

# Master in Data Design



How can data help societies  
be better informed?

# Master in Data Design

Start date  
September

ECTS credits  
60

Course duration  
400 hours

Language  
English

Degree  
Master's Degree in Data and Design, awarded by Universitat de Vic – Universitat Central de Catalunya (UVic –UCC)

Schedule  
Wednesday, Thursday, Friday afternoons.  
Workshops from Monday to Friday.  
For academic reasons, sessions may be scheduled exceptionally in a different time frame.

Directors  
Pau Garcia  
Paadín  
Marc Panero

Admission Requirements  
Due to its particular transdisciplinary nature, the Master is open to professionals and students from different educational backgrounds and experiences. It is mainly aimed at graphic designers, journalists and editors, social scientists, digital product designers, architects and urban planners, etc. A bachelor is not essential to take this master; we value professional experience as much as a college education.

If you have doubts about if you would be a good fit for this programme, please submit your request for a case-by-case evaluation.

## Welcome to a new way of looking into data design

Nowadays, access to almost everything anywhere and anytime is virtually taken for granted. We have generated, collected, and stored more data in the last year than in the previous five millennia of recorded human history. However, that does not necessarily mean we know the world better or are better informed.

Having data at our disposal means nothing if we cannot interpret and make good use of it. Presented without context, it becomes hard to understand what two degrees of average temperature rise means, recognise what a transmission rate of 1.5 entails, or comprehend the magnitude of one million deaths.

In a world of flat-earthers and “alternative facts”, transforming data into understandable and honest information is a matter of societal survival.

This Master will explore data design and analysis, visualisation, and storytelling practices to create projects beyond classical formats. We will work to understand how we can generate transcendent information in a moment when fake news is a political weapon, cryptocurrency threatens traditional finance, and climate change is an opinion.

## Programme

Our role as designers is vital to create the tools that help our present and future societies; at the Master, we'll learn to design comprehensible and empathic systems, to extract meaning and to communicate using a wide range of tools alongside a team of teachers, active professionals, with a passion for what they do and a joy for sharing.

### 1. Foundations

Six modules will provide a basis and a shared perspective on Information design and data visualisation. At the same time, we think about what kind of images we produce and put them into practice.

#### 1.1 Data as raw material - Statistics

Data analysis through extracting meaning from cold facts, recognising patterns, reaching informed conclusions and representing it all most appropriately is essential in an open yet rigorous approach to data.

#### 1.2 Space as data - Cartography

Maps are the foundation of many information design projects: we will learn about cartography and its cultural significance. We will begin to familiarise ourselves with the basic concepts of mapmaking.

#### 1.3 The hidden link - Networks

The access to big data coming from social networks makes it possible to investigate a new social paradigm. Through the theory and tools of network and digital sciences, you will develop a project based on social network analysis techniques.

#### 1.4 Data Visualization

An introduction to data visualisation, bringing together the key concepts and methodologies that can be applied to any project. You will discover the wide range of available information graphics and focus on the most common graphs, maps, diagrams, and other charts, how and when to use them, and how to interpret them.

#### 1.5 Data Representation

In this course, we will examine and practice the graphic representation of data from its very abstract basics to the subtleties of its meaning and the elusive intentions of its authors.

#### 1.6 Visual Explanation

We will analyse the power of good design and how it may make abstract issues understandable despite differences in language and culture or format constraints. Nothing better than a visual explanation to overcome complexity.

## 2. Master project

During a whole semester, you will have the opportunity to make your ideas come true, put into practice what you have learned during the course, and use the city of Barcelona as a field for experimentation, data collection, and laboratory.

### 2.1 Data Experience

You will develop a personal design project that explores how to create meaningful ways of connecting people and information through a multidisciplinary approach for a human approach to data and communication; data-science, qualitative and ethnographic research methods to uncover people's emotions, stories, and models of their world.

### 2.2 Data Communication

You will work with the creative agency Codea Studio focusing on how to communicate your project to the world, how to document it and make it part of your narrative and your portfolio.

### 2.3 Theoretical and methodological research framework

We will learn about the methods and tools at your disposal to conduct research as well as building up an editorial piece explaining all the research made for the project.

### 2.4 Design Criticism

Twice a year (midterm and final presentations) we invite a selected group of professionals from a broad range of institutions, brands and agencies to come and give feedback to your project. This will happen while you are in the process of designing it and at the end for a final evaluation. This way you will grow your network of contacts and have very perspectives on your projects.

## 3. Perspectives

Things don't just happen; the information surrounding us has been mediated and handpicked; it has context and purpose. We will study the design of information through a critical lens, with the certainty that it can be read in many ways and affects us in many others. Sociology, philosophy, and cultural analysis will help us shed some inquisitive light on a world made up of information.

### 3.1 Critical Media

Understanding the emergent, accidental and amorphous nature of our networked planet implies a transdisciplinary approach, and some of our traditional assumptions need to be challenged. It is a joint exercise to review what it means to be human and our relationship with nature and technology.

### 3.2 Data Boundaries

A practical examination of strategies to uncover, describe, map, inhabit, and even rethink the data-based systems with which our societies work: multi-layered, opaque and, often, accidental entanglement of infrastructures, protocols and lifeforms.

### 3.3 Data for the Common Good

Small words for a massive subject. Can we make sense of the amount of data we generate? Is information intangible? Do algorithms inherit our biases? We will dive deep into one of the realities of our time.

### 3.4 Audiovisual

Beyond infographics and motion graphics, the moving image means using techniques as old as the medium itself, simple but constantly renewed to serve new purposes. By comparing, transforming, accumulating, editing or manipulating their speed and scale, they become a perfect vehicle for communicating the complexities and nuances of data.

### 3.5 Storytelling

We are made of stories, and we understand societies through them; they have been the traditional way of explaining the world. From mythology to Netflix, tales are embedded in our DNA; therefore, we need to learn how they work; stories will make designs and projects relatable to others and help spread game-changing ideas.

## 4. Projects

Information design is like a matryoshka: smaller individual problems within each problem. We will work on some of them with the help of experts in tutored projects that address specific topics.

### 4.1 Information Systems

Cities are worlds, complex systems that we share with other beings and things. This project will use Barcelona and its urban environment as a theme, creating graphic tools to help solve some of its main challenges.

### 4.2 Data Beyond Screens

We're no longer constrained by the boundaries of paper, screen frames or objects; we can use three-dimensional space as a canvas for data visualisation. We can think of massive scales, far-distance sightings or interactivity, opening up a new set of possibilities to explore.

### 4.3 Symbolic Alphabet / Iconography

You will learn how to build a symbolic alphabet that allows ideas to be transferred to forms adapted to a social and physical context and analyse, interpret, synthesise and construct alphabets in a precise and functional way to communicate ideas without words.

## 5. Workshops

Learning by doing: intensive and practical design experiences on central data design problems.

### 5.1 Who's Afraid Of Technology?

Technology plays a vital role in gathering, analysing and visualising almost all kinds of information. You will learn the basics of programming in Arduino and Raspberry, how to choose the best platform to solve a technological project and the basics of how to hack an analogue automatism.

### 5.2 Data Journalism

It is an interdisciplinary practice that combines editorial design, UX, web design, data visualisation, interaction design, visual storytelling, and narrative to explain the complexity of contemporary phenomena to a broader audience in a more engaging and approachable way.

### 5.3 Degree Showcase

The last workshop consists of a public showcase of the experiences of the course through different formats. You will face an accurate and complete expository and editorial project, an intense process that takes place in a tight time frame and that culminates in the Degree Show.

## 6. Capsules

Data is everywhere; in how we move and what we listen to. We will explore different fields where data and information are present and configure their environment.

### 6.1 Data & Nature

What is a forest? A society of trees? An artificial environment in disguise? A place to hide? In this workshop we will explore forests as sites where two of the most pressing contemporary concerns (environmental crisis and mass surveillance) meet and feed off each other. We will discuss an inventory of concepts, tools and inspiring cases to collectively map a space of critical intervention over nature and its politics and poetics.

### 6.2 Data & Drawing

Our gaze is a data collection tool. We see and describe all the information we can name... and all the information we can sense. We will use drawing methods and tools to turn that sensitive knowledge into expression and data into information that inevitably contains emotions and desires.

### 6.3 Data & Performance

Our voice, our bodies are tools and the space we inhabit is our medium in this bold approach to data visualisation.

## 6.4 Data & Processing

We will take the first steps towards audiovisual language through code; we will explore the foundations of creative programming. We will investigate the different numerical conditioning strategies, and we will work with data and transform it into light, sound, movement or poetry.

## 6.5 Data & Sound

We create sound pieces that relate to their environment by working with data sets, real-time inputs, and generative sound systems. Concepts and techniques such as “data sonification”, “sound spatialisation”, and the development of synthesis engines that allow us to shape sound flexibly and innovatively. You will work on developing your software in a visual programming environment.

## 7. Events

To listen is to learn. Especially when professionals, emerging or consolidated, share their life experiences through their professional careers. Inspiration has to find you working, but also listening.

### 7.1 International lectures

We will welcome prestigious international figures to talk about their experiences, projects and case studies in different fields of graphic design.

### 7.2 Masters' Talks

Leading creators from different fields will visit us and allow us to share their experiences, observe design phenomena, obtain new points of view, reflections and references that will enrich our interdisciplinary perspective on design.

## Methodology

Creatives, designers, social scientists and all the professionals teaching lectures, courses and workshops work closely with the participants, ushering them in the process of bringing their ideas to light and making them happen.

We want you to start growing your portfolio from the beginning. We will work with a practical approach on semester and quarterly projects; we will combine reflection and debate with active participation in theoretical subjects and experience-oriented capsules and workshops.

We want you to push the margins of design, unorthodoxy, discovery and exploration for a learning experience as diverse as the participants themselves. We will seek to create authentic connections between people and information, between design and content, to offer the world new ways of thinking. We will highlight stories, real ones, not only Instagram's.

You will be part of a committed and motivated group of designers, researchers, thinkers and storytellers in a collaborative learning experience. You will develop your ideas, working on projects tackling real problems. We will address very different disciplines: sociology, communication strategy or cartography, audiovisual research methods, and data science. We will crossover them with a critical perspective always grounded in design methodology. Together we will answer questions like:

- How can data influence our perception of reality?
- How can we analyse data and work with it productively?
- How flexible is data, and in how many ways can we represent it?
- How can data and design help communities shed some light on how to improve their realities?

The future designer will approach symbols as we approach the reality they represent. If you read and speak through data, you will understand and shape part of our world.

## Values

### Working together

Designers always work in teams. Big or small, multidisciplinary or not, collective work is the core of our practice. To know how to behave and interact with colleagues, clients, or suppliers is an integral part of the design process.

### Practical approach

Through a consistent and intense practical approach, even when it comes to theory, the experts and professionals in charge of the subjects will share their tools and know-how not only to learn but also and above all, to put the acquired skills to work.

### Critical thinking

How can we be good designers without questioning the world we live in? We firmly believe in the value of being critical, always trying to find the reasons behind our certainties and constantly looking for ways to improve.

### From design

We understand design as a transversal discipline capable of affecting and influencing different realities and contexts. It is a way of doing things and thinking with infinite possibilities. This approach will boost your master's experience; you will see very different design methods and forms, and you will understand their adaptability and power to change reality. Data is one of the main engines of the world; society will increasingly need designers who know how to work with it and treat it honestly and beautifully.

## The experience

### A 4 day trip to a Hackathon

This Master offers the possibility to seek inspiration on a 4-day hackathon trip\* to a European city where you will have the opportunity to work day and night hand in hand with your classmates and your teachers. We will develop an actual project and put into practice everything you have been learning during the previous months.

\*Not included in the registration fees.

### Barcelona: Urban Lab

Barcelona is a fantastic place to live and work. The rent may be a bit expensive, but that will not stop you from enjoying creative people, lots of design studios, different cultures and ideas. It is an open-minded city full of understanding for design. Barcelona will be our laboratory, the place to research, create, develop and design.

### Work on real projects creating a real impact between communities

Design is an applied discipline. One of the main objectives of this Master is to work through active learning-based mainly on simulations inspired by real projects. This will allow us to understand and assess the disadvantages and real possibilities of the discipline and apply to your work everything you learn.

### A city by and for design

Barcelona is known for its passion for design and its great diversity of gastronomic and cultural choices, which is perfectly complemented by the master's degree. Barcelona will inspire you and make your learning a complete experience.

## Team

### Director

MARC PANERO

Marc graduated from Eina school in 1991. From 1989 to 1996, he worked and trained professionally in various studios in Barcelona, Brussels and Bordeaux. He was the founder of Base Design in 1997 to create a network of graphic design studios in Barcelona,

Brussels, Geneva, Madrid, New York and Santiago de Chile. He was awarded the City of Barcelona Design Prize in 2007. In 2015 he established a new professional initiative: Outcome. Currently, he is Director of the Master in Visual Design, Master in Editorial Design and Master Beyond Packaging, and Co-director of the Master in Data Design.

#### PAU GARCIA

Pau's research is based on new media technology and data languages. He has been working on the REcall European Conflict Archeological Landscape Reappropriation projects in Berlin and Norway and doing research and design projects in Spain, France, Italy, and Germany. In 2013 he received the M4M European Prize that allowed him to design a project for the European Design Institute developing a series of cartographic systems and a book that ended up with an exhibition at the Center of Contemporary Art of Fabrics in Milan.

Nowadays, he leads the consultancy company Domestic Data Streamers working in research and communication projects for cultural institutions, organisations, and companies such as California Academy of Sciences, Western Digital, UNICEF, Nike or the Mobile World Congress in gathering and communicating information in new data languages.

#### PAADÍN

Paadín is a graphic designer who graduated in Fine Arts (UCLM) in 1998. In 2003 he joined Lamosca as a graphic designer and later as a partner in the studio. Among other infographic works, he published "Data", a weekly column in the magazine Cultura / s (La Vanguardia), receiving recognition from the Malofiej awards and the 2012 Graffica Award.

Since 2014 he has combined his work as a designer with teaching. As an independent editor, he has published and collaborated in various publications, forming part "Negros Rojos" (2017) of the Macba archive. In 2019 co-founded the stage company Serrucho.org.

#### Professors

PABLO ARAGÓN, Research Scientist (Wikimedia Foundation).  
Aleix Artigal, Founder (Familia).

ANDREU BELSUNCES, Co-founder (Becoming Studio).

GEMMA BUSQUETS, Creative Director and Graphic Designer

(Gemma Busquets Studio).  
BANI BRUSADIN, Founder (The Influencers).

RAFA CASTAÑER, Painter and Illustrator.

MARÍA FABUEL, Creative Director (Domestic Data Streamers).

EDUARD FRIGOLA, Software developer (Playmodes).  
Abelardo Gil-Fournier, Artist and Researcher (Abelardo Gil-Fournier).

ANE GUERRA, Co-founder (Agencia Letraherida).  
Andrés Hispano, Audiovisual Producer (Soy Cámara experimental video lab – CCCB).

GERALD KOGLER, Co-founder (ZZZinc).

TONI LLÀCER, Research Consultant and professor of the Undergraduate Degree in Design (Elisava).

ELOI MADUCELL, Founder (Playmodes).

ALEX MARTÍ, Co-Founder (Codea Studio).

MÒNICA MOLINS, Art Director (Sala Apolo).  
CARLA MOLINS, Creative Technologist (Carla Molins Studio).

MATTEO MORETTI, Co-founder (Sheldon.studio).

FÉLIX PÉREZ-HITA, Co Director (Pantalles CCCB).

ESTEBAN PIACENTINO, Data Scientist (Domestic Data Streamers).

EDGAR PONS, Founder (The Social Coin).

JOSE ROSALES, Co-founder and Creative Director (Codea Studio).

OLGA SUBIRÓS, Architect and Curator (Olga Subirós Studio).

RICARD SUNYOL, Co-founder and Copywriter (Codea Studio).

SANTI VILANOVA, CEO and Sound Research (Playmodes).

## WHY GO BEYOND?

→ You can find out more about the Master in Data Design at [mastersbeyond.elisava.net](https://mastersbeyond.elisava.net)

- If you are a Bold Category Member of Elisava's Alumni Association, you may enjoy a 15% discount on our Master's tuition.
- There may be some changes to the faculty for reasons beyond the course programme.
- Elisava will make the necessary and appropriate changes in the programme or, in exceptional circumstances, cancel the programme altogether if the course has not reached the minimum number of students to ensure its proper functioning two weeks before its initiation. Elisava will only refund the amounts already paid by the students.
- According to their specific necessities, the Master schedules may include additional hours, including during the weekend.