

SUPSI

Master of Arts SUPSI
in Interaction Design

MAInD

Master
of Arts
SUPSI in

Interaction
Design

2023
/2024

Study Plan

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Introduction

The University of Applied Sciences and Arts of Southern Switzerland (SUPSI), as the other Swiss UASs, performs three inter-related tasks:

- basic training leads to Bachelor's and Master's degrees recognized by the Swiss Confederation;
- continuous education, from specialization MAS to ad-hoc education courses;
- applied research projects, technology development, and transfer, in cooperation with companies, institutions, and other universities.

Since its establishment in 1997, SUPSI has its strengths in:

- the bond with its reference territory, thanks to the support to the regional economy and in favor of small and medium-sized enterprises;
- the professional dimension, which is ensured through state-of-the-art, practice-oriented training involving teachers with established professional experience;
- the relationship between applied research and training, promoted by teacher-researchers of the institutes and laboratories;
- teaching offered in parallel with the professional activity, through study programs that can be attended by students who are actively employed during their training;
- internationalization, developed through collaboration agreements and the involvement of lecturers from abroad.

The Master of Arts (MA) SUPSI in Interaction Design is offered by the Department for Environment, Constructions and Design (DACD), which also offers Bachelor's degrees in Architecture, Interior Architecture, Visual Communication, Conservation, and Civil Engineering, and Master's degrees in Conservation-Restoration and Civil Engineering.

Within the DACD there are the following research units that employ numerous researchers and collaborators that also teach in the degree courses:

- the Institute of Applied Sustainability to the Built Environment (ISAAC);
- the Institute of Earth Sciences (IST);
- the Institute for Materials and Constructions (IMC);
- the Institute of Design (IDe);
- the Institute of Microbiology (IM).

The guidelines that led to the complete revision of the education programs and that govern the design of this Study Plan include in particular:

- the modular design of a Bachelor's (180 ECTS credits) and Master's (90 ECTS credits) degree courses, in line with UAS goals and national directives;
- the implementation of training credit systems based on the ECTS model;
- the promotion of student and teacher mobility with the consequent strengthening of European cooperation through quality assurance.

Education Credits (ECTS)

The ECTS (European Credit Transfer System) is the European system for the recognition, transfer, and accumulation of credits. One ECTS credit corresponds to a student workload of approximately 30 hours (lectures, supervised study, and individual study). One academic year corresponds to 60 ECTS credits (1800 working hours).

Qualification

The qualification is awarded to those who certify all modules included in the Study Plan which correspond to 90 ECTS credits of the Master of Arts SUPSI in Interaction Design.

The diploma is recognized at the federal level and constitutes a qualification protected by the Swiss Confederation.

Equal Opportunities

Equal opportunities and the prevention of discrimination are priority objectives at SUPSI, which integrates the gender dimension into its development strategies and management.

Information

For further information, please visit the SUPSI website at www.supsi.ch.

Master of Arts SUPSI in Interaction Design

Head of the Master Program:
Massimo Botta

The Master of Arts (MA) SUPSI in Interaction Design combines design thinking, prototyping techniques, digital fabrication, programming, and physical computing in one study program addressing the realization of projects in which the interaction between the design culture and the technological development allows to generate design-driven innovations. The master offers students specialized knowledge and skills of interaction design. A pragmatic problem-solving approach to design is applied in a laboratory environment. Peer-to-peer learning, iterative processes, and the rapid prototyping of various solutions qualify the students to pursue careers in industry, research centers, and design practices, wherever technological innovation and design meet.

The study program covers three semesters: it is structured in modules offering a variety of design, methodological and technical courses.

The first semester focuses on in-depth courses and workshops about the Fundamentals of Interaction Design, whereas the second semester is dedicated to project-based learning about Designing Advanced Artifacts, Designing Advanced Environments, and Designing Advanced Services.

The third semester is entirely dedicated to the thesis project: students have the opportunity to do hands-on research on their own project and develop their competencies through an internship in a company.

The Master Program

The master's program in Interaction Design offers to graduate students advanced professional training that combines the design culture with technological innovation and social change. As a master's education, the program in Interaction Design merges knowledge coming from the design disciplines in a unique profile able to set new thinking in design, technological innovation, and human needs. For this reason, the program has a multidisciplinary perspective and it is conceived as the result of an original set-up of three domains:

1. the Design Domain: the systemic thinking to face global challenges, the adoption of human-centered design methodologies to respond to major social issues, and the practice of design to define a better future;

2. the Technical Domain: composed of those cutting-edge technologies driving design innovation, the impact of the digital transformation on society and organizations, and business models to provide the entrepreneurial feasibility of design solutions;

3. the Social Domain: the intellectual, critical, and social role of the designer, where design answers human needs and rights considering three emerging topics: the information society, sustainable development, and the common good.

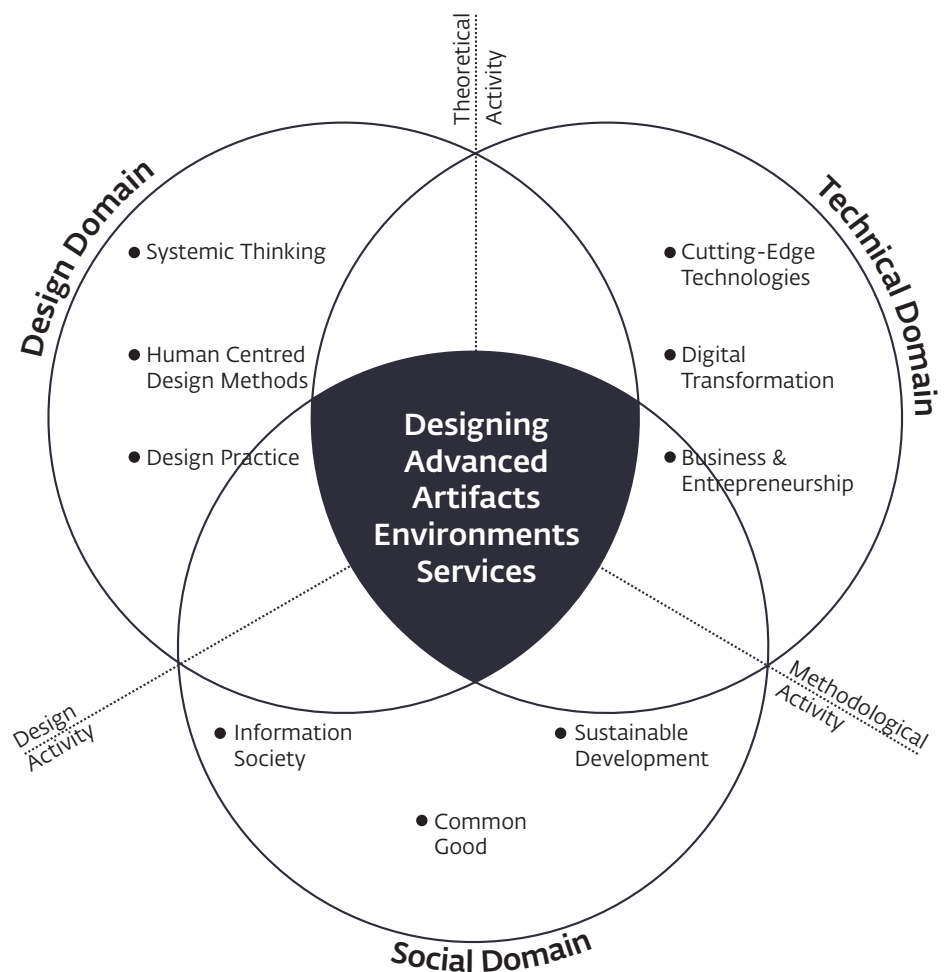
The master program merges these domains in a specific curriculum, where Interaction Design is the key element for the conception and creation of Advanced Artifacts, Environments, and Services.

Objectives

The goal of the Master of Arts SUPSI in Interaction Design is to train skilled designers who work in interdisciplinary design teams in the most creative and innovative industries.

The master responds to the demands of the market for designers who are able to tackle the digital transformation within firms and industries. In particular, the study program allows students to develop design, methodological, technical, strategic, and relational skills.

The master meets the innovation economy by training professionals qualified to design products and services focused on human needs and desires, make use of cutting-edge technologies, and promote new business models.



Competences and Skills

The master's degree program offers students the opportunity to acquire specialized knowledge, skills, and design methods that can be applied for research and problem-solving. Moreover, students have the opportunity to learn how to build working prototypes to test their ideas. This set of skills qualifies the students to undertake professional careers at consulting agencies, companies, and research centers at the intersection between design and technology.

The Master of Arts SUPSI in Interaction Design allows students to learn the following core competencies and skills:

Analysis and Research Methods

To acquire knowledge about Human-Centered Design (HCD) methods, ranging from research to the analysis of the user needs and co-design. To be able to successfully implement the right methods during the project phases and to skillfully apply them according to the context.

Rapid Prototyping

To learn the rapid prototyping techniques by using digital fabrication machines to build working prototypes that can be tested, improved, and communicated by means of incremental iterations.

Understanding of Technology

To become aware of the limits and possibilities of the technology with software programming and electronics to acquire the necessary knowledge to work with engineers and product managers.

Ability to Plan and Develop Complex Projects

To be able to autonomously plan and develop digital services and ecosystems focused on the user experience (UX) for different industries, such as financial services, transportations, consumer electronics, healthcare, telecommunications, media, culture, society, and institutions.

Working in Multidisciplinary Teams and Applying Collaboration Methods

To collaborate with peers from different disciplines and backgrounds; to assign specific tasks and responsibilities according to knowledge, skills, and interests; to improve results and correct mistakes in peer assessment.

Understanding and Defining Business Strategies

To recognize the social and economic relevance of an industrial sector and draw useful information from it in order to pitch a project that responds to a market need. To learn about business models, to tackle and apply strategic design thinking in dialogue with leading managers; to acquire the tools necessary to set up a business plan.

Leadership and Communication Skills

To learn the leadership principles to plan and carry out creative processes within complex organizations. To handle and evaluate various approaches in order to document, articulate and present a project in a convincing and reasonable manner.

Attitude Towards Innovation

To be able to originally combine user needs, cutting-edge technology, and research outcomes to define innovative products, environments, and services.

Critical and Creative Thinking

To develop a critical and personal approach supported by research outputs to sustain the decision-making process. To enhance creative skills thanks to interdisciplinary collaborations and workshop activities.

Professional Profile

The interaction designer conceives and designs innovative products, environments, and services to create a meaningful experience that fulfills human needs, innovates the company's business, and positively impacts society.

The main skills of the interaction designer are to craft the interaction between human beings and systems, defining behavioral and functional features of technological products, processes, and eco-systems.

The duties of an interaction designer include analyzing business strategies, conducting user research, defining the user experience, and creating prototypes to test in real-use contexts to improve or innovate a company's product or service.

They work in multidisciplinary and international teams, wherever innovation and design meet.

Career Prospects

The interaction designer is a professional figure who has career prospects not only within the traditional interaction design fields but also in multidisciplinary sectors which work with system innovation. The interaction designer covers specialized roles, whose professional development can also progress to managerial and executive positions.

Students who complete the Master of Arts SUPSI in Interaction Design will pursue careers at design agencies, industries, and startups worldwide. Students will work on innovative products and services in sectors where the digital transformation represents a competitive advantage, such as:

- design practices in interaction design, product design, digital communication, exhibition design, and architecture;
- international consulting agencies offering complex services and project development where innovation is a competitive advantage;
- digital media and web companies;
- ICT and digital services;
- industries where the digital transformation is a strategic factor for the development of new products and services, such as banking and finance, telecommunications, consumer electronics, automotive, distribution and logistics, health and well-being;
- public and private institutions operating in the cultural, social, entertainment and tourism fields;
- technology start-ups.

Functions

The functions performed by interaction designers vary in relation to the sectors in which they work and, in general, can be considered as specialized or complementary to a specific industry.

The progression of functions held by an interaction designer during their career usually takes place through the transition to the following functions:

- Interaction designer/service designer junior
- Senior interaction designer/service designer
- Design researcher
- Principal interaction/service designer
- Associate creative director
- Creative director
- Executive/Design director

Program Structure

Regarding career prospects, the interaction designer is a recognized professional figure who progresses steadily to higher positions within all organizations, taking on the role of mid-level manager, executive director, or manager.

Admission Requirements

The Master of Arts SUPSI in Interaction Design is addressed to students with creative talent combined with a strong interest in designing the evolution of the technological, social, and cultural context of the near future.

The requirements for acceptance to the Master of Arts SUPSI in Interaction Design are:

- A bachelor's degree in Design (graphic design, industrial design, interior design, media design, web design, etc) or an equivalent diploma.
- Students with a bachelor's degree in fields such as architecture, engineering, humanities, fine arts, and business management are entitled to apply. Their application is subject to the approval of the Board of the Master and it might entail the acquisition of some extra ECTS credits, which can be obtained before or during the program.

Copyright

The inventions or creations made by SUPSI students (who do not have an employment relationship with SUPSI) as part of their degree course are owned by the students who hold the Copyright. The author grants SUPSI the free right of use for academic and communication purposes and the free right to keep a copy in the archives.

The Master of Arts SUPSI in Interaction Design course lasts for 3 semesters and is developed through several teaching modules. The first two semesters are composed of design, methodological and technical courses that require full-time attendance. The third semester coincides with the development of the final thesis project and allows the student to consolidate their professional skills through an internship in a company.

The Master of Arts SUPSI in Interaction Design awards 90 ECTS.

1st Semester

Interaction Design Fundamentals

The first teaching semester provides students with the skills necessary for the practice of interaction design and is organized in design, technical and methodological courses, and intensive design-oriented workshops. The semester offers an introduction to programming and electronics, digital fabrication, user experience design, and research methodologies, equipping students with transversal and multidisciplinary skills.

2nd Semester

Designing Advanced Artifacts, Environments, and Services

The second semester consists of teaching modules that allow students to address specific areas of design through the development of complex projects, the use of cutting-edge technologies, and the adoption of innovative business and entrepreneurship models and strategies.

Designing Advanced Artifacts Module

This module investigates the relationship between humans and the development of new kinds of objects, as well as the structuring of new relationships between the human being and the object through the use of specific technologies. The module offers students the opportunity to design devices to support everyday activities such as work, study, leisure, entertainment, and communication.

Designing Advanced Environments Module

The module investigates the immersion of human beings in a physical environment and their interactions within space. The module offers students the opportunity to explore the design of interactive environments that define the spatial experience in different contexts of use such as the home, urban space, workplace, exhibitions, and site-specific installations for dissemination or entertainment purposes.

Designing Advanced Services Module

The module investigates the design of the human experience by defining new systems and processes through the use of multiple touchpoints.

The module allows students to design digital services and ecosystems based on user experience (UX), which defines new relationships and interaction patterns in different fields such as media and communication, health and well-being, economic growth, mobility, education, gender equality and inequality reduction, sustainable consumption, social and environmental change.

3rd Semester

The Thesis Project

The third semester consists of one module dedicated to the thesis work and focuses on the development of an applied project, in which the student implements the research methodologies and the technical and design skills acquired during the previous modules to develop innovative solutions in different sectors of industry, society, organizations, economy, and culture and which may be suitable for an entrepreneurial venture (start-up).

The thesis project is carried out with the support of a tutor and through an internship in a company or public or private institution for a period of approximately 4 months. The module does not require a permanent presence on campus but includes some sessions to present progress on the project to the thesis jury.

Teaching Methods

The Master of Arts SUPSI in Interaction Design courses are designed to offer quality training for designers and innovators who want to become key players in the next social, technological, and economic transformations. The courses are taught in English to reflect the international vocation of the Master and the multidisciplinary and multicultural working environment.

The curriculum's educational model adopts approaches, methods, and practices that are aimed at acquiring the knowledge and skills needed to generate product, process, and service innovation.

Teaching takes place mainly in a laboratory environment, characterized by the 'learning by doing' approach, where working closely with the teaching staff enables students to acquire skills aimed at transforming ideas into working design solutions and prototypes, to be tested with real users and used for demonstration purposes.

The study program consists of design-driven courses and workshops, methodological and technical courses, and talks and seminars.

The **design-driven courses and workshops** focus on practical activities and enable students to acquire the fundamental design, methodological and technical skills of the interaction design discipline. They are intended to create a common basis for students from different bachelor's training programs, to equip them with transversal and shared skills, and an aptitude for multidisciplinary collaboration.

The **methodological courses** include learning and practicing Human Centred Design (HCD) methodologies, with different levels of depth and complexity. Knowledge of these methodologies enables students to acquire the conceptual and practical tools useful for structuring a creative process: collecting data and information in an organized manner, analyzing the needs of different users, extrapolating evidence to inform the project, setting up and structuring the various design phases with rigor, defining the user experience and the key features of a product, environment or digital ecosystem.

The mastery of these methodologies certifies the student's ability to set up and guide a design process in the most diverse organizations and industries.

Technical courses are always project-oriented. The acquisition of technical and technological skills takes place through the development of projects in which the learning of specific software and hardware programming languages, such as the use of digital fabrication machines, are functional to the achievement of a design goal. Through the technical courses, the student acquires confidence in the use of different technologies and the necessary knowledge to explore new ones.

The **project-based courses** involve the development of real projects in collaboration with companies and institutions, through which students have the opportunity to tackle challenging research topics and explore the use of cutting-edge technologies.

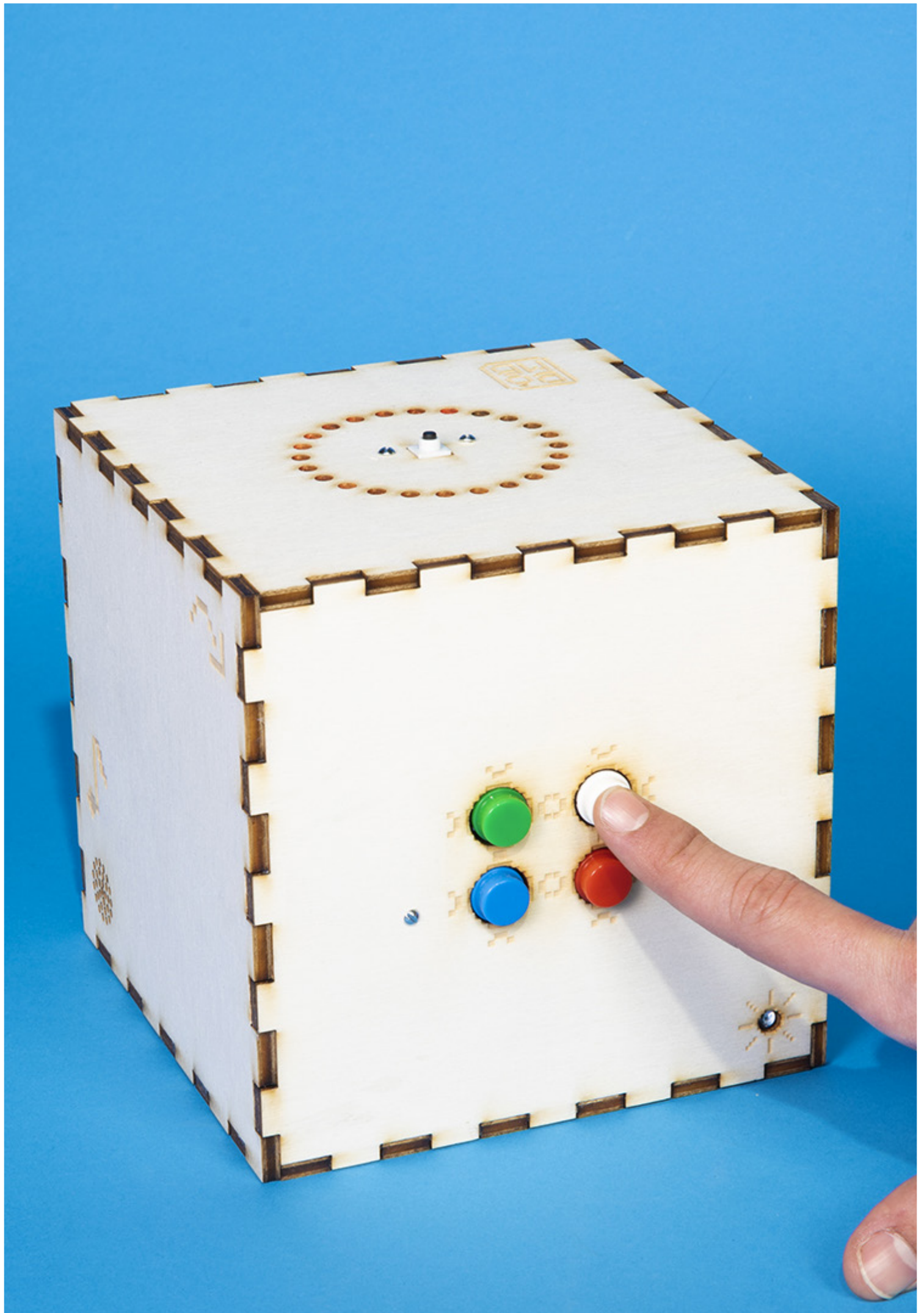
The project activity aims to address methodological and technical skills in a process where it is necessary to know how to achieve project goals, meet user needs, define the user experience and implement specific interactions and technological solutions. The craft of a prototype demonstrating the effectiveness and innovativeness of the project concludes the project process.

The **talks and seminars** aim to offer an overview of the discipline of interaction design, through lectures by professors, researchers, professionals, and representatives of companies and start-ups from national and international backgrounds. The topics covered are intended to show the breadth of views that make up the interaction design area and provide opportunities for meeting and networking with the key players of creativity and innovation.

First and Second Year
Full-Time Curriculum

Modules and Courses

1 st Semester – Interaction Design Fundamentals				
Codice	Titolo	ECTS	Ore/Lezioni	Pag.
ID101	Programming and Interactivity	5	45	12
ID101.01	Creative Coding with P5.js		45	
ID111	User Experience Design	3	32	14
ID111.01	Designing Digital Experiences		32	
ID120	Digital Fabrication	5	132	16
ID120.01	Digitally Designed Objects for Fast Prototyping		92	
ID120.02	Documentation and Communication		40	
ID131	Experimental Workshop 1	3	45	19
ID131.01	Machine Learning for Designers		45	
ID140	Physical Computing	5	130	21
ID140.01	Creating Tangible Interfaces		90	
ID140.02	Documentation and Communication		40	
ID151	Experimental Workshop 2	3	45	24
ID151.01	Programming Interactive Objects		45	
ID161	The field of Interaction	2	15	26
ID161.01	Maind-Expanding Talks		15	
ID170	Design Thinking	1	28	28
ID170.1	(Co)design for Systematic Challenges		28	
ID180	Human Centred Design	3	56	30
ID180.01	User Research Design		56	
Total 1st Semester		30	528	
2 nd Semester – Designing Advanced Artifacts, Environments and Services				
Codice	Titolo	ECTS	Ore/Lezioni	Pag.
ID200	Designing Advanced Artifacts	7	104	34
ID200.01	Multimodal User Experience Design in Products		92	
ID200.02	Documentation and Communication		12	
ID211	Designing Advanced Environments	7	96	37
ID211.01	Prototyping Interactive Installations		84	
ID211.02	Documentation and Communication		12	
ID220	Designing Advanced Services	7	88	40
ID220.01	Designing Intelligent Experiences		88	
ID230	Entrepreneurial Skills	5	32	42
ID230.01	From Project Ideas to Market		32	
ID241	The Business of Design	2	30	44
ID241.01	Design for...Seminars		30	
ID251	The Field of Interaction	2	15	46
ID251.01	Maind-Expanding Talks		15	
Total 2nd Semester		30	365	
3 rd Semester – The Master Thesis Project				
ID300	Master Thesis Project Module	30	440	50
ID300.01	Thesis Project Definition		40	
ID300.02	Thesis Project Development		400	
Total 3rd Semester		30	440	
Total Master		90	1333	



First
Year

1st

Semester

ID101

Programming and Interactivity

Module Head:
Fabio Franchino

Semester:
First

ECTS:
5

Module Hours:
45

ID101.01

Creative Coding with P5.js

Teaching Hours: 45

Teacher:
Fabio Franchino

Assistant:
Matteo Subet

ID101.01

Creative Coding with P5.js

What You'll Learn

- Foundational knowledge in programming topics and coding principles
- The P5.js environment and language
- Basic interactions between ChatGPT and P5.js

Description

The goal of the course is to give students an introduction to coding with a special focus on graphics programming and interactivity. Every week the students will learn new principles, concepts, and language syntax of programming, using the P5.js environment and language. The students will practice coding by means of structured exercises with continuous support from the teacher. A project brief will be given to allow the students to put in practice the learned materials, prototyping a project that will be evaluated at the end of the course. The course follows the learn-by-doing principle featuring hands-on activities. The approach follows the step-by-step process through incremental exercises.

Format and Assessment

Format: online lectures, onsite lessons, individual incremental exercises, online support, and mentoring.
Individual/group-based course: the course exercises will be developed individually while the final project will be developed by small groups.
Examination: final presentation on the last day of the course.

References

References will be provided during the course.

ID111

User Experience Design

Module Head:
Sarah Corti

Semester:
First

ECTS:
3

Module Hours:
32

ID111.01

Designing Digital Experiences

Teaching Hours: 32

Teachers:
Sarah Corti, Alberto Andreetto,
Enrico Tedoldi

ID111.01

Designing Digital Experiences

What You'll Learn

- How to design a mobile application starting from the foundation of Digital Experiences design
- How to identify user needs and validate user behavior
- Define user requirements for the creation of interactive systems with high usability and accessibility
- How to define the end-users, the value proposition, and the key features of a mobile application
- User Flow and Customer Experience mapping
- How to generate ideas and how to translate them into experience elements (From areas of opportunity to solutions)
- User Interface basics, how to put together an interface, and how to create a design library

Description

Since the introduction of the iPhone in 2007 and the widespread use of high-speed mobile networks, smartphones have been our primary way to access information and services related to every aspect of our daily life: from social networks to media, from financial services to transportation, from healthcare to shopping. Great digital experiences today are made possible by providing highly contextual, personalized, and emotional experiences to the customers.

How can we design delightful digital experiences through multiple digital touchpoints, rather than focusing just on a single product or service? How can we create mobile experiences and show relevant information on small screens?

In this course, we will understand the whole UX process – from user research, requirements analysis, idea generation, and product definition to prototyping, UI design, and usability testing. We'll learn how to design a mobile application starting from the foundation of Digital experiences design: from defining its end-users, to value proposition and key features definition, building a solid UX framework and defining the different user flows, creating a distinctive visual language to design and prototype a modern mobile User Interface.

Students will be given a concrete design brief and will be asked to design, prototype, and test a mobile app. The course will mix online lectures, hands-on activities, and review moments to support students in the learn-by-doing approach through their personal projects.

Format and Assessment

Format: offline and online lectures, intermediate assignments, coaching, and mentoring.
Workgroup-Based Course: the course assignments and the final project will be developed in workgroups of max. 4 students.
Examination: examination of final presentation on the last day of the course.

References

References will be provided during the course.

ID120

Digital Fabrication

Module Head:
Marco Lurati

Semester:
First

ECTS:
5

Module Hours:
132

ID120.01

Digitally Designed Objects for Fast Prototyping

Teaching Hours: 92

ID120.02

Documentation and Communication

Teaching Hours: 40

Teacher:
Marco Lurati

Assistant:
Matteo Subet

ID120.01

Digitally Designed Objects for Fast Prototyping

What You'll Learn

- Basic principles of parametric CAD
- How to prepare 2D and 3D files for digital manufacturing through laser cutting machines and 3D printers
- How to prototype with digital fabrication tools as interaction designers

Description

The course aims at giving the basis of one of the most widespread and versatile 2D and 3D software, Fusion 360, in order to create digitally designed objects that can be fabricated through fast prototyping machines. The focus of the course is placed equally on CAD theory, Fusion 360 lessons, and practical exercises. The course provides an overview of both the Computer-Aided Design and the Fusion interface. Following the overview, students will design a small 2D file and 3D file of low or intermediate complexity and prepare it for a potential digital manufacturing process.

The main goal is to introduce students to parametric CADs and to explain the different possible approaches based on the desired result. The focus of the course is the useful applications these technologies have for an interaction designer (like simplifying the hacking of existing objects or design new interfaces from scratch), that can be produced with innovative digital technologies, like laser cutting machines, CNC routers, and 3D printers.

Format and Assessment

Format: offline and online lectures, intermediate assignments, coaching, and mentoring.
Course: the course assignments and the final project will be developed individually or in small teams.
Examination: final presentation on the last day of the course.

References

References will be provided during the course.

Teachers:
Antonella Autuori, Matteo Subet

ID120.02

Documentation and Communication

What You'll Learn

- To document all components of the project developed during the module
- To refine the documentation for the future portfolio

Description

The course aims to produce the documentation of the project developed within the module. The student will have to write a description of the project, produce image documentation (digital outputs/screens in the case of digital software or photographs in the case of physical products), a video (the storytelling of the project), the software source files and the hardware schematics, according to the provided examples and guidelines. More specific documentation may be requested depending on the course topic.

Format and Assessment

Students' evaluations will be based on the review of the requested materials. To assess this module, it is mandatory to hand in the project documentation.

References

References will be provided during the course.

ID131

Experimental Workshop 1

Module Head:
Matteo Loglio

Semester:
First

ECTS:
3

Module Hours:
45

ID131.01

Machine Learning for Designers

Teaching Hours: 45

Teacher:
Matteo Loglio

ID131.01

Machine Learning for Designers

What You'll Learn

- The fundamental concepts and practical applications of Machine Learning
- A practical way to start using this new technology in your design and creative projects
- An overview of the current tools used in the machine learning prototyping space
- Simple programming tools such as ml5.js, RunwayML, and Wekinator

Description

The acceleration of processing power, large amounts of data, the release of open-source frameworks and research papers are only a few factors that contributed to making artificial intelligence one of the most hyped and interesting trends of the last few years. Machine learning is watching over the devices we use every day, it listens and records our actions, learns our behaviors, and predicts our intentions. There are many branches of AI where designers could have a great impact. So far, the most obvious applications are conversational design, voice interfaces, and natural language, but we are starting to move into more experimental directions. This course provides an introduction to artificial intelligence and its relative creative applications. Participants will learn how to include AI in their projects, and to experiment with some simple tools created for artists and designers. We hear news about artificial intelligence and machine learning almost every day, but what are they exactly, and how can we use them in design practice? We will look into existing projects that use this technology in the fields of art, science, design, and creativity in general. Then we will start to prototype ideas using machine learning as a design instrument. Participants will learn to use existing libraries and prototyping applications hands-on, and many examples will be provided for future reference.

Format and Assessment

Format: offline and online lectures, intermediate assignments, coaching, and mentoring.
Workgroup-Based Course: the course assignments and the final project will be developed in workgroups of 3-4 students.
Examination: final presentation on the last day of the course.

References

References will be provided during the course.

ID140

Physical Computing

Module Head:
Ubi De Feo

Semester:
First

ECTS:
5

Module Hours:
130

ID140.01

Creating Tangible Interfaces

Teaching Hours: 90

ID140.02

Documentation and Communication

Teaching Hours: 40

Teacher:
Ubi De Feo

Assistant:
Matteo Subet

ID140.01

Creating Tangible Interfaces

What You'll Learn

- Fundamentals of electronics
- Programming tiny computers
- Sensing the world and reacting to it
- Creating a project using Arduino boards
- Prototyping a physical interactive object or experience

Description

The course introduces the domain of physical computing for interactive product prototyping. The focus is to create physical modalities and experiences for accessing and manipulating information through sensing artifacts. The course is based on the approach of "learning by doing": students learn how to design and implement interactive behaviors by developing basic prototypes with using Arduino hardware and MicroPython. The goal of the course is to learn how to design and implement interactive product behaviors and interfaces through systems based on sensors and actuators controlled by Arduino and electronics. This will be achieved by learning basic notions of physical computing and working with a range of sensors and actuators which can be used and controlled through the use of Arduino as a programmable microcontroller board.

Format and Assessment

Format: offline and online lectures, intermediate assignments, coaching, and mentoring.
Course: the course assignments and the final project will be developed individually or in small teams.
Examination: at the end of the course, students present a summary of the project and the prototype.
Materials: a custom Arduino kit will be provided with a set of sensors and actuators.

Prerequisites

Basic knowledge of programming and code structures.

References

References will be provided during the course.

Teachers:
Antonella Autuori, Matteo Subet

ID140.02

Documentation and Communication

What You'll Learn

- To document all components of the project developed during the module
- To refine the documentation for the future portfolio

Description

The course aims to produce the documentation of the project developed into the module. The student will have to write a description of the project, produce image documentation (digital outputs/screens in the case of digital software or photographs in the case of physical products), a video (the storytelling of the project), the software source files and the hardware schematics, accordingly to the provided examples and guidelines. More specific documentation may be requested depending on the course topic.

Format and Assessment

Students' evaluations will be based on the review of the requested materials. To assess this module, it is mandatory to hand in the project documentation.

References

References will be provided during the course.

ID151

Experimental Workshop 2

Module Head:
Andreas Gysin

Semester:
First

ECTS:
3

Module Hours:
45

ID151.01

Programming Interactive Objects

Teaching Hours: 45

Teacher:
Andreas Gysin

Assistant:
Matteo Subet

ID151.01

Programming Interactive Objects

What You'll Learn

- Programming praxis, mainly for the web platform but not limited to it
- An efficient workflow
- Structuring a complete application
- Working with XML/JSON
- Working with text
- Working with pixels
- Working with vectors
- Transposing data to other domains (for example visualization)
- Encoding and decoding information
- Programming for real-time environments

Description

What is an interactive system? What is the "goal" of an interactive system? What is the role of the user in such systems? The main activity of the course is guided experimentation with code finalized for a specific assignment. Through a practical approach with a strong focus on code, the students will try to find answers to these questions by programming a complete application.

Format and Assessment

Format: online lectures, exercises, support, and mentoring.

Course: the course assignments and the final project will be developed individually or in small teams.

Examination: final presentation on the last day of the course; every student or team will present the projects developed during the course to the class: the concept, the techniques, and the presentation itself will be evaluated.

Prerequisites

Basic knowledge of programming (any language) is required. See "Creative Coding" course description.

References

References will be provided during the course.

ID161

The field of Interaction

Module Head:
Massimo Botta

Semester:
First

ECTS:
2

Module Hours:
15

ID161.01
Maind-Expanding Talks
Teaching Hours: 15

Teachers:
Invited Speakers

ID161.01

Maind-Expanding Talks

What You'll Learn

– The main objective of the lectures is to provide knowledge in interaction design, from broad topics to specific areas and skills

Description

The course is organized into a series of seminars and talks that address issues of interest in interaction design. The lectures, taught by invited professors and professionals, have the goal of presenting theoretical and practical knowledge useful for design thinking and practice.

Format and Assessment

Format: offline and online lectures.
Examination: attendance is mandatory.

References

References will be provided during the course.

ID170

Design Thinking

Module Head:
Elena Zordan

Semester:
First

ECTS:
1

Module Hours:
28

ID170.01
(Co)design for Systemic Challenges
Teaching Hours: 28

Teachers:
Elena Zordan, Federica Bardelli, Enrico
Tedoldi

ID170.01

(Co)design for Systemic Challenges

What You'll Learn

- Discover the Design Thinking approach as a framework for disclosure and inquire
- Experiment with proper methods, tools, and templates in a collaborative environment
- Increase your awareness about design as a medium to entangle complex situations
- Challenge yourself in a team within participatory processes and co-design activities
- Reflect on new ways of interaction

Description

The increasing complexity of the context we live in challenges design discipline and asks for new ways of disclosure. Interaction design should become a relational discipline finding new innovative ways to connect people in challenging, extreme, faraway, (...) environments. The digital turn we're facing, accelerated unexpectedly in the Covid Pandemic years, is proposing to us - as designers - new spheres of interventions, new languages, and frameworks that must be discussed from a methodological perspective.

This course will focus on the Design Thinking approach, giving an overview of how this mindset can help shape solutions capable to impact on complex situations, from different perspectives, to produce systemic changes, while being at the same time inclusive and targeted.

During the course, we will apply the methodology in order to experiment and reflect on new and innovative ways of interaction, and what interactivity and networked processes can add to the discipline.

The classes will entail theoretical matters and practical exercises to make participants experiment and learn-by-doing Design Thinking processes in a collaborative workshop environment.

Format and Assessment

Format: short theory lessons and hands-on exercises, working groups, research, discussion, and debate on single outputs.

Workgroup-Based Course: the course assignments and the final project will be developed in teams.

Examination: final presentation on the last half-day of the course.

Students will be evaluated for their capability of applying the Design Thinking approach to the delivered initial challenge and demonstrating full confidence within processes and methods, framing problems into a personal critical perspective, and presenting their final results to open up discussion trajectories.

References

References will be provided during the course.

ID180

Human Centred Design

Module Head:
Elisabeth Graf

Semester:
First

ECTS:
3

Module Hours:
56

ID180.01

User Research Design

Teaching Hours: 56

Teachers:
Elisabeth Graf

ID180.01

User Research Design

What You'll Learn

- How to create a research plan and choose the right research methods
- How to conduct research
- How to synthesise research findings and communicate insights

Description

This course gives an introduction to design research. Through a learning-by-doing approach, students will get familiar with the different phases of design research. From understanding a research brief to developing a research plan. Choosing the right methods for the research questions and learning more about the different techniques and tools. During the course, students will have the opportunity to conduct small research and to learn how to capture findings and synthesise them into insights. Furthermore, we will explore how to communicate those insights effectively so that they can be used in the ideation phase of the design process.

Format and Assessment

Format: offline and online lectures, individual incremental exercises, intermediate assignments, online support, and mentoring.

Course: the course assignments and the final project will be developed individually or in small teams.

Examination: final presentation on the last day of the course; every student or team will present the research projects developed during the course to the class: the research plan and the presentation itself will be evaluated.

References

References will be provided during the course.



First
Year

2nd
Semester

ID200

Designing Advanced Artifacts

Module Head:
Serena Cangiano

Semester:
Second

ECTS:
7

Module Hours:
104

ID200.01

**Multimodal User Experience Design
in Products**

Teaching Hours: 92

ID200.02

Documentation and Communication

Teaching Hours: 12

Teachers:
Serena Cangiano, Alice Mela

Assistant:
Matteo Subet

ID200.01

Multimodal User Experience Design in Products

What You'll Learn

With a focus on the domain of conversational agents and voice user interfaces, the course aims to guide the students in the design process to:

- ideate an interactive product based on multimodal interfaces; in particular they will concentrate on combining voice recognition and touch interfaces
- design and prototype a conversational agent and a voice user interface
- communicate and showcase a functioning prototype and documentation to describe the context of use and interaction modalities

Description

One of the biggest challenges for interaction designers today is to craft user experiences that leverage the power of intelligent agents as well as support people in their daily environments through different interaction modalities. Multimodal interfaces can help shape a more free and natural communication between people and devices through experiences that connect digital information, intelligent systems, and physical devices through natural modes of communication.

Format and Assessment

Format: offline and online lectures, intermediate assignments, coaching, and mentoring.
Workgroup-Based Course: the course assignments and the final project will be developed in teams of max. 3 students.

Examination: final presentation on the last day of the course.

The work executed will be evaluated with the following criteria:

- 10% research
- 40% concept & design
- 30% execution, prototyping, and product design
- 20% presentation and documentation.

References

Diana Deibel, Rebecca Evanhoe, Conversations With Things: UX Design for Chat and Voice
Christine W. Park, John Alderman, Designing Across Senses: A Multimodal Approach to Product Design

Cathy Pearl, Designing Voice User Interfaces: Principles of Conversational Experiences

Cheryl Platz, Design Beyond Devices: Creating Multimodal, Cross-Device Experiences

Teachers:
Serena Cangiano, Alice Mela

ID200.02

Documentation and Communication

What You'll Learn

- To document all components of the project developed during the module
- To refine the documentation for the future portfolio

Description

The course aims to produce the documentation of the project developed into the module. The student will have to write a description of the project, produce image documentation (digital outputs/screens in the case of digital software or photographs in the case of physical products), a video (the storytelling of the project), the software source files and the hardware schematics, accordingly to the provided examples and guidelines. More specific documentation may be requested depending on the course topic.

Format and Assessment

Students' evaluations will be based on the review of the requested materials. To assess this module, it is mandatory to hand in the project documentation.

References

References will be provided during the course.

ID211

Designing Advanced Environments

Module Head:
Leonardo Angelucci

Semester:
Second

ECTS:
7

Module Hours:
96

ID211.01

Prototyping Interactive Installations

Teaching Hours: 84

ID211.02

Documentation and Communication

Teaching Hours: 12

Teacher:
Leonardo Angelucci

Assistants:
Antonella Autuori, Matteo Subet

ID211.01

Prototyping Interactive Installations

What You'll Learn

- The main goal is to give the students a real understanding of the complexity of an interactive installation as well as a common foundation to prototype it using the combination of all the technical disciplines learned during previous courses
- You will learn how to ideate, design, and prototype, in a teamwork setting, an interactive installation following a given project brief
- To use Machine learning, HTML, CSS, Javascript, SQL, and Python as main programming languages to prototype interactive installations

Description

We live in the digital age, a time when technological innovation continues to transform and define our daily lives. This rapid technological evolution has drastically changed the way we interact with the world around us, and a particularly influential area is human-machine interaction.

The goal of the course is to design an interactive installation in relation to a specific context and scope of work.

The primary focus of the course is not accessibility, but rather the ability to experiment and conceptualize new forms of spatial interaction.

Students will be asked to experiment with new methods of human-machine-space interaction.

The technologies that will be used during the course are mainly web, machine learning, screens, and sensors.

Students will be required to work in groups in all major phases of the course: ideation, design, and prototyping. The teacher will aim to supervise as well as help with the technical and conceptual part of the entire course.

Format and Assessment

Format: the course will follow the typical process for all the ideation, design, and prototyping phases. Each week the teacher will provide details about intermediate activities and deliverables. Each group is encouraged to meet all the deadlines and deliverables asked by the teacher.

Workgroup-Based Course: the activities will be organized in a teamwork setting from the beginning. Each group will be encouraged to self-organize the activities according to the project phase and the teacher's suggestions. The teacher will guide and oversees the progress of each group weekly.

Examination: final presentation on the last day of the course.

Prerequisites

Attendees have a basic understanding of HTML, CSS, and Javascript paradigms.

References

Supplementary references will be provided during the course.

Teachers:
Antonella Autuori, Matteo Subet

ID211.02

Documentation and Communication

What You'll Learn

- To document all components of the project developed during the module
- To refine the documentation for the future portfolio

Description

The course aims to produce the documentation of the project developed into the module. The student will have to write a description of the project, produce image documentation (digital outputs/screens in the case of digital software or photographs in the case of physical products), a video (the storytelling of the project), the software source files and the hardware schematics, accordingly to the provided examples and guidelines. More specific documentation may be requested depending on the course topic.

Format and Assessment

Students' evaluations will be based on the review of the requested materials. To assess this module, it is mandatory to hand in the project documentation.

References

References will be provided during the course.

ID220

Designing Advanced Services

Module Head:
Giorgio Baresi

Semester:
Second

ECTS:
7

Module Hours:
88

ID220.01

Designing Intelligent Experiences

Teaching Hours: 88

Teachers:

Giorgio Baresi, Nicolò Calegari, Paolo Decaro, Martina Granello, Mariapaola Valicenti

ID220.01

Designing Intelligent Experiences

What You'll Learn

- Analysing a competitive landscape
- Conducting design research with end-users
- Synthesizing end-user observations and information into insights
- Designing an intelligent, multi-touchpoint product/service experience that delights end-users and is sustainable from a business perspective

Description

Ubiquitous technologies have changed the way people experience services. Nowadays, the expectation is not only to have a coherent, omnichannel experience but also interactions that are personalized (only for me), intelligent (learning from me), context-aware, and, ultimately, capable of raising a brand's relevance in an ever-changing, hyper-competitive landscape.

At the same time, the new normal we are living after the pandemic is setting new challenges and new opportunities in the design of services, redefining the boundaries between physical and digital, and allowing us to re-think and evolve the concept of hybrid and 'phygital' experience.

In this course, we will learn how to design an intelligent service experience across different touch-points and contexts: from gathering insights directly from our target users to identifying opportunity areas that satisfy unmet needs, to generating ideas that lead us to a concept that will be developed and prototyped.

Format and Assessment

Format: online lectures, intermediate assignments, coaching, and mentoring.

Workgroup-Based Course: the course assignments and the final project will be developed in workgroups of 3-4 students.

Examination: final presentation on the last day of the course.

References

References will be provided during the course.

ID230

Entrepreneurial Skills

Module Head:
Leandro Bitetti

Semester:
Second

ECTS:
5

Module Hours:
32

ID230.01

From Project Ideas to Market

Teaching Hours: 32

Teachers:
Leandro Bitetti, Monica Mendini

ID230.01

From Project Ideas to Market

What You'll Learn

- Be able to discover Business opportunities
- Be able to write and describe a Business Idea
- Be able to understand who your customer really is, what she/he wants, and what customer-centricity means
- Be able to write and describe a unique Value Proposition in response to customers' needs
- Be able to understand what market research is about
- Be able to design and test a Minimum Viable Prototype
- Be able to write, describe and discuss a Business model
- Be able to describe the main chapters of a Business Plan
- Be able to present and advocate their own business project

Description

Entrepreneurship is a fundamental process that promotes innovation, growth at the corporate level as well as at the level of economic and social systems. In addition, it is also a process that leads to self-accomplishment. There are many ways to support and promote this process. One of these is to discover potential business ideas and hence interesting business opportunities looking at the market, social, technological, institutional, and economic trends, and customer needs. This is also a way to support another fundamental process which is the knowledge and technology transfer from Science to Business. Graduates and master students are key agents in this process. Some recent developments in the business entrepreneurship field are particularly linked to the general framework of the MA in Interaction Design. We particularly investigate the role of the "entrepreneur" considered in a broader view as a sense-maker, as a language-maker, as a culture-maker, and as a history-maker. Moreover, entrepreneurship and innovation are increasingly customer-oriented and based on a problem-solving process. That is why we do believe that there are good chances to find interesting entrepreneurial seeds in the students' projects, ideas, or even dreams that deserve to be nurtured, supported, and promoted throughout the module. The module aims at developing a validated customer-centric Business Concept, with particular attention to the Value Proposition and the Business Model. The module will also provide an introduction to the Business Plan document and its main chapters (the financial projections and the customers in particular).

Format and Assessment

Format: offline video lectures, online discussion sessions (Q&A), and coaching and mentoring concerning the individual or group project.
Individual-based or Team-based Course: the course project may be carried out individually or in small teams of 2-3 students.
Examination: Students are expected to understand the business side of a project and be able to apply its basic concepts in their practical work.
 The certification of the module is composed of two main parts: the different forms (Value Proposition Canvas, Market Research Report, Business Model Canvas, and Financials) (80%) and the final oral presentation, i.e. Elevator Pitch (20%).

References

References will be provided during the course.

ID241

The Business of Design

Module Head:
Massimo Banzi

Semester:
Second

ECTS:
2

Module Hours:
30

ID241.01
Design for...Seminars
Teaching Hours: 30

Teacher:
Massimo Banzi

ID241.01

Design for...Seminars

What You'll Learn

– The main objective of the course is to provide knowledge useful to develop and produce a physical product and to start a proper business

Description

The course structures a series of seminars introducing some entrepreneurial aspects to consider when designing and implementing a physical product to start a new business. The lectures, taught by invited professors and professionals, have the goal of presenting theoretical and practical knowledge for building a product, focusing on salient aspects, such as how to design for hi-fi prototyping, how to design for manufacturing, and how to design for small and medium productions/series. Each seminar aims to offer contributions on topics that range from the more operational to the ethical ones.

Format and Assessment

Format: offline and online lectures.

Examination: attendance is mandatory. Presentation on the last day of the course of requested deliverables.

References

References will be provided during the course.

ID251

The Field of Interaction

Module Head:
Massimo Botta

Semester:
Second

ECTS:
2

Module Hours:
15

ID251.01

Maind-Expanding Talks

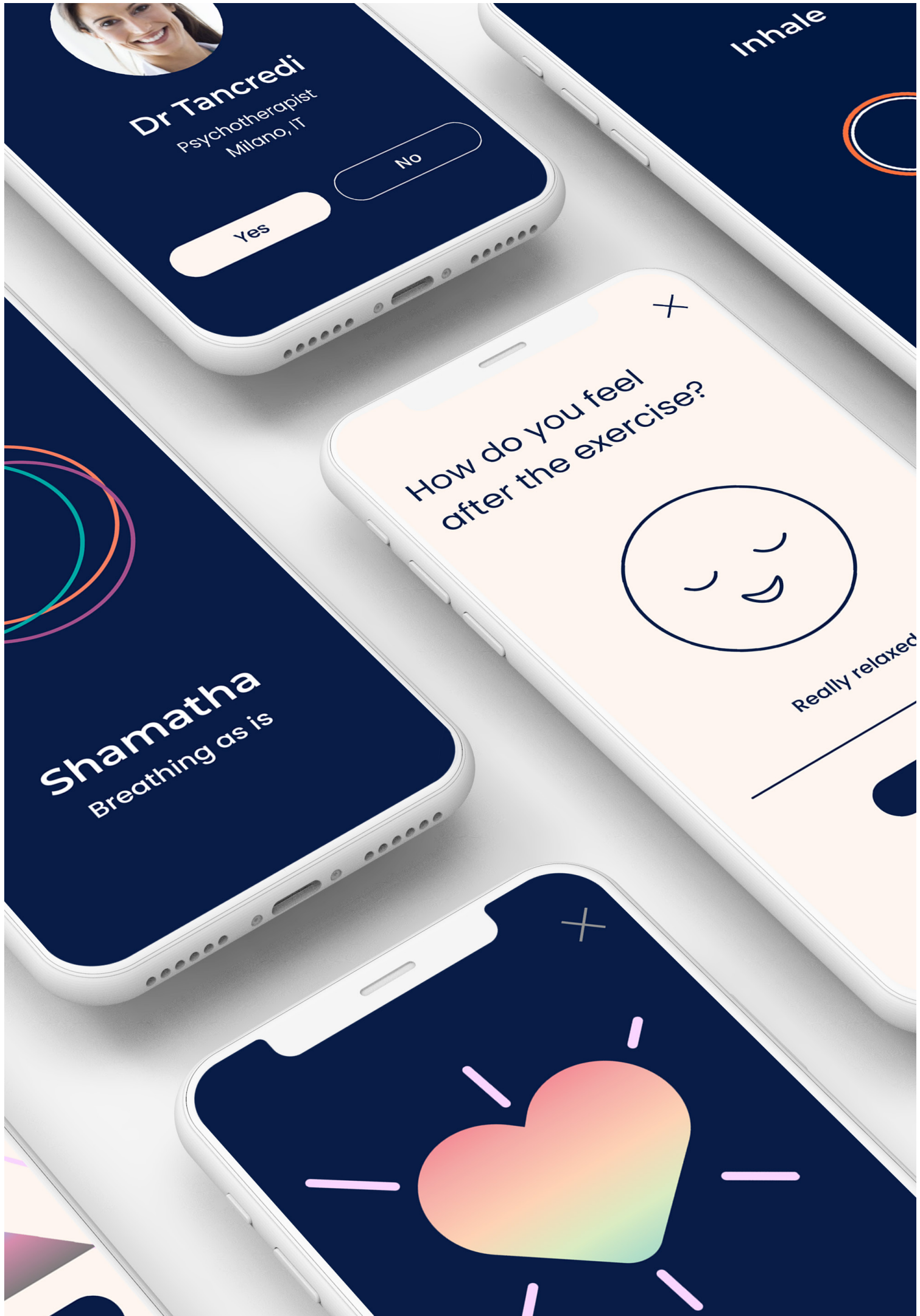
Teaching Hours: 15

Teachers:
Invited Speakers

ID251.01

Maind-Expanding Seminars and Talks

What You'll Learn	– The main objective of the lectures is to provide knowledge in interaction design, from broad topics to specific areas and skills
Description	The course is organized into a series of seminars and talks that address issues of interest in interaction design. The lectures, taught by invited professors and professionals, have the goal of presenting theoretical and practical knowledge useful for design thinking and practice.
Format and Assessment	<u>Format</u> : offline and online lectures. <u>Examination</u> : attendance is mandatory.
References	References will be provided during the course.



Dr Tancredi
Psychotherapist
Milano, IT

Yes

No

Inhale



Shamatha
Breathing as is

How do you feel
after the exercise?



Really relaxed



Second
Year

3rd
Semester

ID300

Master Thesis Project Module

Module Head:
Massimo Botta

Semester:
Third

ECTS:
30

Module Hours:
440

ID300.01

Thesis Project Definition

Working Hours: 40

ID300.02

Thesis Project Development

Working Hours: 400

The thesis project module concludes the training and aims to apply the knowledge acquired to a complex topic over a longer period of time to create an original project in the field of interaction design.

The thesis project module is organized into two parts devoted to the development of the Master Thesis Project. Students are expected to identify a thesis challenge and select a thesis mentor, and, if necessary, establish a network of people, institutions, and companies for the completion of the thesis project.

Participants have to present the thesis challenge to the Thesis Jury for evaluation and approval. After this step, participants will develop the thesis project and present it to the Thesis Jury for the final evaluation.

Thesis Project Plan

The plan of activities listed below represents the necessary issues/items/points that students have to develop for the completion and the dissertation of the thesis project. The plan is organized into two main courses: the Thesis Project Definition and the Thesis Project Development.

Prerequisites

To attend the Master's Thesis Project Module, the student must have certified all modules and obtained 60 credits from the previous semesters.

Remarks

- It is mandatory to be present at the Mendrisio campus for the thesis dissertation and the exhibition at the end of the Master Project Module.
- Before the start of the Thesis Project Development, the student must have the proposed thesis challenge definition approved by the Thesis Jury.

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Teachers:
Thesis Jury and Thesis Tutors

ID300.01

Thesis Project Definition

What You'll Learn

- Define the thesis topic
- Identify a thesis tutor
- Identify a company, organization, or institution for the development of the thesis project

Description

The course provides a methodological tool for defining a thesis topic and introduces the work plan to be carried out in the second part of the module: the Thesis Project Development. The student must identify a topic to investigate, formulate a design challenge, elaborate the How Might We Question that will guide the project, and select the industry sector of interest.

The student is also responsible for identifying a mentor and planning an internship in a design practice, company, industry, or institution.

Format and Assessment

Format: offline/online lectures, presentations, and discussion sessions (Q&A).

Individual-based Course: the course may be carried out individually.

Examination: students are expected to deliver the methodological tool filled out and a short text to the Thesis Jury. The certification of the module takes place through the approval of the Thesis Project Definition.

References

References will be provided during the course.

Teachers:
Thesis Jury and Thesis Tutors

ID300.02

Thesis Project Development

What You'll Learn

- Develop a complete project from ideation through user research, documentation, and implementation of an interactive prototype
- Apply a human-centered design methodology to a complex project over an extended period of time
- Work independently and organize tasks
- Experience a work environment

Description

This phase focuses on the development of an interaction design project which must be fully developed in all formal, behavioral, and functional details according to a plan of activities.

The plan of activities represents the necessary issues/items/points that students have to develop for the completion and the dissertation of the thesis project.

Students must prepare the documentation required for each stage of progress and submit it to the Thesis Jury.

The module ends with the delivery of the required materials, the defense of the thesis project to the Thesis Jury, and the organization of a closing exhibition of the thesis projects.

Format and Assessment

Format: offline/online feedback and presentation session.

Individual-based Course: the course may be carried out individually.

Examination: students are expected to deliver and present the required documents and materials to the Thesis Jury at each stage of progress. The evaluation of the thesis project takes into account the student's path throughout the whole module and is expressed through a grade.

References

References will be provided during the course.



Faculty

Master Commission

Massimo Botta

Massimo Botta is a professor in interaction design, head of the Master of Arts SUPSI in Interaction Design, and head of the research area on Interaction design at the Institute of Design. He holds a Ph.D. in Industrial Design and Multimedia Communication from the Polytechnic of Milan and he worked at Domus Academy Research Centre and Philips Design as Senior Design Consultant. He carries on a theoretical and research activity in the field of interaction design, the design of new products and services, digital archives, user-centered interfaces and software design, interaction modalities and techniques, knowledge organization, and information visualization. He is the author of the theoretical book on computer-based systems *Design dell'informazione. Tassonomie per la progettazione di sistemi grafici auto-nomatici* (2006) and the editor of the book *Multiple ways to design research. Research cases that reshape the design discipline* (2009). With Prof. Sabine Junginger, he is the editor of the conference proceedings *Design as Common Good. Framing Design through Pluralism and Social Values* (2021).

He has been the Head of the Master of Advanced Studies SUPSI in Interaction Design from 2011 to 2020.

Serena Cangiano

Serena Cangiano works at SUPSI as a researcher and as the head of the FabLab DACD (founded in 2012), a laboratory dedicated to digital fabrication and open innovation. From 2009 to 2020, she also served as the program coordinator of the MAS in Interaction design. As a professional, she operates in academic, educational, and industry contexts to make projects where the encounter among design, tech, and making fruitfully happens. During the last ten years, she has been designing, teaching, and coordinating workshops and projects in collaboration with an international network of interaction designers, creative coders, and (change)makers. She co-edited "Open Technologies", the issue n.30 of *Progetto Grafico*, the Italian magazine on graphic design; the book "Rebelling with Care" (WeMake, 2019). Her last publication is included in the book "The Critical Makers Reader - (Un)Learning Technologies" (Amsterdam University of Applied Sciences, 2019). She gave workshops and public talks at events such as LIFT Conference Geneva, HEK Basel, LIMA Platform for Media Art Amsterdam, ISEA HK, Dani-

sh Design Center, FHNW. She moderates and co-curates public events and exhibitions on the encounter between coding and design such as the exhibition *Codici Visivi* (Turin, October 2019) and *Processing Community Day* (Turin, February 2019). In 2017 she was awarded the ETH Zürich exchange grant to collaborate with *Motaelastico* Architectural studio and *IDAS International Design School* on the first *Seoul Architecture Biennale*. She has been collaborating with Swiss and international organizations, such as the *Educreators Foundation*, *WeMake Makerspace*, *TODOMedia & interaction design*, and worked as a business coach at *Creative Hub*. Together with *Leyla Tawfik*, she is the co-founder of the *Ethafa* project, a kit for teaching programming and electronics to kids through playful stories (successfully powered by *Gebert RUF Stiftung*).

Alice Mela

Alice designs interactive experiences for products, museums, exhibitions, spaces, and events, with a focus on User-Centered Design aspects and User Experience. With an educational background between Product and Interaction design and almost 10 years of experience in the field, she leads large-scale projects from concept to realization. Since 2011 she has been an active member of the makers and Fablabs community, with collaborations with *Fablab Amsterdam*, *Fablab Dahahran*, and *Fablab Torino*. Since 2020 she is Vice President of *Fablab Torino*. Since 2012 she has been teaching classes and workshops on diverse topics, from User Experience to interactive prototyping, and for different educational institutions, such as *Willem De Kooning Academy*, *IED*, *NABA*, *Domus Academy*, *SUPSI*, and more

Teaching Staff

Alberto Andreetto

Alberto is a designer with a focus on interaction and service design. He worked for startups and corporates in Italy, Switzerland, and Germany before joining *Sketchin* in 2017. Since then, he designed services in Italy, Switzerland, Angola, Russia, Germany, and UAE paying attention to how a user should interact with any kind of services and interfaces. Lately he focused on digital prototyping and on designing human interaction mediated by technology carrying out different projects with a human core interaction.

Leonardo Angelucci

Leonardo Angelucci is an art director, graphic designer and coder based in Zurich, Switzerland. Focusing on code, graphic design for screen and print, he works mostly with culture and institutions. Angelucci is a lecturer for the Bachelor in Visual Communication at SUPSI and has led workshops worldwide and is a visiting lecturer at several universities.

Antonella Autuori

Assistant

Antonella Autuori is a communication designer with a Bachelor's degree in Interior design and a specialization in Graphic design and Data Visualization from *Politecnico di Milano*. She has been working for about a year as a collaborator at *Accurat*, a Milan-based data visualization studio, and she has taken part in several short-term research projects in collaboration with *Uva*, *University of Amsterdam of New Media*, and *iNova Media Lab Lisbon* on the topic of information design and the role of the algorithms in our society. During her master's thesis, carried out at the *Density Design Lab* of the *Polytechnic University of Milan* in collaboration with *King's College* and the *University of Amsterdam's New Media (Uva)*, Antonella worked on developing new methodologies for analyzing and synthesizing collections of video data to facilitate the study of these materials in the context of social research on the web. Since 2021, she has been a research assistant at the *Design Institute SUPSI* and a teaching assistant at the Master of Arts in Interaction Design. In 2022, Antonella created the first *Data Visualization* course in the Bachelor's program in *Creative Communication* at *IED* in Turin, where she currently serves as a lecturer.

Her research focuses on experimenting and systematizing the application and intersection of *Machine Learning*, *Artificial Intelligence*, and *Data Visualization* within the field of Design. Related to these fields, she started the research project "Designing With: AI+ML+DV," funded by *Movetia* and in collaboration with *EPFL* and *Universidade Nova de Lisbon*, aimed at integrating these practices into the pedagogical curricula of Design.

Massimo Banzi

Massimo Banzi is an Interaction Designer, Educator, and Open Source Hardware advocate. He's the co-founder of *Arduino* where he currently works. Before *Arduino*, he spent 4 years at the *Interaction Design*

Institute Ivrea as an Associate Professor. He also worked many years as a consultant on interactive projects and was a software architect in Milan and London.

Massimo teaches Interaction Design, runs workshops, and is a public speaker at institutions all over the world.

He currently teaches at the Universities of USI and SUPSI in Lugano and Mendrisio.

Federica Bardelli

Federica Bardelli is working at Sketchin / Switzerland as visual designer and as affiliated researcher at Visual Methodologies Collective / HvA Hogeschool van Amsterdam - Faculty of Digital Media and Creative Industry (FDMCI). She obtained in 2013 a master's degree in Communication Design at Politecnico di Milano where she collaborated for two years with the research department DensityDesign Lab. She also studied for a master's degree in New Art Technologies at Accademia di Belle Arti di Brera - Milan and she spent a semester in France at ESADMM - École Supérieure des Beaux-Arts de Marseille where she practiced sculpture and photography. She used to teach Communication Design at Politecnico di Milano and worked with IED (Istituto Europeo di Design), IULM, and NABA.

Her research focuses on new visual languages applied to research, specializing in information and data visualization strategies with digital methods, co-design processes and speculative discussions.

Giorgio Baresi

Giorgio is Executive Design Director at Spark Reply, where he leads a multidisciplinary team of service, interaction, and visual designers based in Milan and Munich.

As a creative leader with 15+ years of experience both as a designer and as a manager, Giorgio has partnered with clients such as Novartis, Roche, General Electric, Intel, AXA, Generali, and Swisscom, shaping new ideas and distilling them into products and services that meet users' needs and advance their experience by bringing meaning to their life. Moreover, both as a professor and a design director, Giorgio coaches and mentors young design talents to ensure they are ready to face today's challenges in an ever-evolving industry.

Leandro Bitetti

Leandro Bitetti is Lecturer-researcher at the Competence Centre for Management and Entrepreneurship at the Department of Business Economics, Health and Social

Care of the University of Applied Sciences and Arts of Southern Switzerland (SUPSI), a Ph.D. student in the field of Business Model Innovation at the Faculty of Communication, Culture, and Society at the Università della Svizzera italiana, in Lugano, and a Scientific and Community Coordinator of the International Society for Professional Innovation Management (ISPIM).

He holds a Master of Science in Management with a specialization in Organizational Behavior from the University of Lausanne. His main responsibilities concern education, research, and consulting activities in the field of innovation management and entrepreneurship, in particular in the area of innovation strategy and business model design. He is involved in numerous entrepreneurship training initiatives in Switzerland, such as the Boldbrain startup challenge, where he is also a member of the Regional Jury.

Nicolò Calegari

Nicolò works as Principal Designer at Spark Reply, where he leads teams of designers on national and international projects covering the design process end-to-end, supporting clients from the opportunity framing until the delivery of the final solution or product. His main role is to coordinate and lead Spark design teams in the process of translating users' needs and business requirements into valuable and delightful experiences leveraging a design-driven methodology, with a particular focus on the Interaction Design discipline.

Sarah Corti

As Sketchin's Chief Design Officer, Sarah leads the design team in delivering excellence to customers, collaborating effectively with the company's leadership.

With her 10+ years of design and management experience, Sarah creates long-lasting, sustainable value for Sketchin's clients by evolving organizations, shaping business transformation, and enhancing the human experience. Among some of the main partners she has worked with with Artemide, Fastweb, Sky, Mondadori, FC Internazionale, Repower, Xpo, RSI, SUPSI, Ticino Turismo, Berlin Packaging and Cerved. She's also a Professor and Design Director mentoring young talents to face tomorrow's challenges in an ever-evolving industry.

Paolo Decaro

Paolo is Design Manager at Spark Reply, moving from experience design and experience strategy to help companies innova-

te, support them in change management processes, and bring their focus to their customers and final users. He's been working within different industries such as healthcare, insurance, real estate, automotive, and education.

Paolo believes that empathy is the key to truly understand users' needs and expectations and create the perfect match to business objectives.

Ubi De Feo

Born in 1974, Ubi belongs to one of the luckiest and unique generations that ever lived: part of a demographic which grew up without the Internet, he slowly saw the internet appearing on computer screens, and gradually transitioned to a world in which connectivity lies in our pockets, on our wrists, in our fridge and many more connected devices.

Ubi started taking stuff apart when he was 6, and this desire to discover the inner workings of objects has guided him throughout his whole life via hacking computers, engines, code, and electronics. Armed with this curiosity he became interested in many aspects of computing and technology, as well as many other things "technical". Ubi moved to Amsterdam in 2002 where he worked as a Creative Technologist for the advertising industry and then rediscovered his passion for working in the physical realm building tangible experiences. Teaching programming, electronics, and prototyping techniques, he often develops his own methods to explain really complicated things in a more down-to-earth fashion. Believing that you cannot teach what you don't thoroughly understand, often leads him to learn entirely new subjects in order to explain them to himself and others. In his off-time (mostly when doing the dishes) he thinks about ways to improve things or invent new ones. He began experimenting with mobile devices in the early 2000s, and his first internet-connected objects saw the light in 2007. These days he works for Arduino as the product owner of software tools and the Internet of Things, and in his off time, he's learning woodworking. Ubi loves talking about the future but treasures the experiences of the past.

Fabio Franchino

Fabio is a computational designer and a founding partner at ToDo. He has always been involved in creative processes, in fields ranging from music to design, passing through performing and generative arts. One day he discovered the potential of

programming as a medium and unconventional tool for his creative purposes, and he has explored ideas through evolving processes, often finding unexpected, meaningful outcomes and new aesthetics, ever since. After gaining senior experience with ActionScript and Processing, he has been exploring the Web Platform, trying to exploit the creative potentials of that platform. He has taught at several institutions and has held workshops in his field of expertise; he also organized the first Italian event devoted to computational practices in art and design.

Elisabeth Graf

Elisabeth is a freelance service designer who worked for different design agencies across Europe such as Livework and Idean (now frog). She gained experience across a wide range of sectors including healthcare, travel, public services and fintech. The goal: crafting engaging service experiences and supporting teams in increasing the capability for change. She conducts research, translates findings into actionable insights and develops new experiences to test and implement. She regularly coaches small companies in their adoption of Service Design methods and new ways of working. As well as facilitating workshops for private organizations and public institutions such as the Politecnico di Milano, University of Padova, Fondazione Ca'Foscari. Having supported many organizations in developing new value propositions she is now creating her own: IMMA. It stands for impact makers and is a collective of experts working in the field of climate adaptation. IMMA helps organizations grow their capacity to prepare, manage and recover from disasters and the consequences of the climate crisis.

Martina Granello

Martina is a dynamic design professional with a diverse background in crafting transformative user experiences. Martina partnered with start-ups and established companies, leading venture design, strategic repositioning, and redesign projects. Currently serving as a Design Lead at Spark Reply in Milan, Martina's ambition is to inspire her team and create meaningful impacts in the design landscape. As a service designer, she thrives on orchestrating solutions that harmonise user expectations and business imperatives. Martina's holistic approach encompasses comprehensive evaluations of users, stakeholders, infrastructure, channels, and business strategies, coordinating teams to deliver experiences that leave

lasting impressions and drive companies toward success.

Andreas Gysin

Andreas Gysin was born in Zurich, and currently lives and works as a graphic and interaction designer in Lugano. Writing custom programs is part of his design process independently of the output medium. Whenever he is not busy working on commercial or experimental projects, he teaches interaction design and programming at SUPSI (Lugano), ECAL (Lausanne), ISIA (Urbino), and at occasional workshops worldwide.

Matteo Loglio

Matteo Loglio is a product and interaction designer, currently a founder of and director at oio, a new design lab. Matteo works at the cutting edge of design and technology, on experimental projects big, small, and often the first of their kind. He recently designed a musical instrument for Google, he taught a river in London to write poetry using AI and started the ed-tech company Primo Toys – a wooden robot that is changing the lives of millions of children who use it every day. Matteo talks about design and creativity in universities, museums, and hackerspaces around the world. Sometimes you can find his work exhibited in places like MoMA NY, V&A London, or Triennale Milan.

Marco Lurati

Marco Lurati graduated in Micro-engineering at the Bern University of Applied Sciences in Biel/Bienne and holds a Master of Advanced Studies in Interaction Design from the University of Applied Sciences and Arts of Southern Switzerland (SUPSI). As an engineer, he worked at Sensoptic SA in the production and quality control of optical sensors, as well as the design and customization of production tools and mechanical and micro-mechanical manufacturing. He is currently working for the Institute of Design - Interaction Design research area as a scientific collaborator. He collaborates on the development of web and mobile applications and carries out interaction design projects.

Monica Mendini

Monica Mendini is a research lecturer in Marketing at the Department of Business Economics, Health and Social Care of the University of Applied Sciences and Arts of Southern Switzerland, SUPSI. Before joining SUPSI, she obtained her Ph.D. in Marketing (sponsored by the Swiss National Science

Foundation, Doc.CH) at the Università della Svizzera italiana in Lugano, where she still teaches in graduate programs. Her research focuses mainly on consumer behavior, with particular reference to consumer-brand relationships, cause-marketing, design thinking, food consumption, and consumer well-being. Her work has been published in the Journal of Business Research, Journal of Consumer Behaviour, Qualitative Market Research, and Marketing Education Review.

Giovanni Profeta

Giovanni Profeta holds a Ph.D. in Design from the Politecnico di Milano, where he developed, at the DensityDesign research lab, a thesis about user interfaces for access to digitized cultural collections. After obtaining his Master's degree in Visual and Multimedia Communication from the University IUAV of Venice, he collaborated on web design and digital publishing projects. As a researcher at the Institute of Design of the University of Applied Sciences and Arts of Southern Switzerland (SUPSI), he carries out applied research projects focused on data visualization and interaction design. He also teaches interaction design and map design within the Bachelor SUPSI in Visual Communication.

Matteo Subet

Assistant

Matteo Subet is an interaction designer who pursued product and nautical design at the University of Genova before earning a Master's degree in Interaction Design from SUPSI. He has worked as a freelance web designer and has also explored design and technology through personal projects in physical computing. During his Master's degree program, Matteo collaborated with the Spearhead research project to develop a novel method for digitizing the laboratory experience of antibiogram testing. This project aimed to raise awareness of antimicrobial resistance and was completed at the FabLab at SUPSI as part of his thesis project called DiPLab - Digital Petri Laboratory. Since 2023, Matteo has been working as a teaching and research assistant at the Design Institute at SUPSI. He continues to delve into new technologies in the design field and physical computing, and his research focuses on interaction design.

Enrico Tedoldi

Enrico is a designer with a strong fascination for digital and new technologies. His

background and his work experience in the Service Design field, in the academic and research environment, combined with his "maker" attitude are granting him the opportunity to understand, see and design from complementary perspectives. In this way, he's capable to support companies by envisioning new services and improving the existing ones from research to actual implementation.

Elena Zordan

Elena Zordan is General Manager in Sketchin Switzerland. She has professional experience as Executive Design Director with more than 10 years of practice in designing integrated UX/CX strategies for digital products, services, ecosystems, and strategic consultancy.

Her professional and academic work history combines continuous in-depth research and exploration about the best human-centered design techniques, tools and approaches for service, interaction, and design research, as well as connections between design, design thinking, innovation processes and business strategy. Her focus extends from digital to physical experiences, from single products and touch-points to complex ecosystems and services. She has worked leading a wide range of multidisciplinary design teams, innovation, and digital transformation programs, within different industrial fields: bank and financial services, e-commerce, consumer products, telecom and media, fashion, luxury, tourism, retail, pharma, and energy. She enables teams and companies to embrace design thinking, agile principles, and methodologies to improve the way people work and how processes are designed, unlocking a continuous improvement

virtuous cycle. She is interested in systemic design & innovation, helping companies and institutions to evolve by launching new products and services that can generate a positive impact on the system in which we live or that we will experience in the future. She is currently Adjunct Professor at SUPSI, School of Design - Politecnico di Milano and LIUC - Carlo Cattaneo University, where she teaches Design Thinking, Design Research, Business and Visual Design. She is also involved in extensive teaching activities and collaboration in post-graduate courses and masters.

Academic Year 2023/2024

Applications

Application deadline: please check the following websites:

<https://www.supsi.ch/dacd/bachelor-master/interaction-design.html>

https://www.supsi.ch/home_en/bachelor-diploma-master/master/interaction-design.html

<https://maind.supsi.ch/>

Fall Semester 2023

Start of courses: 18 September 2023

End of courses: 09 February 2024

Suspension of Courses

23 December 2023 – 07 January 2024: Christmas holidays

Spring Semester 2023

Start of courses: 19 February 2024

End of courses: 14 July 2024

Suspension of Courses

29 March – 07 April 2024: Easter holidays

Public Holidays

01 November 2023: Ognissanti

08 December 2023: Immacolata Concezione

19 March 2024: San Giuseppe

01 May 2024: Festa del Lavoro

09 May 2024: Ascensione

20 May 2024: Lunedì di Pentecoste

30 May 2024: Corpus Domini

29 June 2024: San Pietro e Paolo

01 August 2024: Festa Nazionale

15 August 2024: Assunzione

Summer Exam Session (make-up session)

16 August – 02 September 2024

Fall Semester 2024

Start of courses: 16 September 2024

End of courses: 9 February 2024

Information

Scholarships

Students can benefit from cantonal scholarships under certain conditions of income and residence in Ticino (their own or their parents, if they are dependent on them).

Ufficio degli aiuti allo studio Residenza governativa

Piazza Governo 7
CH-6501 Bellinzona
+41 (0)91 814 34 32
www.ti.ch/aiutistudio

Career, Experience and Study Advisory

Area gestione amministrativa studenti
Via Pobiette 11
CH-6928 Manno
+41 (0)58 666 60 04
amministrazione.studenti@supsi.ch

Bibliography

Teaching activities are carried out with the support of digital documentation consisting of a basic bibliography and handouts prepared by the teachers.

Canteen

At the DACD Campus in Mendrisio, there are a canteen and a bar available to students and staff.

Library

SUPSI has specialized thematic libraries, integrated with the national university catalog Swissuniversities. The libraries are available to students from Monday to Friday. For timetables, databases, and further information: <https://www.supsi.ch/biblioteca.html>

At the Department of Environment Constructions and Design, there is also the Materioteca which, along with the library, is part of the DACD biblio-documentary hub.

Languages and Mobility

Language courses for SUPSI students are organized by a unit dedicated to foreign languages. The purpose is to provide students with the necessary language skills to facilitate their integration into the professional world in Switzerland and abroad.

Area Lingue Straniere (LIST)
Dipartimento formazione e apprendimento (DFA)
Palazzo E, Via Cantonale 16e
CH-6928 Manno
+41 (0)58 666 61 33/34
dfa.list@supsi.ch

The International Office manages SUPSI's mobility programs.

It is possible to carry out semesters of study or internship in a partner institution, obtaining recognition of the earned credits.

SUPSI International Office
Le Gerre, Via Pobiette 11
CH-6928 Manno
international@supsi.ch

Laptops, Notebooks

All students are required to use their laptop computers during courses.

The Department of Environment Constructions and Design provides an adequate number of connections to the computer network. IT services can advise students about the purchase of laptops and programs suitable for their chosen degree course.

<https://si.supsi.ch/>
it.dacd@supsi.ch

Internet, e-mail

Throughout their studies, SUPSI students have free access to the Internet and receive a personal email address in the format `firstname.lastname@student.supsi.ch`.

To use these services, all students must respect SUPSI's norms and regulations for the use of IT infrastructure.

Access to Facilities

Access to the Campus is granted without particular time restrictions for carrying out the planned activities. Students receive a badge that allows them to access the Campus and the department's IT infrastructure. Smoking is prohibited in enclosed areas of public use, including hallways. The regulations and orders handed out by the responsible staff also apply.

Language of instruction

The courses are held in English.

SUPSI Sport

A dedicated service, addressed to students, organizes sports activities aimed at promoting socialization and the improvement of students' personal values and skills. An exclusive program allows them to participate in weekly activities, group and training courses, and national/international events.

Servizio carriera, esperienza e orientamento
Area esperienza universitaria
Via Pobiette 11
CH-6928 Manno
sport@supsi.ch
www.sport.supsi.ch

Insurance

Students are not insured by SUPSI for treatment in case of illness or accident, and therefore they must be insured privately (LaMal or European Health Card). Enrolled SUPSI students are insured in the event of bodily or material damage to third parties

occurring during work/study time through SUPSI's civil liability insurance.

Sportello Assicurazioni SUPSI
Stabile Le Gerre, Via Pobiette 11
6928 Manno
assicurazioni@supsi.ch

Military Service

In case of military duty please contact course secretary or the following address:

Sezione del militare e della protezione della popolazione
Piazza Governo 7
CH-6501 Bellinzona
Tel. +41 (0)91 814 33 21
di-smpp@ti.ch
www4.ti.ch/di/smpp/section/

Arriving by Public Transport

It is possible to reach the Department of Environment Constructions and Design by using public transport. Stop at FFS station in Mendrisio.

FFS: Ferrovie Federali Svizzere
AMSA: Autolinea Mendrisiense
AutoPostale

SUPSI grants a 20% contribution towards the purchase of an Arcobaleno annual pass to students who purchased one before December 1st.

For further information on public transport, please consult the following websites:

www.ffi.ch
www.amsa.ch
www.postauto.ch/it
www.arcobaleno.ch

Arriving by Car

(see QR code on the following page)

It is possible to reach the Department of Environment Constructions and Design by car, follow the directions below:

1. Take the A2 highway
2. Exit in Mendrisio
3. Drive towards the Mendrisio FFS train station

Parking

On the lower floors of the Campus, there is a parking garage (Park & Ride della stazione FFS di Mendrisio).

Address

Campus SUPSI Mendrisio
Via Flora Ruchat-Roncati 15
CH-6850

Helpful Addresses

master.mid@supsi.ch

SUPSI Direction

Le Gerre
CH-6928 Manno
tel. +41 (0)58 666 60 00
fax +41 (0)58 666 60 01
info@supsi.ch
www.supsi.ch

**Department of Environment
Constructions and Design**

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Business and social sciences**

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Healthcare**

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www.dsan.supsi.ch

Department of Innovative Technologies

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CH-6928 Manno
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fax +41 (0)58 666 65 71
dti@supsi.ch
www.dti.supsi.ch

**Department of Education
and Learning**

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CH-6600 Locarno
tel. +41 (0)58 666 68 00
fax +41 (0)58 666 68 19
dfa@supsi.ch
www.dfa.supsi.ch

E-mail addresses of collaborators of the
Department of Environment Constructions
and Design:

All SUPSI collaborators have an email
address in the format
firstname.lastname@supsi.ch

How to
Reach Us



More
Information

