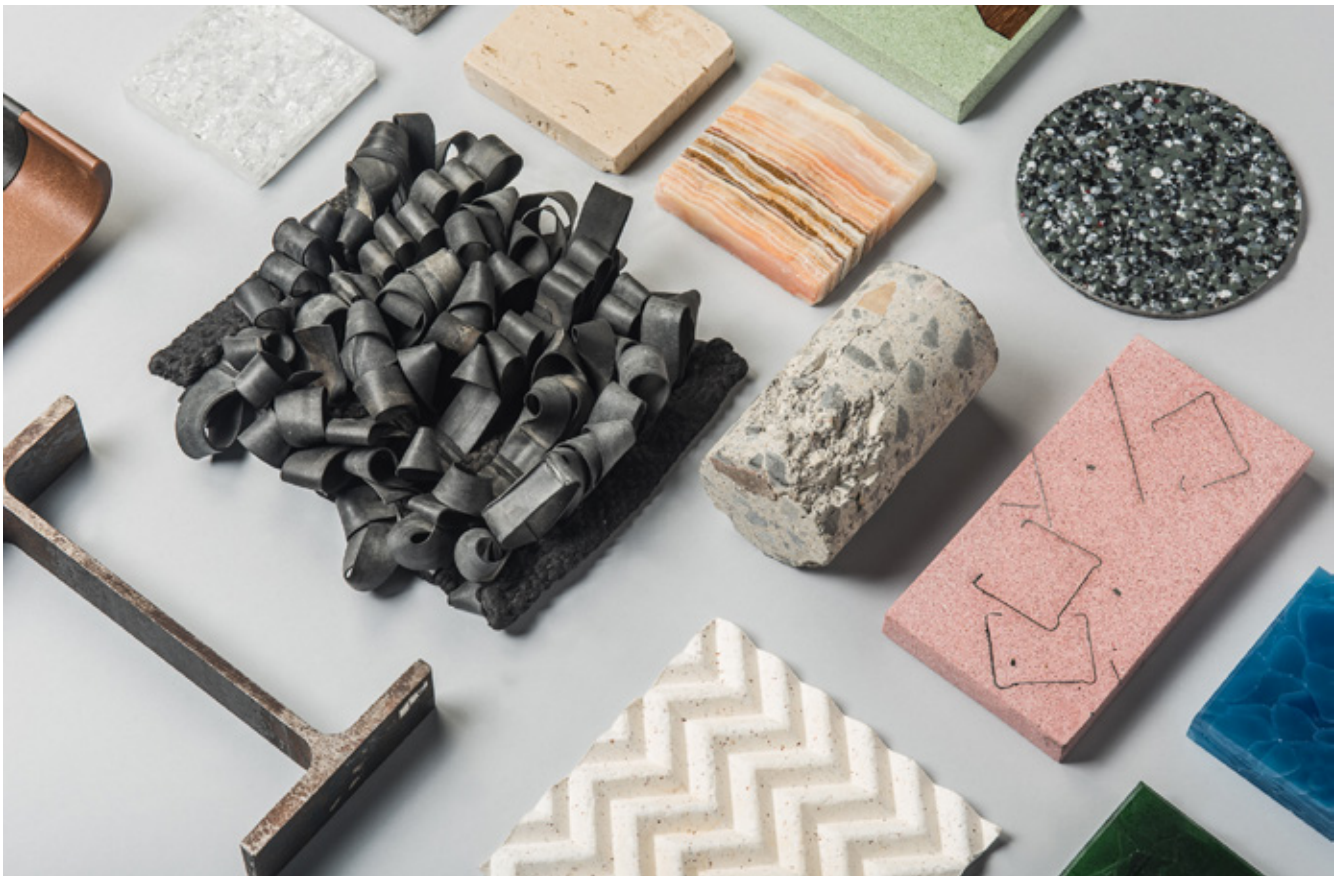

Sustainable Materials for Design

Summer School 2023

ELISAVA UNIVERSITAT DE VIC
UNIVERSITAT CENTRAL DE CATALUNYA

SUSTAINABLE
MATERIALS
FOR DESIGN

Date
10th to 21st July

Timetable
10 a.m. to 2.15 p.m.

Duration
40 h

Language
English

Professor
Laura Freixas

Collaborators
Laura Clèries
Pere Llorach

Required material (students)
Students will need to supply his/her own specific working materials for the DIY (Do It Yourself) experimentation.

Level
Introductory / Intermediate

Students need to be familiar with the main families of materials (polymers, ceramics, metals, composites…) and understand basic scientific concepts that describe their properties.

Price
€ 880

Presentation

In the domain of design and industrial practices, materials are gaining ever more relevance as important drivers for product development and innovation, more specifically in promoting a more sustainable future and empower circular economies.

A circular economy starts at the very beginning of a product's life. Both the design phase and production processes have an impact on sourcing, resource use and waste generation throughout a product's life. This circular design approach can make products more durable or easier to repair, upgrade or remanufacture. It can help recyclers to disassemble products in order to recover valuable materials and components. Overall, it can help to save precious resources. Circular Design involves Service Design, Product Design and also Materials Design. Most materials have an infinite lifecycle. They can be re-used, reformed and redesigned with a new purpose. By harnessing the unexplored potential of materials, we can implement social, economic, environmental and political change through a cross sector approach.

So what if we used creativity to provide better circular economy solutions through the ideation of new materials?

This is a program that addresses the training and exposure of the new materials designers towards a better circular economy and their positive impact in industry or the generation of an alternative creative industry. More specifically, the aim of this course is to work developing waste-driven materials with a focus on product, fashion and interior design, by acquiring the theoretical foundations of materials, developing hands-on materials experimentation and development, and developing a communication package for its dissemination.

Objectives

+ To acknowledge current context in the world of both foundational and state-of -the-art materials.
+ To understand materials characteristics from both a scientific and creative perspective
+ To address Specialist Materials Designers skills gaps.
+ To be able to experiment and acquire knowledge in materials processing.
+ To be able to recognize a material, a material state, its finish, its potential manufacturing process and possible applications in terms of functional and aesthetic qualities.
+ To adopt a comprehensive view regarding sustainability and efficiencies, in materials applications while preserving and meeting innovation driven value-added approach when developing novelty in a design project.
+ To use adequate terminology and glossary for materials and materials for circular design and to be able to communicate in a visual and engaging form a materials design project.

Aimed at

The course is aimed at all those people who want to be introduced to circular materials, their design strategies and communication.

Structure and contents

This course is carried out at Elisava classrooms and laboratories, together with Materials capsules on Biopolymers/ Smart materials. The programme consists in 3 blocks:

1/ Materials for design Foundations
Understanding the historical overview and current state-of-the-art in the world of materials, including materials for circular economies.

Materials foundations: Overview of materials families and their characteristics. Circular materials foundations: glossary of materials for circular design, case studies, sourcing and materials processing.

Materials Capsules sessions of Biopolymers/Smart materials, with access to physical samples exploration, wherein materials may be tested, touched, weighed analyzed and witnessed from a physical point of view.

2/ Hands-on project development
Materials Experimentation in the Laboratory: hands-on development of waste-driven materials.

Sustainability and industrial impact of materials for circular design.

3/ Communication of the project
Surface design lab: art direction and colour & trim finishings of your project.

Development of sector market positioning and application.

Development of visual communication of the Circular materials design project.

Professor

LAURA FREIXAS
Laura Freixas is a researcher at Elisava Research and co-director of the Master in Design through New Materials. Her current research work focuses on regenerative design, biofabrication and emerging materials. With a master in Design for Emergent Futures and training in both Industrial Design Engineering and Product Design at Elisava . Laura has worked in different materials innovation departments such as Puig, Vibia and Materfad. She has also participated in two European projects such as Material Designers (MaDe) and SISCODE (Remix El Barrio) with her project Organic Matters.

Collaborators

LAURA CLÈRIES
Laura Clèries is professor at Elisava School of Design and Engineering and Head of Elisava Research, as well as co-director of the Master in Design through New Materials. With both creative and scientific backgrounds, she obtained her BA in Physical Chemistry and her PhD in Materials Science from the University of Barcelona and then pursued degree studies in Industrial Design. Laura has worked internationally as designer in main design companies (Zara Home) and design studios and as researcher for main forecasting publications and think tanks (Pantone Colour Planner, WGSN). As materials innovation consultant, she has worked for EURECAT electronic textiles division, for the architects of Jean Paul Gaultier's headquarters, and she has curated exhibitions related to materials innovation and forecasting (Materfad - textile area- and 'Materiality'). Her present research work focuses on futures research methodologies, as well as in materials innovation..

PERE LLORACH
During the 2016-2017 academic year, Pere Llorach completed his Doctorate in Environmental Science and Technology at the UAB after 4 years of research aimed at improving the efficiency of the systems of urban agriculture production through the study of the application of new materials and technologies in indoor greenhouses. Pere Llorach has participated in several national projects, has published numerous scientific articles, 5 of which in first level magazines, and has made 5 scientific contributions in renowned congresses in the field of sustainability, agriculture, green cities and life cycle approach.He is currently Head of Sustainability & Gender Equality Agent in Elisava, where he also teaches as a researcher and professor of the Degree in Industrial Design Engineering.

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MORE INFORMATION

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The teaching staff is likely to change according to reasons beyond the course programme. Elisava reserves the right to make changes in programming as well as the right to suspend the course two weeks before it starts if not reached the minimum number of participants, without further obligation of the amounts paid by each participant.

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