Escuela online de creadores digitales.

SHIFTA by Elisava

Máster Online en CREATIVE COMPUTING

weareshifta.com

Key Data

STARTS 30th October 2023	
DURATION 10 months	
CERTIFICATE Master's degree issued by Elisava and UVic-UCC	
LANGUAGE English	
CREDITS 60 ECTS	
METHODOLOGY 100% Online	
DIRECTOR Bruno Caldas Vianna	
PRICE 6.200 euros	
UNIT SLOTS 25	
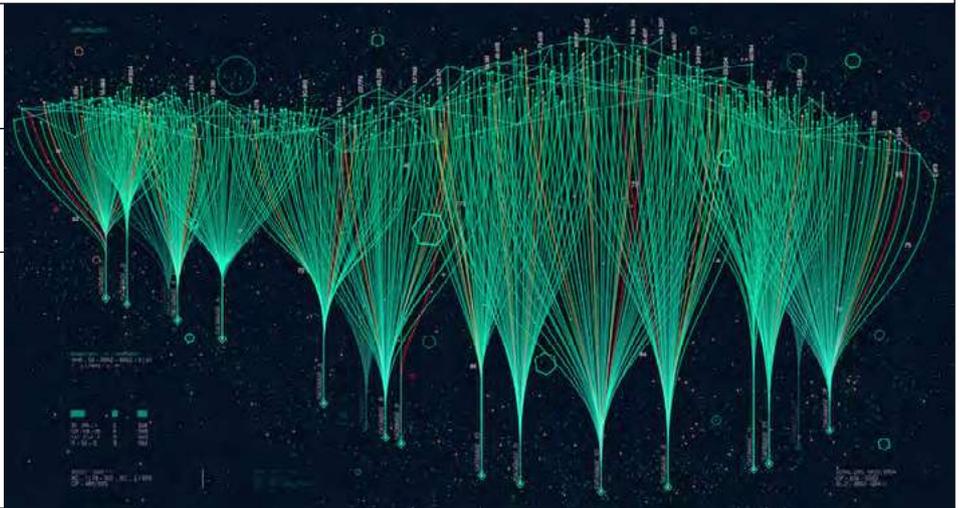
Program Structure

Module 1
Introduction to Creative Computing

Module 2
Designing Generative Experiences

Module 3
Creative blockchain applications

Module 4
Data Art

Module 5
Designing activated objects and environments

Module 6
Designing with AI

Module 7
Creating inmersive narratives

Module 8
Internet equalities and decolonizing technologies

Final Project (TFM)

ADMISSION
Curriculum
Motivation letter
ID or passport
Copy of Academic
Certificate

Any doubt or information you might need, we are at your disposal via email:

hola@weareshifta.com

SHIFTA
by Elisava

PROJECT: "EN CASA 48"
DIMITRIS LOUIZOS

SHIFTA is the Digital Creators Online School promoted by ELISAVA, the Design and Engineering University School of Barcelona. Our mission is to break with the silos of the creative discipline and offer a more transversal and holistic approach of the creative processes in the digital society. We address all digital creators.

SHIFTA is 100% online. SHIFTA is digital. SHIFTA is global. We offer quality training in small groups in which the teachers are the mainstay of our methodology. They are experts in the disciplines they teach and they convey their knowledge to you and guide you in its application in different projects. Everything focused on creating unique experiences so that you acquire new knowledge, skills and a network of contacts.

We want to train the future digital creators. Are you one of them?

Elisava is the reference school in the design and engineering field in Spain and it has a high international recognition. Located in the heart of Barcelona, Elisava has more than 50 years of experience, prestigious teachers and a large community of students and alumni.

Since 2021, Elisava is the Faculty of Design and Engineering of the Central University of Catalonia (UVic), one of the most prestigious universities in Spain. It offers University Degree Studies, Masters, Postgraduate Studies and Specialised Programs in the fields of design, engineering and communication.

Research and innovation are two of the engines that drive the school. It also has a close collaboration with companies, institutions and NGOs to get in touch with the professional world.

Program Presentation

This program aims to provide a general-purpose education in using new technologies for creative endeavors. It reflects an ever-changing media landscape, where this year 's media might be discarded in the next year. The knowledge mosaic offered in the modules will always reflect the pressing challenges entailed by new tech developments. The main goal, however, is not to teach specific skills, but to learn to identify opportunities for creativity in the technological space. By completing the master, students can become professionals who propose creative configurations for new and old platforms, reinvent careers in companies which need innovative products, find her/his artistic path, or even become autonomous, inventive, high-tech entrepreneurs.

The main goal is to learn how to incorporate both novel and existing technological resources into creative projects. The shifts in adoption of new technologies always create renewed opportunities for businesses and professionals. Understanding how to identify these openings is crucial for survival in a scenario of constant mutation.

In order to achieve this type of familiarity, two strategies are adopted. On one hand the master builds on generic computational skills, familiarizing the students with practices such as coding and data manipulation. On another level, we will look into specific frameworks which are on the rise in today's media horizon - artificial intelligence, immersive environments, IoT, blockchain applications and so on, looking at inspiring initiatives and understanding how to implement projects using one or, preferably, a combination of these platforms. Students will obtain basic skills like implementing and accessing IoT sensors, using AI models to understand data and generate content, distributing digital creations on the blockchain and more.

Target audience:

+ Creative people from all fields - editors, artists, playwrights, dancers, musicians, advertisers, designers - who wish to incorporate technology into their practice.

+ Technical people from any field - developers, engineers, chemists, physicists - who want to understand and apply the potential for art and creativity in their own practice.

+ People wishing to change careers into fields that will benefit from the blend of art and technology.

Career oportunities:

+ Creative technologists: professionals that have a wide view of technology and are capable of identifying opportunities for creative projects in areas from publicity to product design.

+ Artists that want to work with technology as a material and subject. Through this master they will be able to develop new pieces, besides writing solid proposals for grants, residencies and exhibitions.

+ Autonomous entrepreneurs with the ability to design projects in the intersection of Computing and creativity

+ Designers who are able to take advantage of new technological frameworks and incorporate them in their practices.

Competences

Identify new opportunities for creative projects based on emerging technologies.

Develop immersive narrative experiences based on virtual reality, 360 cinema, extended reality and more.

Use data as a raw material for creative applications.

Use AI tools in creative projects, both as a tool to process information and as a device that can produce automated, yet relevant, content.
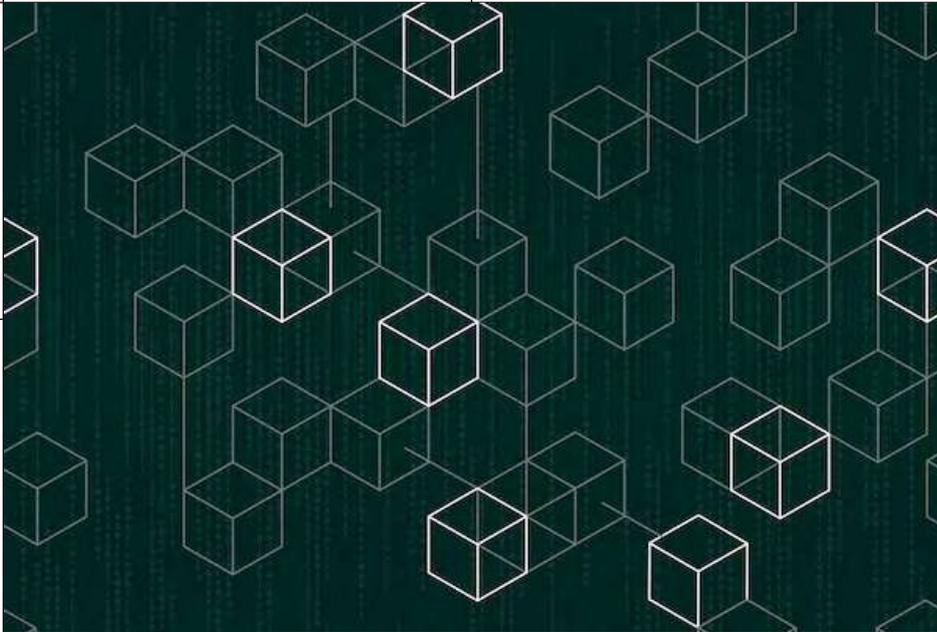
Code algorithms that generate artworks.

Know and reflect on reference projects that set trends in the field of sustainable and circular design.

Understand the social consequences, issues and limitations of technology.

Develop contraptions that make bridges to the physical world by using sensors, motors, controlling objects, sharing and accessing real-time environmental data from anywhere.

Explore the blockchain as a support for showing and financing artistic projects.

Prototype projects that combine different technologies explored in the syllabus.

Program content

Module 1
Introduction to Creative Computing

Technology and art have always walked hand in hand. The development of new tools always generates new artworks and creative uses of them. In this introductory module, we will look into the origins of cybernetic art and some of the most important creators.

We will analyze creative products that took advantage of developmental breakthroughs. In addition, we will look into specific technologies that won't be addressed in specific modules.

These small capsules dedicated to specific themes within art and technology will take place between every module. They have less demanding assignments and will also serve as a moment to revise the content and student production after every module.

+ When computers got creative
+ Projection mapping, live cinema and new configurations for audiovisual experiences
+ Movement technologies: dance and performance, robotic and kinetic art
+ Art in science: physics and in the outer space
+ Biological and genetic arts

Module 2
Designing Generative Experiences

Generative art is a central part of the history of computer-aided art. Its connections to contemporary art are strong and extend to the early stages of conceptual art.

The creative programming platforms that have become widespread in recent decades have constantly opened up new opportunities for those working with generative visual arts. The course introduces the backgrounds of generative visual arts through various themes, considers its theoretical foundations and explores different methods and technical solutions through demos and examples of use. During the course, students work on weekly assignments and carry out their own project. The work is mainly done using the p5js programming library and the web-based programming environment.

+ Algorithms and natural phenomena: simulations
+ Complexity through repetition: patterns
+ Temporal processes: time series, video, distortions
+ Review and final project: difference and repetition

Module 3
Creative blockchain applications

Participants in this course will have the opportunity to understand fundamental aspects of distributed ledger technologies (DLT's) that enable the self-issuance of values through new forms of financial organization.

In 5 meetings of 2 hours each, we will present historical aspects of cryptoeconomics presented as hyperstructure; covering features (and bugs) of some of the main platforms, protocols, and tools that allow the issuance of non-fungible tokens based on examples of art made on (and with) the blockchain and their conditions of existence on public ledgers.

Each meeting foresees a presentation of 1h20m with commented bibliography, and 40 minutes for open conversations. The fourth meeting is dedicated to implement a practical tokenization experiment carried out among the participants using a energy-cost-effective blockchain (Polygon) to be presented as a final group show, while in the last we will share and discuss the final assignments.

+ History of cryptoeconomics and blockchain space. Issues of concentration, decentralization, sustainability.
+ Non-fungible: artistic and social experiments in the blockchain.
+ How to mint and trade - some platforms for experimenting
+ Practical tokenization
+ Discussion of final projects

Module 4
Data Art

More and more, all decisions in our world are influenced by data. High-frequency trading can define fortunes in milliseconds. Our private information is being surveilled and commodified - and very often against our own interests.

How can we propose applications that tap into the power of data in a creative and fair way?

+ Open tools for data visualization: Flourish, Datawrapper, SPSS

+ Data sources: scraping, OSINT, open servers

+ Open cartography: mapbox, cartodb, mapshaper, GIS, GPS data

+ Final projects discussion

Module 5
Designing activated objects and environments

This class will introduce you to the world of physical computing and creating interactive objects. Using different platforms including Arduino and Tekniverse, students will learn about microcontrollers, wireless communication, sensors and basic programming.

Each week we will cover concepts from activating objects with light, sounds and motion, to interactive environments and the Internet of Things. Projects will draw inspiration from speculative thinking and design fiction to imagine objects for the near and distant future. Throughout the term students will work on several quick prototypes and one final project. Most assignments will focus on physical sketching, i.e. prototyping from various materials.

+ Intro to Microcontrollers, Input Output

+ Activating Objects

+ Intro to Design Fiction

+ Making things talk (remote interaction)

+ Creative Coding

Module 6
Designing with AI

The evolution of machine learning techniques and the investment in powerful models allowed for an explosion of most different systems to generate texts, videos, images, music and more. However, in order to take full advantage of these resources, it is important to understand both the potentials and limitations of machine learning tools.

Although there are many models which have been described as being creative, no machine can make art without a person that will guide its production and curate its outputs. In fact, this AI explosion is redefining the roles of inventors: traditional artists may see their inspiration be enhanced with these tools, and new jobs are being created to operate models and process their outputs.

A masterclass on the subject will be taught by Gene Kogan, while the rest of the module will be by Bruno Caldas Vianna.

+ How does AI work? Introducing neural networks and machine learning models.
+ Open models for image generation and manipulation
+ Open models for music and text production.
+ Final projects
+ Metal and construction field
+ Food and agricultural field
+ Logistics field

Module 7
Creating immersive narratives

We are heading towards a three-dimensional digital language that will shape how we create narrative experiences. Immersive technologies, known as extended reality, have the potential to amplify content immersion. Learning the basics of this emerging immersive language is the necessary first step to be able to produce these kinds of experiences.

+ Extended reality
+ Virtual reality
+ 360 cinema
+ Volumetric cinema

Module 8
Internet equalities and decolonizing technologies

How can we deal with inequalities in gender, sexual orientation, culture, to create an inclusive Internet that can be a safe space for every person?

How much is technology built on historical biases that discriminate against minorities of all sorts?

How can we conciliate a wider access to tech with the current climate crisis?

The Internet is under constant threats of censorship, not to mention the perils of the monopolistic approach that concentrates information flow in the hands of a few companies. In this module, we will learn how to address these issues when planning our projects, as well as look for inspiration in actions around technopolitics.

+ Bias and discrimination in data
+ Internet inequalities
+ Threats to an open internet
+ Web3: decentralized internet beyond the blockchain

Final Project (TFM)

To successfully complete the master, students must complete a final project in the last fifteen weeks of the course. In general terms, this must be a new creation that combines two or more of the subjects studied. Students are free to choose the support of this product: might be in the form of a gallery exhibition, a website, a gadget, a theater play, mobile application, or anything else they feel like.

Ideally, projects should be made by groups of students from different backgrounds, like developers cooperating with artists, or creators that combine varied skills. Exceptionally, students may also develop the final project individually if it is justified.

This project is not necessarily a working product. If it complies with the list of deliverables below, it might be presented as a prototype or even a project proposal. We will take in consideration the remote aspect of the program.

Required deliverables:

+ Final product or video documentation

  + If the project can be distributed online - like a website or app - no video documentation is required. The group must demo the project on the last day of classes.

  + If the project requires some physical support that cannot be demonstrated online, video documentation must be produced. This must be between 3-8 minutes long, and must display a mockup, prototype, or proof-of-concept, with enough information to enable viewers to understand the concept and potential of the ideal.

+ Written proposal

  + A textual description with goals, requirements, potential audience, justification. Visual cues like drawings, pictures, schemes can be added here.

Optional deliverables (these can help the groups frame and conceptualize the project):

+ Pekapitch. A 10-20 page powerpoints slides that abridge the project in the form of a pitch to potential sponsors, investors, supporters, curators.

+ Development blog/diary. Weekly updates on the state of the idea and development

We will take in consideration:

+ Originality

+ Written proposal clarity with goals, methods, requirements, audience, justification

+ Visual organization of the project or deliverables

"The Master's Degree in Art Direction and Audiovisual Creativity in SHIFTA has been the way to bring together everything I like: music, attention to detail, the ability to tell stories, fashion, color, typography, photography..."

Lola Fernández

ART DIRECTOR | Spain

Art Direction and Audiovisual
Creativity Online Master
May 2020

"Learning while I'm working is one of the keys to my professional growth."

Santiago Banchero

AUDIOVISUAL PRODUCER
Uruguay

Audiovisual Aesthetics and
Narrative Master| May 2019

"Studying at SHIFTA has allowed me to learn research methodologies and agile work frameworks to create projects with great social impact."

Alejandra Anderson

SENIOR GRAPHIC DESIGNER
Colombia

UX | UI Online Master
February 2020

Methodology

At SHIFTA we are sure that you will learn creating, that is why practice is our identity. In addition, experience has shown us that learning is much more effective if it is shared with a group and efforts are worked collaboratively.

The ability to work in a team, its planning, its efficiency, the proper use of collaboration tools are in themselves competences considered fundamental as a result of monitoring our programs, so the activities proposed in small groups have a fundamental value in the monitoring of the program and also to improve the "soft skills" of the students since they promote collaborative work, online and international.

Each Program Director, along with his teaching team, has carefully selected the resources necessary to achieve the objectives of each module. Each of them is important within the training process, therefore, it is essential that each student work with the utmost rigor.

In each module the student has a serie of reference contents that will guide them in the learning process and the proposed activities will help the student to understand, reason, judge and be able to apply in different contexts the learning that results from working with the students and materials. As far as possible we will recommend contextualizing the activities in the scope of the student's own professional experience, but we will also try that through the activities the student is able to approach other scenarios, therefore we have a teaching team with a great professional experience.

The teacher will set the pace of work through the deliveries of the activities, through the module calendar and will provide the necessary documentation to carry out each of the planned activities.

The learning process will be carried out through the SHIFTA online environment. It is a tool that allows the accompaniment of teachers and students so that the achievement of academic objectives is complete. We have at the student's disposal the necessary tools so that the learning experience is complete.

The campus has been designed taking into account the needs of teachers and students so that they can carry out training in a simple and effective way that allows learning, sharing, and improving both professionally and personally.

The methodology of the program is based on different dynamics that reinforce each other: practices, through which critical thinking aimed at improving strategic decision-making is cultivated; conferences with invited external professionals that expose you to cutting-edge knowledge and practices; workshops that delve into relevant digital concepts and themes, as well as individual and group challenges.

SHIFTA programs are based on experience that allow you to face new challenges, students make decisions and enhance their learning process with a wide range of methodologies connected with the Learning by doing philosophy. SHIFTA's educational methodology is based on innovative learning ecosystems that promote active and collaborative learning, combining diverse methodologies with a more humanistic, open and inclusive vision of leadership; cooperative leadership in which people are at the centre and transversal work processes are promoted.

Faculty

Director
Bruno Caldas Vianna

PhD candidate at Uniarts, Helsinki. Investigating artificial intelligence and visual arts.

Web

Professor
Tuomo Rainio

Art and Technology Professor, Fine Arts Academy, Uniarts Helsinki. Visual artist.

Web

Professor
Pedro Victor Brandão

Visual Artist, working with photography, digital manipulation and cryptomedia.

Web

Professor
Genevieve Hoffman

Head of Digital Product, BioBot analysis.

LinkedIn

Professor
Sibel Deren Guler

Lecturer at Parsons School of Design, NYC. Teknikio.com, Founder.

LinkedIn

Professor
Laura Kurtzberg

Data Analyst in the Pulitzer Center.

LinkedIn

Faculty

Professor
Flor Salatino

Creative Technologist at Immersive
Creatures & Wildbytes.

Web

Professor
Eva Dominguez

Immersive content creator (Nushu),
Immersive Creatures (founder).

LinkedIn

Professor
Bryan Nunez

Vice-president of Technology at the Open
Technology Fund.

Web

Admission process

In the Online Master in Creative Computing, there's a maximum of 25 places available.

It is a decision to preserve the quality of the program and so that students have the necessary accompaniment during the learning process.

You will need a computer and a good internet connection.

We will wait for you.

If you want to be one of those 25 Shifters, these are the requirements:

University Degree

You need to have a University Degree in some creative discipline. It is also possible to access the program with degrees from other relevant careers, for example, engineering, design, or Bussiness.

Professional Experience

If you don't have a University Degree, you can access the program based on your professional experience that can be accredited (In this case, you won't be able to receive the Master's Degree, but a Program Certificate).

Motivation letter

Motivation letter explaining why you want to study this master program, and why in SHIFTA.

Language

The Master's Degree is taught in English. Students need to have a sufficient level of the English language to understand and be able to carry out the program correctly.

Attitude

Students need to be efficient, organized and with the capacity for autonomous learning. It is essential to be willing to learn and having the capacity for effort.

Think.
Make.
Change.

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