



**istitutomarangoni**



**MASTER IN PRODUCT  
DESIGN FOR HUMAN-ROBOT  
INTERACTION**

## ISTITUTO MARANGONI ACADEMIC MISSION

Over the past 85 years Istituto Marangoni has grown and developed alongside the thriving Italian fashion and design industry. Through an exciting curriculum aimed to develop practical, creative, and management skills which are subject specific and relevant to the international fashion, design or art fields. Istituto Marangoni Master's courses provide students with a focused and in-depth knowledge and *know-how* for a successful professional career at various levels of the above-mentioned industries. There is a strong focus on project-based, industry-linked teaching methods of delivered by experienced industry specialists and professionals.

## PROGRAMME INFORMATION

### ACADEMIC ACHIEVEMENT

Participants who successfully complete this programme will be awarded with an Istituto Marangoni Diploma Certificate.

### EDUCATIONAL APPROACH

Istituto Marangoni's academic approach is shaped by the following educational aims

- develop a flexible and updated approach to programme delivery and student support which reflect the needs and expectations of all students;
- provide a supportive and inclusive learning environment which will enable success for all learners;
- encourage and nurture the development of students' intellectual and imaginative powers, creativity, independence, critical self-awareness, imagination and soft skills that will enhance global employment opportunities in all programmes;
- establish a culture of constant improvement in learning, teaching and assessment that is anticipatory, enabling, supportive, rewarding and fully aligned with the Institutions vision and strategic objectives;
- provide a learning experience that is informed by research, scholarship, reflective practice and engagement with the industry and the professions.

## CONTENTS' OVERVIEW

### Curriculum

As robotic objects widespread in all major business areas, with forecasts of adoption and investment growth, the presence of intelligent automata is bound to increase in daily life, with products and services as well as furnishings and robotic "companions" whose presence raises an aesthetic question that directly involves product design as a discipline, both in terms of projects and culture. In this course students will learn how to define the aesthetic body of robotic objects through several project works accompanied by integrative lessons dealing with specific aspects of the project such as: Technology applications, design definition, user cognitive experience, aesthetic language, critical analysis of the human-robot relationship. They will make robotic-based company projects from a given brief, through concept definition, until product development by preparing technical documentation and a professional visual presentation. Students will work in the role of junior designers led by a mentor as their "art director", supported by teachers in the definition of specific aspects of their project. Students will attend most of the programme at IM Milan campus, with also some of their learning experiences at Scuola di Robotica di Genova. They will make physical models of their projects by taking advantage of the IM Milan campus laboratory with a dedicated tutor.

### Final Project (Dissertation)

The final project is the assessment of the competences gained by the Student, his/her maturity in the methodologic approach and the acquisition of the relevant technical and cultural tools; this will translate into a final work that will show evidence of all aspects and steps that are part of the candidates' educational path. The final project will consist in the development of a work that will demonstrate a concrete application of the theoretical and cultural studies undertaken, as well as a critical approach towards primary and secondary research on a free-choice topic. The candidates shall develop a personal project for a robotic product, supported by a deep research and technical documentation, and that will show a clearly innovative approach; their project will also have to demonstrate an accurate definition and planning of all functional aspects, as well as an efficient integration of aesthetic and semantic aspects of the product.

## LEARNING OUTCOMES

### Educational Outcomes

Students who attend Programmes at Postgraduate level, on successful completion of their course of study, will be able to:

- apply skills of critical analysis to real situations within a defined range of contexts;
- select and define a research topic and implement a research plan using appropriate methodologies – within their specialist field of study;
- demonstrate a high degree of professionalism characterised by initiative, creativity, motivation and self-management;
- express ideas effectively and communicate information appropriately and accurately using a range of media including ICT;
- critically analyse their results and draw logical conclusions;
- develop working relationships using teamwork and leadership skills, recognising and respecting different perspectives;
- manage their professional development reflecting on progress and taking appropriate action;
- find, evaluate, synthesise and use information from a variety of sources;
- articulate an awareness of the social and community contexts within their disciplinary field;
- exercise initiative and personal responsibility in the work environment;
- continue as a researcher in an academic or commercial setting and have the potential to extend the bounds of knowledge in their chosen field;
- carry out further independent learning or continuing professional development.

### Programme-Specific Learning Outcomes

Students who successfully complete this specific Programme shall be able to:

- Define the aesthetic body of a robotic product which combines aesthetic language with cognitive requirements
- Implement robotic functionalities and design language in the characterization of the functional structure of a robotic object
- Specify semiotic features of a robotic product and define its affordances to promote empathy with the user and its fitting ion the everyday environment

## TEACHING AND LEARNING METHODS

Course teaching methods are based around a wide variety of formats, such as frontal lectures, workshops, seminars, case-studies and self-directed study: experienced professionals and visiting specialist Lecturers (industry professionals) make valuable contributions and enrich the learning experience of all students.

### Self-Directed Study

This plays a major role in the programme, as students are expected to spend time researching and analysing subject matters independently to support and substantiate taught material.

### Frontal Lectures

An integral part of the programme - with formal delivery of subject-specific contents to the whole cohort of students. At this level it is expected that students will use the lectures as a stimulus for further study/reading.

### Seminars

Used to build on themes that are connected to the contents part of the Study Plan. Students are encouraged to make an active contribution by sharing in the argument and debate, while expressing their views.

### Case Studies

A detailed discussion and in-depth analysis of real-life situations and existing Brands - to substantiate and assess concrete examples of contents and theories studies in class.

### Workshop / Laboratory / Practical Sessions

Used to enable and nurture the creative and practical skill development of the student in an environment which simulates what happens in the industry.

### Team Work

Requires students to operate as a member of a group or team and they usually have clearly identified roles. The emphasis is on collective responsibility, individual responsibility to the group and joint decision-making.

### Study Trips (when applicable)

An exciting opportunity to enhance the students' learning path and consolidate their understanding of specific-subject contents. If assessment is dependent on information collected whilst undertaking the study trip, the trip would be considered mandatory. The cost of study trips can be either the responsibility of the student or on occasion included in the annual study fee. If the visit is within the city students pay for public transport.

## ASSESSMENT STRATEGY

The assessment strategy for the programme is designed to incorporate a variety of assessment methods to enable all students to demonstrate their learning in a fair and comprehensive manner.

### Assessment Methods

Formative assessment is used as an interim review of student work undertaken at key points during the semester. It provides an indicative measure of progress, allows students to consider their work in relation to that of their peers, allowing students to agree with staff any adjustments that are necessary to make in order to satisfy course requirements. It is designed to help improve student performance.

Summative assessment provides an evaluation of student progress and learning during an entire semester: it generates a final mark, constructive feedback and confirms the conditions (if any) for exam recovery in the allowed modalities.

Peer and Self-assessment requires students to assess their own work and that of fellow students. It encourages:

- a sense of ownership of the process of assessment;
- assists the student to become an autonomous learner;
- helps to develop a range of transferable skills;
- makes assessment part of the learning process rather than an adjunct to it.

### Assessment Types

- Portfolio Assessment is used to assess a variety of projects that have been developed.
- Practical and Class Based Projects – allow the students to demonstrate their understanding of a specific subject area and application of practical areas of the programme.
- Written Reports are required in some study areas, where a clear and structured brief is provided and the students are asked to submit work to be marked independently and anonymously by staff.
- Formal Examinations – will be used in some subjects to permit students to demonstrate their understanding of a subject within a constrained timeframe.
- Individual / Group Presentations are used in some subjects to allow the student to develop their professional communication, presentation skills and to argue critical reflection and interpret findings.

### Avoiding Plagiarism

Plagiarism is defined as stealing another person's ideas and presenting them as though they were the student's own. The reference framework adopted in all Istituto Marangoni Schools is the Harvard Referencing System - please refer to the Student Handbook for further details.

## STUDY PLAN

Semester	Subject	Lesson Hours
S1	Design of the Product System	100
S1	Cognitive Ergonomics	22,5
S1	CAD CAM Modelling	62,5
A	Prototyping	75
A	Product Communication	75
S2	Integrated Product Design	100
S2	Design Semiotics	37,5
S2	Rendering	62,5
S2	Dissertation	

## CAREER SERVICE FOR MASTER COURSES

The purpose of the Istituto Marangoni Career service is to bridge the gap between course completion and entering the world of work.

Monitoring, guidance and counselling activities are organised throughout the academic year. The careers service organises various activities including seminars and round table discussions with fashion professionals, HR managers and head-hunter agencies on specific topics such as future career paths, personal research methods and job profiles. Individual meetings are also arranged to assist with CV preparation, revise portfolios and encourage students to talk about their career goals and expectations.

**STUDENT SUPPORT STRATEGY**

Istituto Marangoni administers policies to enhance the student experience, in an academic, practical and pastoral way:

- Programme Leaders / Directors of Education: the first point of call to acquaint students with regulations and issues arising on the programme;
- Student Support Officers for student referral where appropriate;
- programme and student handbooks;
- induction programmes for facilities including: Library, IT, online resources (where available), school facilities and media services;
- student group representatives (student voice).

**Student Support Officers**

A dedicated Student Support Officer is available for all students on the programme.

For academic counselling, Student Support Officers will liaise with tutors and programme leaders to offer practical advice to resolve specific academic difficulties.

A written record of these tutorials will be kept in the student's file for reference and to assist in the monitoring of student progress.

For matters of pastoral care the Student Support Officers will help in:

- finding their way around;
- managing their time;
- getting the best from their course;
- understanding and applying the school's rules;
- anything else the officers can advise on.

One-to-one appointments may be made by phone, through the receptionists or by email. Where possible students can expect to be seen almost immediately, or contacted to arrange a suitable time.