SUPSI

Scuola Universitaria Professionale
della Svizzera Italiana

Master of
Advanced Studies
in Interaction Design

Designing Advanced Artifacts, Environments, Networks and Services

Table of contents

Short Description

What is the Master of Advanced Studies in Interaction Design?

The MAS in Interaction Design is a master that combines design, new media, robotics, intelligent systems and high–tech materials 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 MAS program places interaction design disciplines at the centre of an original curriculum where it serves as the key element in the design of Advanced Artifacts, Environments, Networks and Services.

Professional opportunities

The interaction designer is the professional specialized in designing the functional and behavioural features of technological products and systems that the users interact with.

The main skill of the interaction designer consists in the conceiving of advanced technological products based on the combination of design competencies – focusing on the definition of the formal characteristics and the use modalities of products – with a deep understanding of the technological aspects.

The interaction designer works on interface systems, electronic devices, responsive environments, services and systems for knowledge acquisition and communication.

In the job market, the interaction designer is an emergent figure that can apply for different professional positions. He or she can work:

– in design related fields working in projects in which technology is the core topic such as communication design, interior design, industrial design and interaction design;

– in interdisciplinary fields like product innovation, design engineering, orientation design, corporate communication, environmental design; as a designer or responsible for both the design management and the project development;

– in companies, consultancies and institutions offering complex services where innovation is a key competitive advantage, such as telecommunications, consumer electronics, media and web companies, industry, distribution, finances and public sector.

Goals and contents

The MAS program offers to students specialized knowledge and skills of interaction design. Analytical methods and pragmatic problem-solving approach to design are applied in a laboratory environment where prototyping and testing of various solutions qualify the students to pursue professional design career goals in industry, research or studios, wherever technological innovation and design meet. The goal of the master is to train skilled professionals able to lead interdisciplinary team design projects within the most innovative industrial and design fields.

Program

The MAS is a one year program. It proposes different design modules, whose topics are complementary.

– The program begins with a introductory module structured around practical workshops that hone the technical, methodological and practical skills of interaction design discipline.

– The following modules are project based. These modules present complementary design topics that the student has to select according to her/his interests. Complementary design topics of the Module 2 are dedicated to the design and the development of Advanced Artifacts and Networks. Complementary design topics of the Module 3 are dedicated to the design and the development of Advanced Environments and Services. Both modules 2 and 3 are provided with common courses on theoretical, methodological and technical knowledge.

– The fourth and final module is dedicated to the development of the thesis project.

Each module releases 15 ECTS. Students can apply for just one module as a Certificate of Advanced Studies (CAS) course.

Target students

The MAS in Interaction Design is addressed to students with a developed creative talent combined with a strong motivated interest in the changing technological, social, cultural context within which the future will be designed.

Admission requirements

Requirement for the acceptance to the MAS in Interaction Design program is a degree in an appropriate field such as visual communication, industrial design, interior design and architecture, communication sciences and computer sciences. Equivalent studies and professional experiences may be evaluated in an individual admission procedure.

Certificate

Master of Advanced Studies SUPSI in Interaction Design.

Admission procedure

Candidates are asked to present the documentation requested within the application for admission. Selected candidates can be invited for an interview with the direction of the MAS program and a board of experts.

Duration

Two full time semesters (60 ECTS).

Dates

The application deadline is 16th October, the interviews are held during November and the enrolment deadline is 18th December 2009.

The Master of Advanced Studies in Interaction Design starts on the 22nd February 2010.

Fees

15.000 CHF/10.000 Euros for the full year attendance.
6.000 CHF/4.000 Euros for a single CAS.
300 CHF/200 Euros application fee (MAS and CAS).

Teaching language

Courses are held in English and Italian.

**Concept and Structure
of the MAS Program**

Concept of the MAS Program

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

1. **The Design Domain**: Interaction Design disciplines and knowledge related to the wide field of design, such as the Visual Communication field, the Industrial Design field, the Interior Design field and as well as new fields like Services Design, Sustainable Design etc;

2. **The Technical Domain**: Composed of those ICT technologies useful to driving design innovation and for techniques of applied research methods and business models to provide the organizational feasibility and rigor of design solutions;

3. **The Public Domain**: The intellectual, critical and social role of the designer, where design answers human needs and rights considering three emerging topics: the information society, the sustainable development and the public concern.

The MAS Program merges these different competencies in a specific curriculum, where **Interaction Design** is the key element for the conception and creation **of Advanced Artifacts, Environments, Networks and Services**.
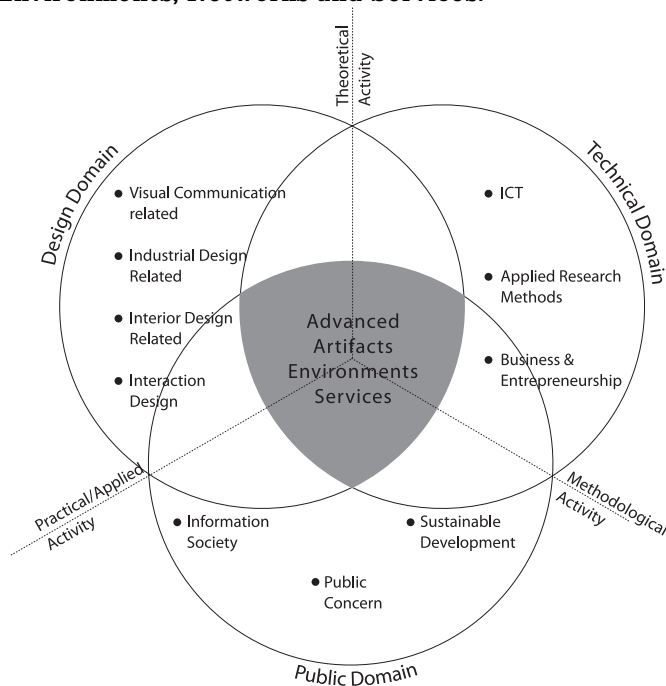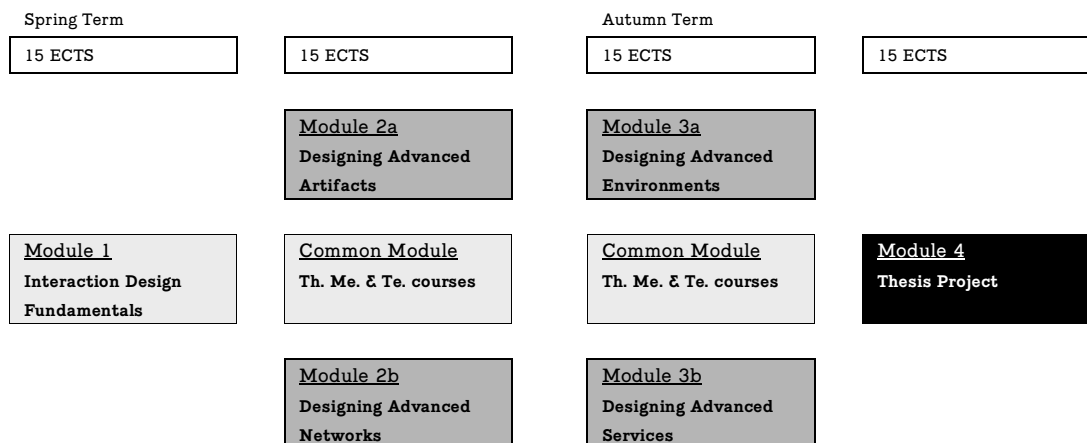

The curriculum of the MAS Program provides students the opportunity to acquire specialized knowledge and competences, specific methods for the analysis and the solution of design problems and the ability to autonomously understand and practice research methods and to adopt these methods in their own work. The ability to adopt existing methods and to develop new ones is one of the central competences of the MAS Program that qualifies the student for careers in companies where innovation crosses interaction design area.

Modules of the MAS Program will focus on the different specializations and through these three main activities: theoretical activities (courses and seminars), methodological activities (courses, seminars and applied research) and projects (design workshops with applied research) as well as the development of the thesis project.

Structure of the MAS Program

The MAS Program covers 2 semesters and it is developed through four kinds of modules:
1. The **Fundamental Module** gives students the basic skills for the interaction design practice;
2. The **Design Modules** give students the opportunity to face a particular area of interaction design through the development of projects with a different scale and centred around different design topics;
3. The **Common Modules** give students interaction design knowledge to support the design activity.
3. The **Thesis module** is focused on the development of the thesis project, where the student works in term of design research to generate applicable knowledge and new forms of entrepreneurships.

Spring Term

| 15 ECTS | 15 ECTS |

Autumn Term

| 15 ECTS | 15 ECTS |

Module 2a
Designing Advanced Artifacts

Module 3a
Designing Advanced Environments

Module 1
Interaction Design Fundamentals

Common Module
Th. Me. & Te. courses

Common Module
Th. Me. & Te. courses

Module 4
Thesis Project

Module 2b
Designing Advanced Networks

Module 3b
Designing Advanced Services

The **Fundamental Module** is organised in a series of workshops that merge design competencies with those one coming from the computer science fields. These workshops give students the fundamental design and technical backgrounds of the interaction design discipline useful to prototype interactive artifacts, environments, networks and services.

The **Design Modules** investigate four specific design topics:
– the conception and the development of **Advanced Artifacts**, the relation between the human being and the development of new kinds of objects;
– the conception and the development of **Advanced Environments**, considering human beings and their immersion in a specific physical or cognitive context;
– the conception and the development of **Advanced Networks**, considering how human beings can be connected sharing information and experiences;
– the conception and the development of **Advanced Services**, how human beings are involved in new work sequences and processes, new relations and forms of business.

The **Common Modules** consist in 5 courses that give students the theoretical, methodological and technical knowledge to face the issues concerning the fields of interaction design;

The **Thesis Module** schedules the thesis development. The student has to select and define the thesis topic, to write an essay that focuses his/her research area, to search for a thesis advisor and the establishment of a network of competencies with people, institutions and companies necessary to the completion of the thesis project.

The MAS curriculum is composed of theoretical (Th), methodological (Me) and technical (Te) courses in an average of 40%, and of project units for the remaining part.

Didactic Modules

Module 1
Interaction Design Fundamentals

The MAS course starts with a first module organised in a series of workshops that give students the fundamental design and technical backgrounds of the interaction design discipline. These Fundamental Workshops work as advanced basic design courses providing students the ability to merge and mix design competencies with programming and technologies.

1a Interaction Design Field Seminar

This module starts with an intensive seminar that offers a wide overview of the Interaction design field, followed by 5 workshops that have the purpose to create a common background for students coming from different design fields as well as from the computer science field. They offer an introduction to programming for those students with a design background and an exposure to design for those with a technical background.

1b Workshop on Sketching and Prototyping Ideas

This workshop introduces students to sketch and prototype design ideas for a first evaluation. Students try to define basic structures of contents, simple interfaces, first paradigms of interaction. This workshop is based on the use of traditional techniques as well as the use of Macromedia Director and Flash.

1c Workshop on Programming Visual Object

This workshop introduces students to programming visual objects and forms with an aesthetical value. This workshop is based on the use of Processing and the design of generative graphics.

1d Workshop on Developing Natural Interactions

This workshop brings students to develop easy and spontaneous forms of interactions with physical devices. This workshop is based on the use of software like Isadora, VVVV and MAX/MSP.

1e Workshop on Creating Tangible Interfaces

This workshop brings students to work with electronics in the creation of tangible interfaces, to build prototypes considering the design implications of physical interactions. This workshop is based on the use of Arduino.

1f Workshop on Auto-nomatic Computing

This workshop brings students to design and manage autonomic and behavioural aspects of computer-based systems. This workshop is based on the implementation of simple agents and synthetic forms of life.

Parallel to these workshops, there are two methodological courses offered on the following topics: Semiotics for Technical Fields (Me), Tools for Thought (Me).

Interaction Design Fundamentals						
Interaction Design Field	Sketching & Prototyping Ideas	Programming Visual Objects	Developing Natural Interactions	Creating Tangible Interfaces	Auto-nomatic Computing	11

Semiotics for Technical Fields (Methodology)	2

Tools for Thought (Methodology)	2	**15 ECTS**

Module 2a
Designing Advanced Artifacts

The module on Designing Advanced Artifacts investigates the relation between the human being and the development of new kinds of objects. The module gives to students the opportunity to delve into the conception and the development of cognitive and physical artifacts, considered as prosthesis able to extend the human perception, as well as the human action.

The module is based on a project driven unit that schedules a seminar for the set-up of design concepts and solutions, with parallel seminars on theoretical, methodological and technical topics.

Designing Advanced Artifacts	Test & Verify Concepts and Prototypes (1)		9 + 1	**10 ECTS**

Module 2b
Designing Advanced Networks

The module on Designing Advanced Networks investigates the structuring of new relationships between human beings and/or organizations by the use of information and communication technologies. The module gives to students the opportunity to delve into the creation of new forms of communication, socialization and relation through the development of networks that enhance the human interdependency.

The module is based on a project driven unit that schedules a seminar for the set-up of design concepts and solutions, with parallel seminars on theoretical, methodological and technical topics.

Designing Advanced Networks	Test & Verify Concepts and Prototypes (1)		9 + 1	**10 ECTS**

Common Module
Theoretical, methodological and technical courses

The module proposes five courses that give to the students the theoretical, methodological and technical knowledge useful to support the design project activity. Courses are the following: New Media Culture (Th), Methods for Interaction Analysis (Me), Technologies for Interaction Design (Te), Strategic Planning (Th/Me), Info design and GUI (Th/Me/Te).

New Media Culture (Theory)	1	
Methods for Interaction Analysis (Methodology)	1	
Technologies for Interaction Design (Technology)	1	
Strategic Planning (Theory/Methodology)	1	
Info design and GUI (Theory/Methodology/Technology)	1	**5 ECTS**

Module 3a
Designing Advanced Environments

The module on Designing Advanced Environment investigates the human being and its immersion in a specific physical or cognitive context. The module gives to students the opportunity to delve into the creation of environments able to define the spatial experience and to drive the human behaviour.

The module is based on a project driven unit that schedules a seminar for the set-up of design concepts and solutions, with parallel seminars on theoretical, methodological and technical topics.

Designing Advanced Environments	Test & Verify Concepts and Prototypes (1)		9 + 1	**10 ECTS**

Module 3b
Designing Advanced Services

The module on Designing Advanced Services investigates how the human being could be involved in new work sequences, processes and new forms of business. The module gives to students the opportunity to delve into the strategic definition of new services and systems able to define new forms of socialization, exchange or business that satisfy emerging human needs. The module is based on a project driven unit that schedules a seminar for the set-up of design concepts and solutions, with parallel seminars on theoretical, methodological and technical topics.

Designing Advanced Services	Test & Verify Concepts and Prototypes (1)		9 + 1	**10 ECTS**

Common Module
Theoretical, methodological and technical courses

The module proposes five courses that give to the students the theoretical, methodological and technical knowledge useful to support the design project activity. Courses are the following: Design Project Management (Th/Me), Technologies for Creating Effective Experiences (Te), Experience Design (Th/Me), Scenario Design and Notation Systems (Th/Me), Product Service System (Th).

Design Project Management (Theory/Methodology)	1	

Technologies for Creating Effective Experiences (Technology)	1	

Experience Design (Theory)	1	

Scenario Design and Notation Systems (Theory/Methodology)	1	

Product Service System (Theory)	1	**5 ECTS**

Module 4
Thesis Project

The thesis project is organised in two phases dedicated to the development of the thesis project linked with a research area/activity of LCV. The student has to identify a thesis topic that can develop as an applied research thesis project. The student has to identify an internal or external professor to serve as thesis advisor and he/she has to present the thesis project proposal to the Review Commission for the evaluation and the approval. After this step, the student has to develop the thesis project and present it to the Review Commission for the final evaluation.

Thesis Project	Review Commission		15 ECTS

Master of Advanced Studies
in Interaction Design
Designing Advanced Artifacts, Environments,
Networks and Services

For information:

University	SUPSI
	Scuola Universitaria Professionale della Svizzera Italiana
Dipartimento	DACD Ambiente Costruzioni e Design
Area	LCV Laboratorio Cultura Visiva
Head	Massimo Botta
For inquiry	+41 (0)58 666 63 94
	SUPSI – DACD CP 105
	6952 Canobbio – Lugano
	master.mid@supsi.ch
	www.maind.supsi.ch