MATERIALS AND APPLICATIONS I

IE University
Professor: **ANDREA CARUSO**
E-mail: acaruso@faculty.ie.edu

Academic year: 22-23
Degree course: SECOND
Semester: 2º
Category: COMPULSORY
Number of credits: 6.0
Language: English

PREREQUISITES

The students are required to be familiar with design research methods, ideation techniques, visualisation and prototyping in physical and digital environments and; issues of design for sustainability, the circular economy and commercial viability. The practical requirements: hand sketching, computer skills in order to research and compile presentations (Keynote, Powerpoint, Indesign, Illustrator). It is highly recommendable to know some fundaments of computer aid drawing - 2D and 3D (i.e. Rhinoceros, Autocad, Sketch-up etc.). Students must have a very good predisposition to manual work, using different types of materials, and dominate the use of tools and machineries in the Fablab.

SUBJECT DESCRIPTION

The programme is an introcution to the world of materials and its manufacturing processes. The course provides different perspectives to gain insight into modern processing technology, product design, innovation, financial considerations and production.

OBJECTIVES AND SKILLS

The main themes and skills to be acquired will be:

- To learn the different material properties;
- To learn how to modify the properties through manufacturing techniques;
- To apply the material theory to practical exercises;
- To identify the use of the best material depending on a project briefing;
- To propose sustainable material alternatives in the manufacturing of products;
- To learn important references in the history of design and in the contemporaneity;
- To learn how products such as home appliances are manufactured and which materials are used;

METHODOLOGY

The course is divided into different consecutive sections all of them composed by theoretical and practical activities and the engagement with readings through assignments, class discussion and tasks both individual and group work. Students are expected to delivery assignments constantly throughout the course, collective debates will be held every session to share contents and points of view. 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.

THEORY

The course covers:

1. Introduction to the Material World
2. Wood & Composites, Related Innovative Materials
3. Ceramics & Glass, Related Innovative Materials
4. Metals, Related Innovative Materials
5. Plastics, Related Innovative Materials
6. Biomaterials

INDIVIDUAL & GROUP WORK

The course's main assignments are the analysis of a Home Appliance, Wood Working and Blowing Glass.

Groups of 2 or 3 students will find a home appliance product and make an extensive analysis of its materials and manufacturing process. Students search for a second-hand product with low economical value (look in Rastro Madrid, Wallapop, Flea Markets etc), since the product is going to be opened and dissected. The assignment is divided into consecutive deliveries throughout the entire course.

The work will be graded both individually and in groups.

ASSIGNMENT 1 - Mythical Product Pecha Kucha
ASSIGNMENT 2 - Product Biopsy
ASSIGNMENT 3. - Wood Joinery
ASSIGNMENT 4. - Glass & Wood Sculpture
ASSIGNMENT 5. - Booklet Print

MATERIAL ADQUISITION

Class representatives will have to manage the adquisition of the material for Assignment 3, for which students are require to cover the costs.

The professor will give instructions on which material to buy. Orders will be placed all together at Model Reyna wood store.

IMPORTANT: All materials must arrive in time for the Briefing on Session 15 & 16.

Teaching methodology	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	26.67 %	40 hours
Discussions	13.33 %	20 hours
Exercises	20.0 %	30 hours
Group work	20.0 %	30 hours
Other individual studying	20.0 %	30 hours
TOTAL	100.0 %	150 hours

PROGRAM

SESSION 1 (LIVE IN-PERSON)

INTRODUCTION

IMPORTANT: For this first class each student has to watch the Fantastic Fungi Documentary on Netflix, the professor will ask the students to comment on this.
In this introductory class the professor will introduce the course objectives and assignments.

ASSIGNMENT 1 - Group of 2 or 3 students - Mythical Product Pecha Kucha

Groups of 2 or 3 students have to prepare a Pecha Kucha - reduced format (15 slides x 15 seconds) on a Mythical Product of the same category for Assignment 1, telling the story of the best example of that product range (for instance, if you study a juicer, you'll tell the story behind the design and success of the Braum Juicer designed by Dieter Rams).

The speed of the PowerPoint presentation is fixed to 15 seconds per slide, which gives a total of 15 slides x 15 seconds = aprox. 5 minutes. The speed can't be change. You must upload the Power Point format on the Black Board Discussion Board before the start of the class. The name of the file must be as follows: PECHAKUCHA_STUDENT'S NAME_LASTNAME.ppt

This part is very important to understand how your product category has evolved over the years in terms of design and use of materials. It could be interesting to compare some of the functions you found in your analysed product to this Mythical piece, highlighting differences, or pros and cons. The historic and social aspect is also important, or how the advertising campaigns were designed to market the product. The history of the designer behind the product (think about Dieter Rams behind the Braun juicer), or the design features (shape, color, material) used depending to the historical moment (or on how expensive were some materials in the past), the status the products was aimed to give to the consumer.. these are all interesting facts you can include in this part.

ASSIGNMENT 2 - Group of 2 or 3 students - Product Biopsy

Groups of 2 or 3 students will work on this assignment "Home Appliance Biopsy". Each group will find a home appliance product and make an extensive analysis of its materials and manufacturing processes. The final delivery is a horizontal format PDF in 1 single sheet with the following content:

- Instruction Manual (a complete step-by-step Ikea-like graphics, you can add small captions, notes. Please number each step)
- Usability Diagram (must include all interactions. The diagram shows how all parts and functions are connected and interact with each other. Try to unify all of them in 1 single visible draw / diagram instead of bullets points. You must identify the specific functioning of each part and describe the flow, for example "the user presses the trigger and the circuit is closed, the energy starts flowing" and so on).
- Component Charts (1 chart for each component, you must separate all parts, unless impossible like wires or the core of an engine).
- Material Percentage, please download the template Excel file (Components that cannot be separated as engines, chip boards etc can be listed as "others").
- Section & Blueprints (It should be a 4 view slide - 3 orthogonal and 1 exploded axo view - all in millimetres. The exploded view should have an axe in discontinued line and name of components in a table cells).

Consecutive deliveries will be required each session.

FANTASTIC FUNGI, Netflix
Professor will ask students to comment on the documentary.

Additional Readings:

- Magazines Issues: Ingredients, Chris Lefteri, Material Exploration (Additional Documentation). http://www.chrislefteri.com/publications.html

- Making it: manufacturing techniques for product design, by Chris Lefteri. https://ie.on.worldcat.org/oclc/866622276

Video: The Salt of the Earth (documentaryarea.com)

Other / Complementary Documentation: Magazines Issues: Ingredients, Chris Lefteri, Material Exploration (chrislefteri.com)

Book Chapters: Making it: manufacturing techniques for product design (See Bibliography)

SESSION 2 (LIVE IN-PERSON)

INTRODUCTION

IMPORTANT: For this first class each student has to watch the Fantastic Fungi Documentary on Netflix, the professor will ask the students to comment on this.
In this introductory class the professor will introduce the course objectives and assignments.

ASSIGNMENT 1 - Group of 2 or 3 students - Mythical Product Pecha Kucha

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components in a table cells).

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  http://www.chrislefteri.com/publications.html
- Making it: manufacturing techniques for product design, by Chris Lefteri
  https://ie.on.worldcat.org/oclc/866622276

Video: Machines (IE Library)

SESSION 3 (LIVE IN-PERSON)

ASSIGNMENT 1. - Group of 2 or 3 students - Mythical Product Pecha Kucha

Final Delivery - Product Presentation Pecha Kucha
Each group will bring to class the selected product - home appliance and will present the Pecha Kucha reduced format in front of the class. Comments are given.

The speed of the PowerPoint presentation is fixed to 15 seconds per slide, which gives a total of 15 slides x 15 seconds = aprox. 5 minutes. The speed can't be change. You must upload the Power Point format on the Black Board Discussion Board 1 hours before the start of the class. The name of the file must be as follows: PECHAKUCHA_STUDENT'S NAME_LASTNAME.ppt

Bibliography

Manufacturing Processes. The professor will show the book in class and explain how to navigate and find the relevant information for the Assignment 2.

SESSION 4 (LIVE IN-PERSON)

ASSIGNMENT 1. - Group of 2 or 3 students - Mythical Product Pecha Kucha

Final Delivery - Product Presentation Pecha Kucha
Each group will bring to class the selected product - home appliance and will present the Pecha Kucha reduced format in front of the class. Comments are given.

The speed of the PowerPoint presentation is fixed to 15 seconds per slide, which gives a total of 15 slides x 15 seconds = aprox. 5 minutes. The speed can't be change. You must upload the Power Point format on the Black Board Discussion Board 1 hours before the start of the class. The name of the file must be as follows: PECHAKUCHA_STUDENT'S NAME_LASTNAME.ppt

Bibliography

Manufacturing Processes. The professor will show the book in class and explain how to navigate and find the relevant information for the Assignment 2.

SESSION 5 (LIVE IN-PERSON)

Work of Enzo Mari

All students watch the interview at Enzo Mari and will comment in class.

Assignment Review

The professor will select random groups to present the progress of the biopsy of chosen home appliance product. Each group will have to compile a presentation with:

- Instruction Manual (can be hand sketch or Illustrator drawings).
- Usability Diagram (a visual diagram of how the product works and how each part interact with

each other, with the user and with the object (ie. in case of a juicer, it would be the hand of the user and the orange te be squeezed).

Video Screening:

- Nowness: Material Topic
- Youtube: how an electrical engine works
- Nowness: Material Topic: https://www.nowness.com/topic/design/max-lamb-exercises-in-seating
- Planned Obsolescence: https://www.youtube.com/watch?v=wzJI8gfpu5Y&ab_channel=FilipVrany
- The Story of Stuff: https://www.youtube.com/watch?v=9GorqroigqM
- Documentary Dieter Rams: https://www.hustwit.com/rams
- Documentary Biosphere 2
- Open Structure: https://www.youtube.com/watch?v=5FXTlOytJRI&ab_channel=TEDxTalks

Other references:

Podcast on material applications:

- https://www.dezeen.com/2019/05/23/architecture-design-podcasts/
- https://podcasts.apple.com/gb/podcast/material-matters-with-grant-gibson/id1450375359

MA Central Saint Martin:

- https://www.dezeen.com/2019/05/21/central-saint-martins-biodesign-ma/

Video: How an electrical engine works (Will be Provided)
Video: Nowness: Material Topic (Nowness)
Video: Planned Obsolescence (YouTube)
Video: The Story of Stuff (YouTube)
Video: Dieter Rams (hustwit.com)
Video: Documentary Biosphere 2 (Will be Provided)
Video: Open Structure (TEDxEutropolis) (YouTube)
Podcast: Architecture design podcasts (Dezeen)
Podcast: Material Matters with Grant Gibson (Apple Podcasts)
Podcast: MA Central Saint Martin (Dezeen)
Video: Enzo Mari for Artek - Autoproduzione (Youtube)

SESSION 6 (LIVE IN-PERSON)

Work of Enzo Mari

All students watch the interview at Enzo Mari and will comment in class:
https://www.youtube.com/watch?v=zdzyiwlFaag&t=375s&ab_channel=DavideMazza

Assignment Review

The professor will select random groups to present the progress of the biopsy of chosen home appliance product. Each group will have to compile a presentation with:

- Instruction Manual (can be hand sketch or Illustrator drawings).
- Usability Diagram (a visual diagram of how the product works and how each part interact with each other, with the user and with the object (ie. in case of a juicer, it would be the hand of the user and the orange te be squeezed).

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- Planned Obsolescence: https://www.youtube.com/watch?v=wzJI8gfpu5Y&ab_channel=FilipVrany
- The Story of Stuff: https://www.youtube.com/watch?v=9GorqroigqM
- Documentary Dieter Rams: https://www.hustwit.com/rams
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- https://podcasts.apple.com/gb/podcast/material-matters-with-grant-gibson/id1450375359

MA Central Saint Martin:

- https://www.dezeen.com/2019/05/21/central-saint-martins-biodesign-ma/

SESSION 7 (LIVE IN-PERSON)

Final Delivery of ASSIGNMENT 2 - Product Biopsy, exclusively these parts:
- Instruction Manual (a complete step-by-step Ikea-like graphics, you can add small captions, notes. Please number each step)
- Usability Diagram (must include all interactions. The diagram shows how all parts and functions are connected and interact with each other. Try to unify all of them in 1 single visible draw / diagram instead of bullets points. You must identify the specific functioning of each part and describe the flow, for example "the user presses the trigger and the circuit is closed, the energy starts flowing“ and so on).

Nowness
Video on Material Topic

Additional Assignment Review
Practice: the professor will select random groups to present the layout of the horizontal composition of the biopsy of chosen home appliance product. Each group will have to upload the final horizontal page layout in PDF format on a Miro Board (link will be provided).

SESSION 8 (LIVE IN-PERSON)

Final Delivery of ASSIGNMENT 2 - Product Biopsy, exclusively these parts:
- Instruction Manual (a complete step-by-step Ikea-like graphics, you can add small captions, notes. Please number each step)
- Usability Diagram (must include all interactions. The diagram shows how all parts and functions are connected and interact with each other. Try to unify all of them in 1 single visible draw / diagram instead of bullets points. You must identify the specific functioning of each part and describe the flow, for example "the user presses the trigger and the circuit is closed, the energy starts flowing“ and so on).

Nowness
Video on Material Topic

Additional Assignment Review
Practice: the professor will select random groups to present the layout of the horizontal composition of the biopsy of chosen home appliance product. Each group will have to upload the final horizontal page layout in PDF format on a Miro Board (link will be provided).

SESSION 9 (LIVE IN-PERSON)

Getting Ready for Final Review Assignment 2

Nowness
Video on Material Topic

Assignment Review
Practice: the professor will select random groups to present the layout of the horizontal composition of the biopsy of chosen home appliance product. Each group will have to upload the final horizontal page layout in PDF format on a Miro Board (link will be provided).

Video: The Story of Stuff (Free Range Studios) (storyofstuff.or)

SESSION 10 (LIVE IN-PERSON)

Getting Ready for Final Review Assignment 2

Nowness
Video on Material Topic

Assignment Review
Practice: the professor will select random groups to present the layout of the horizontal composition of the biopsy of chosen home appliance product. Each group will have to upload the final horizontal page layout in PDF format on a Miro Board (link will be provided).

SESSION 11 (LIVE IN-PERSON)

Final Review
The session will be dedicated to the final review for Assignment 2. Last comments will be given during the class, student will have to correct and upload their final delivery before midnight on the Online Campus.

ASSIGNMENT 2.
Final Delivery - Before Midnight

The students will have then time, until midnight, to deliver the final result. Each group will submit 1 horizontal sheet with all the content from the home appliance biopsy, including:

- Instruction Manual
- Usability Diagram
- Component Charts & Percentage
- Section & Blueprints

Grades will be given.

ASSIGNMENT 3. - Group of 2 students - Wood Joinery
The professor will introduce the class to the third assignment. The students gather the funds to buy the wood materials for this assignment, the professor will give instructions on which material to buy. Order will be placed all together at Model Reyna wood store.

SESSION 12 (LIVE IN-PERSON)

Final Review
The session will be dedicated to the final review for Assignment 2. Last comments will be given during the class, student will have to correct and upload their final delivery before midnight on the Online Campus.

ASSIGNMENT 2.
Final Delivery - Before Midnight

The students will have then time, until midnight, to deliver the final result. Each group will submit 1 horizontal sheet with all the content from the home appliance biopsy, including:

- Instruction Manual
- Usability Diagram
- Component Charts & Percentage
- Section & Blueprints

Grades will be given.

ASSIGNMENT 3. - Group of 2 students - Wood Joinery
The professor will introduce the class to the third assignment. The students gather the funds to buy the wood materials for this assignment, the professor will give instructions on which material to buy. Order will be placed all together at Model Reyna wood store.

SESSION 13 (LIVE IN-PERSON)

VISITS
In this session the class will pay a visit to:

- Parque Tecnológico de Valdemingómez
- Carpintería La Navarra

The aim of the visits is to discover how materials waste is treated and applied in the architecture sector, a well as getting familiar with a professional high end wood carpentry in Madrid.

VIDEO
For the next class watch the movie “Mon Oncle” by Jacques Tati, and get ready to open discussion on the critic of the movie. Design principles and social implications of modern design machines will be the topic of the discussion.

Video: MON ONCLE (YouTube)

Other / Complementary Documentation: Cine y Arquitectura: "Mon Oncle" (Plataforma arquitectura) (archdaily.cl)

SESSION 14 (LIVE IN-PERSON)

VISITS
In this session the class will pay a visit to:

- Parque Tecnológico de Valdemingómez
- Carpintería La Navarra

The aim of the visits is to discover how materials waste is treated and applied in the architecture sector, a well as getting familiar with a professional high end wood carpentry in Madrid.

VIDEO
For the next class watch the movie “Mon Oncle” by Jacques Tati, and get ready to open discussion on the critic of the movie. Design principles and social implications of modern design machines will be the topic of the discussion.

SESSION 15 (LIVE IN-PERSON)

Nowness

Video on Material Topic

Open Discussion

Open Discussion in Class on the Movie Mon Oncle.

FABLAB Practice

Students will bring all wood materials to class and the full session will be dedicated to working on Assignment 3 - the wood joinery.

SESSION 16 (LIVE IN-PERSON)

Nowness

Video on Material Topic

Open Discussion

Open Discussion in Class on the Movie Mon Oncle.

FABLAB Practice

Students will bring all wood materials to class and the full session will be dedicated to working on Assignment 3 - the wood joinery.

SESSION 17 (LIVE ONLINE)

ASSIGNMENT 4 - Group of 2 or 3 students - Glass & Wood Sculptures

In this assignment, students will work in the designing and manufacturing of a sculpture made of glass & wood. Students will design a display stand for a blowing glass piece, made in wood and joints learnt in the previous assignment. The glass will be blown during the next visit at the Real Fabrica de Cristal. The students will also have to design a mold made in wood, to give shape to the blowing glass item, and relate the shape of the mold with the shape of the display stand. Examples and case studies will be shown.

ASSIGNMENT 5 - Group of 2 students - Booklet Print

In this assignment, students will have to design a booklet to present the final sculptures, including sketches, process and final result pictures. Examples will be shown.

Case Studies

The professor will show examples & case studies of different sculptural works, including Kinetic Art and Surrealism, and Contemporary Art.

A portfolio by Jean Renault will be shown.

Video: Art History: The Evolution of Hypnotic Kinetic Sculptures (mymodernmet.com)

Video: Machine Spectacle (Mini Documentary) (Stedelijk Museum Amsterdam) (YouTube)

Video: Theo Jansen's Wind-Powered Sculptures (The New Yorker) (YouTube)

Video: Alexander Calder at Tate Modern (The Art Channel) (YouTube)

Video: Works of Calder (YouTube)

Video: Naum Gabo (tate.org)

SESSION 18 (LIVE ONLINE)

ASSIGNMENT 4 - Group of 2 or 3 students - Glass & Wood Sculptures

In this assignment, students will work in the designing and manufacturing of a sculpture made of glass & wood. Students will design a display stand for a blowing glass piece, made in wood and joints learnt in the previous assignment. The glass will be blown during the next visit at the Real Fabrica de Cristal. The students will also have to design a mold made in wood, to give shape to the blowing glass item, and relate the shape of the mold with the shape of the display stand. Examples and case studies will be shown.

ASSIGNMENT 5 - Group of 2 students - Booklet Print

In this assignment, students will have to design a booklet to present the final sculptures, including sketches, process and final result pictures. Examples will be shown.

Case Studies

The professor will show examples & case studies of different sculptural works, including Kinetic Art and Surrealism, and Contemporary Art.

A portfolio by Jean Renault will be shown.

SESSION 19 (LIVE IN-PERSON)

ASSIGNMENT 3. - Final Delivery
The students will have to present the final result of the wood joinery assignment.

ASSIGNMENT 4. - Reviews
In this session students will have to compile a 10 pages presentation with:

- 1 moodboard with 10 ideas and references of blowing glass pieces by using wood molds.
- 3 different ideas for the mold and the wood stand (sketches / collage / illustrator).

SESSION 20 (LIVE IN-PERSON)

ASSIGNMENT 3. - Final Delivery
The students will have to present the final result of the wood joinery assignment.

ASSIGNMENT 4. - Reviews
In this session students will have to compile a 10 pages presentation with:

- 1 moodboard with 10 ideas and references of blowing glass pieces by using wood molds.
- 3 different ideas for the mold and the wood stand (sketches / collage / illustrator).

SESSION 21 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

In this class the professor will review all progress and student will work in the Fablab.
All students will get ready with the wood mold in order to visit & blowing glass work at the Real Fabrica on the next session.

SESSION 22 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

In this class the professor will review all progress and student will work in the Fablab.
All students will get ready with the wood mold in order to visit & blowing glass work at the Real Fabrica on the next session.

SESSION 23 (LIVE IN-PERSON)

Workshop at the Real Fabrica de Cristal.

Students will bring the wood mold to the blowing glass site and use it in order to make the glass piece. The wood mold will be damaged by fire during the process therefore the students need to design a mold which is solid enough to give shape to the glass before it gets damaged.

SESSION 24 (LIVE IN-PERSON)

Workshop at the Real Fabrica de Cristal.

Students will bring the wood mold to the blowing glass site and use it in order to make the glass piece. The wood mold will be damaged by fire during the process therefore the students need to design a mold which is solid enough to give shape to the glass before it gets damaged.

SESSION 25 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

All students work in the Fablab to produce the wood stand display for the blowing glass piece. All students will also show the progress of the booklet design for the final delivery.

SESSION 26 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

All students work in the Fablab to produce the wood stand display for the blowing glass piece. All students will also show the progress of the booklet design for the final delivery.

SESSION 27 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

All students work in the Fablab to produce the wood stand display for the blowing glass piece. All students will also show the progress of the booklet design for the final delivery.

SESSION 28 (LIVE IN-PERSON)

ASSIGNMENT 4 & 5 - FABLAB Practice & Reviews

All students work in the Fablab to produce the wood stand display for the blowing glass piece. All students will also show the progress of the booklet design for the final delivery.

SESSION 29 (LIVE IN-PERSON)

Final Delivery

All students will present their final results for Assignments 4 & 5.

Final Expo Mounting

All students will mount the final exhibition and a photo session will take place.

SESSION 30 (LIVE IN-PERSON)

Final Delivery

All students will present their final results for Assignments 4 & 5.

Final Expo Mounting

All students will mount the final exhibition and a photo session will take place.

BIBLIOGRAPHY

Compulsory

- Rob Thomson. *Manufacturing Processes for Design Professionals.* Thames and Hudson Ltd. ISBN 9780500513750 (Digital)

- Chris Lefteri. *Making It: Manufacturing Techniques for Product Design.* Laurence King Publishing. ISBN 9781786273277 (Digital)

Recommended

- Jennifer Hudson. *Process: 50 Product Designs from Concept to Manufacture.* Laurence King Publishing. ISBN 9781856697255 (Digital)

EVALUATION CRITERIA

The evaluation system will be the sum of the Mid Term Presentation, Final Submission and class participation.

Criteria	Percentage	Comments
ASSIGNMENT 1	20 %	
ASSIGNMENT 2	20 %	
ASSIGNMENT 3	20 %	
ASSIGNMENT 4	20 %	
ASSIGNMENT 5	20 %	

PROFESSOR BIO

Professor: **ANDREA CARUSO**

E-mail: acaruso@faculty.ie.edu

Andrea Caruso Dalmas is co-founder of Ciszak Dalmas studio and La Clinica Design brand together with Alberto Gobbino Ciszak.

Since 2009, the Italian duo Ciszak Dalmas has been running a full-service Architecture and Design Studio based in Madrid, Spain. The studio works across a range of disciplines including architecture, retail, product design and art direction. For Max&Co. the studio developed a new retail concept for its stores worldwide, counting 500 single-label boutiques. Similarly they were asked by Zara to design new fixtures and display furniture that were installed in the brand stores internationally. The studio has recently unveiled the design of Malababa and Ambrosia flagship stores in the Central Madrilenian district of Salamanca. The studio has also collaborated in the design of products and spaces with Bosa, Bitossi, Camper, Interbrand, Loewe, Muroexe, and Saffron among others.

Previous to starting the studio in Madrid, Andrea worked in design offices in Italy including Pininfarina, Artemide and Brh+. He holds a Master in Design from the IED Madrid (2008) and a Bachelor in Industrial Design from the Politecnico di Torino (2005). Andrea is adjunct professor at the Bachelor in Design at the IE University and visiting professor at other institutions. Andrea gives lectures in an international framework, such as the Biennale di Architettura in Venice, Salone del Mobile in Milan, Experimenta Design in Lisbon and Design Ambassador in Hong Kong. He is fluent in English, Spanish and Italian and lives in Madrid.

OTHER INFORMATION