techniques.

- To develop a sensibility that goes beyond the design of the solution, also reflecting on the process to achieve it.

- Appreciate the contribution that creative methodologies have to the design process.

Skills:

- Development of a structured way to tackle projects.

- Development of design strategies for problem solving.

- The use of the most common design methodologies, methods and techniques.

- The ability to setup a framework for team collaboration and/or user co-creation.

METHODOLOGY

The course consists of a blend of discussion and lecture based seminars and the engagement with weekly readings through written assignments, group work and in class discussions and tasks.

Students will be expected to have read the pertinent texts before each session and to write a small assignment or prepare a specific task in response to them. Interactivity and engagement is critical to the learning process and therefore students will be encouraged to share their thoughts and ideas in relation to issues presented in each seminar.

Based on the above competencies, the Professor will for his class sessions rely on a combination of the below course formats: Lectures, Discussion Sessions, Student Presentations and Student Debates. Based on the above competencies, students will dedicate their individual study hours to: individual study, preparation of assignments, tasks and group work

CLASS ELECTRONIC REQUIREMENTS: This subject does not require the use of a laptop in class; nevertheless, if you want to bring your laptop, please contact your professor.

Teaching methodology	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	24.0 %	18 hours
Discussions	16.0 %	12 hours
Exercises	21.33 %	16 hours
Group work	22.67 %	17 hours
Other individual studying	16.0 %	12 hours
TOTAL	100.0 %	75 hours

PROGRAM

PART 1: AN INTRODUCTION TO METHODOLOGIES

SESSION 1 (LIVE IN-PERSON)

Fundamental parameters

Methodology, tasks and process Presentation and Lecture.

This module is an introduction to the basics elements on the possible ways on how designers tackle their work. During the session, it's going to be explained how this curse will work and how when you need to connect design work with other activities it is necessary to establish an order in the required actions to complete a job, reflecting on the differences between methodology, tasks, processes, and tools. Different systematic approaches are going to be covered for solving problems, which could be standardized and repeated when necessary as well as fundamentals parameters for a project.

Reading Assignment:

Book Chapters: "Design Methods" John Wiley & Sons Inc, 2nd edition, 1992 (7.05 JON des), pp. 3-14. (See Bibliography)

Recommended movies:

The fountainhead, King Vidor, 1949 URL: https://www.imdb.com/title/tt0041386/
American look, W.F. Banes, John Thiele, 1958 URL: https://www.youtube.com/watch?v=mAeDArSdXYc
The founder, John Lee Hancock, 2016 URL: https://www.imdb.com/title/tt4276820/

SESSION 2 (LIVE IN-PERSON)

Origin of methodologies

Arts & Crafts, Taylorism (Scientific management), Fordism, Ulm School, Bauhaus, Mc Donalds "speedee" system and Lean manufacturing.

In this session we will revisit the history of industrial methodologies and processes from Arts and crafts to Lean manufacturing which are the bases to creative methodologies.

Writing Assignment

Writing an essay of 200 - 250 words summarizing what methodologies are, why do you think they are important (Or not) and what pros / cons can contribute to the design process

SESSION 3 (LIVE IN-PERSON)

Assignment discussion

During the session the students will expose their essays (Through video) and we will discuss the most interesting and dynamic points of view, as well as the movies and readings assigned the previous session. This discussion will lead to those methodologies that will be explained in session 4, specially discussing about human-centered design.

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Basic processes for a designer mind-set

Design is not just about manufacturing. Previous phases, that set up a designer mind-set are just as important as the technical ones. During this session we will find out what design is supposed to be, what's the goal of designing something and how should we face the first steps to design it.

Three technics will be explained:
The Problem Solving Approach. Creating in order to solve a problema or a challenge
The Human Centered Design. Deeply analyzing society in order to find out what people's looking for

The Double Diamond Design Process. Expanding and focusing our vision alternately in order to generate the most appropriate response to each need

Reading Assignment:

Book Chapters: The Field Guide to Human-Centered Design , IDEO, 2015 (P 9-14) (See Bibliography)

Article: Gaggero Westaway, Clara "Design Methodology" Special Projects, 2016 (Special Projects)

Video: IDEO: Shopping Cart Design Process, 1999 (Compulsory watch) (Youtube)

SESSION 4 (LIVE IN-PERSON)

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Reading Assignment:

PART 2: DESIGN THINKING

SESSION 5 (LIVE IN-PERSON)

An introduction to Design Thinking

This session will serve to introduce the Design Thinking methodology. We'll start learning the history of Design thinking and the phases of the methodology: Empathize, define, ideate, test and measure.

A briefing with the case to be explored in this module will be presented to students and discussed deeply.

We will review some business cases too.

SESSION 6 (LIVE IN-PERSON)

Design thinking: Empathize

This session is the first of the Design Thinking phases series. All phases classes will follow the same pattern. We will explain the goals of the phase and the importance of following the defined steps. Some tools and examples.

Empathize phase will help us to understand the challenge we are facing and the target we are approaching to.

During this session we will learn some investigation tools that help us to accomplish the empathize phase, such as the safari, interviews, 6 thinking hats, shadowing, customer journey or persona.

We will prepare a safari exercise using the briefing exposed during the previous session. This will be the base for the session's assignment.

Assignment

Using the Safari tool, you must visit a place were the target usually concentrates to perform some activity related with the briefing. After taking exhaustive notes, you will fill the persona tool and expose some key inputs aqcuired during the excercise.

Define precisely the target and fill the Persona tool

SESSION 7 (ASYNCHRONOUS)

Empathing work in progress
Send the work in process for the empatization phase so that some aspects may be adjusted befor the final presentation

SESSION 8 (LIVE IN-PERSON)

Design thinking: Empathize presentation

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Design thinking: Define

Understanding the problem is not always as easy as it seems. The Define phase helps us to explore and specify the challenges and problems we are facing.

We can't start to ideate without defining the problem or challenge to accomplish, other way our solution will never be accurate enough.

The main goal is to arrive to a proper synthesis of our challenges and generate a problem statement that's clear to understand for everyone and resumes the main aspects of the project.

We will learn some different tools such as an Empathy map or the Manifesto canvas.

SESSION 9 (LIVE IN-PERSON)

Design thinking: Ideate

Ideation phase is the most popular one. It can and should be fun, but a proper order and focus should never be lost. Since this phase is the most popular one, lots of bad habits are already acquired. We will explain the goals of the phase, break up the bad habits and learn some new tools to accomplish and evaluate our ideation phase.

The ideas generation main tools to learn will be Brainstorming, Brainwriting, Opposite thinking…
The ideas evaluation main tools to learn will be the Desirability/feasibility/viability chart, Value Vs Effort…

During the sessions we will do a Brainwriting in-class exercise, related to our practical case. These ideas will be reviewed and we will select one, specifying the tasks that need to be done in order to accomplish that idea. The MoSCoW tool and the Tasks backlog will help to prepare those tasks for starting the action.

Assignment

Use the Desirability/feasibility/viability chart to select your final idea.

Justify your selection and make a list of the main tasks that you will need to accomplish in order to make it possible

Reading Assignment

The lean startup : how today's entrepreneurs use continuous innovation to create radically successful businesses, Eric Ries, 2011 (Pages to be defined)

SESSION 10 (LIVE IN-PERSON)

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SESSION 11 (LIVE IN-PERSON)

Design thinking: Empathize presentation

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Design thinking: Test and measure

Accountancy of design and innovation may be an abstract concept but it's an essential one. All the impact we create by a new design or project has to be measured, even when it seems to be impossible. Nowadays the success or failure of a project has to be shown with data and there are many ways in order to obtain that information
in an objective and precise way.

During this session we will understand the goals of test and measure phases and will watch some of the most useful tools that will help us to accomplish successfully these phases. We will explain what an MVP is (Minimum Viable Product) and different kinds of MVPs: Frankenstein, Landing page, Concierge…

MVPs will lead us to the final part of the course, agile methodologies.

PART 3: AGILE METHODOLOGIES

SESSION 12 (LIVE IN-PERSON)

An introduction to Agile Methodologies

Last decades, the Waterfall methodology has been the main way to manage projects. But after the emergence of Agile Methodologies during the 00's this has started to change.

During this session we will compare the agile VS waterfall system and show how to choose the most appropriate one for each project.

We will also get and introduction to Agile methodologies history, as well as the Agile Manifesto. SCRUM may be the most popular agile methodology but before going deeply into it, we will also know other agile methodologies and where are usually applied.

SESSION 13 (LIVE IN-PERSON)

Excursion

In this session we will leave the classrooms to visit the innovation center of a large company and find out the methodology they use to manage their projects.

Assignment

Describe the company's methodology.
Explore and explain the discovered pros/cons in their methodology.
- Use examples of learned methodologies

SESSION 14 (LIVE IN-PERSON)

Lean Startup and SCRUM

Using Lean Startup and/or SCRUM methodologies allow us to accelerate the time to market of a product and test it before launching it. Both are very useful ways to reduce costs and validate our ideas, minimizing risks.

During these two sessions we will learn where do these methodologies come from and when should we use them.

We will have an special emphasis in SCRUM, discovering a whole new structure to organize our work that includes new roles, new tools and new steps.

ASSIGNMENT

Construction of an MVP and tutoring during the process.
The following objectives are pursued during these sessions:

1. What is the main thing to be tested?
2. What is the best tool for that testing?
3. Construction of the MVP (and test launch, if possible)

SESSION 15 (ASYNCHRONOUS)

ASSIGNMENT FEEDBACK

Submit your ongoing work

Construction of an MVP and tutoring during the process.
The following objectives are pursued during these sessions:

1. What is the main thing to be tested?
2. What is the best tool for that testing?
3. Construction of the MVP (and test launch, if possible)

SESSION 16 (LIVE IN-PERSON)

SCRUM

An introduction to SCRUM + Roles

SCRUM is a methodology that involves a whole new structure to organize our work and includes new roles, new tools and new steps, during the last 3 sessions of this elective subject we will get deep into it.

SCRUM allows us to accelerate the time to market of a product and test it before launching it. Is a very useful way to reduce costs and validate our ideas, minimizing risks.

This first session will be an introduction to SCRUM. What does it mean, where does it come from, who is using it or how can we apply it will be some of the questions that will be answered. The whole picture of what a "sprint" is and how are managed.

We will also understand the new roles assigned by SCRUM methodology: Product Owner, SCRUM Master and SCRUM Team. Also the needed skills for each of them and the main tasks we expect them to accomplish.

SCRUM: Meetings and artifacts

Meetings are an essential part for a correct development of SCRUM methodology. There are several kinds of meetings to be applied during the different phases of the processes that SCRUM involves.

In this session we will review the entire meeting types, rules and how to make them effective. Sprint planning meeting, daily meeting, feedback meeting...

A role-play will take place as an assignment to be made during the session.

Artifacts are the so-called elements that are essential to the SCRUM methodology correct development.

Basic artifacts for SCRUM are Product backlog and Sprint backlog, we will get deep into it as well as in the remaining phases of SCRUM, especially the priorization and estimation phases and some tools to make them easier to achieve

SESSION 17 (LIVE IN-PERSON)

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SESSION 18 (LIVE IN-PERSON)

Final Presentation

Recap of the project and insights from the MVP

SESSION 19 (LIVE IN-PERSON)

Recap and review

We will review all the contents of the course and answer any questions that may have remained pending.

SESSION 20 (ASYNCHRONOUS)

Final exam

All acquired knowledge will be tested during this session.

Final test: 20 Questions, test format
Final Essay: Short essay (300-400 words)

BIBLIOGRAPHY

Compulsory

- Chris Jones, John. *Design Methods.* JOHN WILEY AND SONS. ISBN 9780471284963 (Digital)

- IDEO.ORG. (2015). *The Field Guide to Human-Centered Design.* 1st edition. San Francisco, IDEO. ISBN 9780991406319 (Digital)

- Ries, Eric. *The lean startup : how today's entrepreneurs use continuous innovation to create radically successfu.* 2011. Crown Business. ISBN 9780307887894 (Digital)

EVALUATION CRITERIA

Your final grade in the course will be based on both individual and group work of different characteristics that will be weighted in the following way

Criteria	Percentage	Comments
Class Participation	20 %	Includes attendance + participation
Assignment 1: ESSAY	10 %	
Assignment 2: SAFARI	10 %	
Assignment 3: IDEATION	10 %	
Assignment 4: INNOVATION LAB	10 %	
Assignment 5: MVP + FINAL PRESENTATION	10 %	
Final Essay	10 %	
Final Test	20 %	

Class attendance and participation

It is expected from students to participate in class discussions. There are two ways for individual participation: In the discussions that each seminar will hold and in the group project presentation that students will have to give based on their readings and project results.

Key criteria to consider class participation will be the constructive engagement with class discussions and activities. It is expected that participation should be oriented to enrich the intellectual climate of the class, participating in debates, carefully listening to peers and engaging in dialogues with them.

Assignments

All submitted works must show rigor, creativity and information of the acquired knowledge.

Both in the group and in the individual works, the expression of a well-founded opinion will be valued.

References and citations must be quoted.

In groupworks, everyone will be responsible for the final grade, so the active participation of all members is strongly recommended. Professor reserves the right to specific modifications, individually, in the note of the groupwork if he considers that the participation in said works has been unequal and inadequate.

Final exam

The final exam will be composed by a final test that reviews the whole course in 20 questions.

Also will include a final short essay. Essay should be a theoretical exploration based on the combine of contents from different course modules. Quotes, data and all objective information included will be highly valued.

Retake policy

(2nd or Extraordinary Period)

Students who do not comply with the 70% attendance rule will lose 1st Period (Ordinary) or 2nd Period (Extraordinary) will be required to enrol again in this course next academic year and go directly to the 3rd Period.

Grading for retakes will be subject to the following rules:

- Students failing the course in the first ordinary period will have to do a retake in June (except those not complying with the attendance rules, which are banned from this possibility).

- Dates and location of the June retakes will be posted in advance and will not be changed. Please take this into consideration when planning your summer.

- The June retakes will consist on a comprehensive exam. The grade will depend only on the performance in this exam; continuous evaluation over the semester will not be taken into account. This exam will be designed bearing in mind that the passing grade is 5 and the maximum grade that can be attained is 8. The maximum grade that a student may obtain in any type of retake will be 8 out of 10.

- Students who fail to obtain a satisfactory grade in the 1st or 2nd Periods will be required to enrol again in this course next academic year.

PROFESSOR BIO

Professor: **VALENTÍN GARCÍA ALCOCER**

E-mail: vgarciaa@faculty.ie.edu

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Valentín García is an entrepreneur from Madrid, expert in strategy, innovation and design

He has developed a large part of his career in France and Mexico, mainly collaborating with Domaine de Boisbuchet in the first three years and later as Creative Director of the Mexican Design Gallery. In the Americas he began his consulting work, combined with his own design studio. As a designer, his work has been exhibited in prestigious media and press (The New York Times, AD Russia, Elle Shanghai, Designboom, etc.)

Valentín has been awarded Áccesit INJUVE for best young Spanish designer and Quórum award for best Mexican design. He has also participated in exhibitions at the Museum of Contemporary Art in Mexico, Franz Mayer Museum and Madrid City Council.

As a consultant, he has carried out product development and innovation management projects for brands such as Endesa, MAPFRE or SEAT. Likewise, he has participated in the development strategy of the creative industries for PROMEXICO, trust of the Government of Mexico and La Nave, innovation center of Madrid City Council, where he has directed the programs and activities during the start-up of said centers.

He is the current Deputy Director of Madrid Food innovation Hub, IE University Adjunct Professor and VP of Innovation Strategy at Eatable Adventures.

OTHER INFORMATION

- Office hours: After seminars. It is necessary to set the date in advance.

- Contact details: vgarciaa@faculty.ie.edu

ADDITIONAL MATERIALS:

- Gaggero Westaway, Clara. (2016). Design Methodology. Special Projects.
  http://specialprojects.studio/article/design-methodology
- DESIGN COUNCIL. (2015). The Design Process: What is the Double Diamond?
  https://www.designcouncil.org.uk/news-opinion/design-process-what-double-diamond
- IDEO. (1999). Shopping Cart Design Process. IDEO.
  https://www.youtube.com/watch?v=M66ZU2PCIcM&t=6s
- King, Vidor. (1949). The fountainhead. Prime Video https://www.imdb.com/title/tt0041386/
- Thiele, John. (1958). American look. Youtube
  https://www.youtube.com/watch?v=mAeDArSdXYc
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