

SECOND LEVEL DEGREE IN "PRODUCT DESIGN AND DESIGN WITH ADVANCED MATERIALS"

COURSE DESCRIPTION (alphabetical order)

Characteristics

Qualification awarded: 2nd Level Academic Diploma in *Product Design and Design with Advanced Materials*.

Duration: 2 years

Admission Criteria:

ISIA diploma awarded under the previous system in force (together with a high school diploma or another qualification awarded abroad and recognised as appropriate);

a similar first level Academic Diploma;

a first level academic qualification awarded abroad and recognised as appropriate;

a similar degree awarded under the previous system in force;

a similar three-year degree;

a degree awarded abroad and recognised as appropriate.

Entrance test : interview to assess aptitudes, capacities and the interest of aspiring design professionals.

Available places: 30 of which 2 reserved for priority allocation to non-EU students

Attendance: 80% attendance of total educational activities is compulsory, in addition to individual study.

Language of instruction: Italian

Credits: 120 CFA (credits)

Learning Objectives

Graduates of the Second Level Academic Diploma in *Product Design and Design With Advanced Materials* must acquire:

project development, professional knowledge and skills in the management of highly complex projects involving multiple specialist contributions;

the ability to develop research and experimentation activities oriented towards the innovation of products, processes and services, while also considering economic and social implications;

a critical awareness of project consequences, in terms of social - ethical responsibility and sensitivity towards environmental issues, linked to the designer's profession and role;

necessary technological tools in specific fields of competence;

the capacity to convey their own project along with underlying knowledge and inspiring reasons;

preparation useful for the creation of professional figures characterised by outstanding flexibility, in the industry of communication and the education sector.

Final Assessment

Upon completing the Degree Course, students are awarded the Second Level Academic Diploma in *Product Design and Design with Advanced Materials*, equivalent to a LM12 Degree in Design. The Diploma enables students to enrol in second level master's and doctorate courses.

In order to obtain the Diploma, students must be awarded 120 credits (CFA), based on procedures specified in Degree Course programmes, and must successfully pass the final assessment (Diploma Dissertation).

The Second Level Academic Diploma dissertation constitutes the final assessment of competencies acquired by the student and must culminate in a project which clearly demonstrates project development aspects and phases as well as research carried out by the candidate, leveraging previous years of study. The final assessment project must also demonstrate aspects of a cultural and socio-economic nature, with particular focus on production and relative market factors. According to preference, the final assessment may be carried out with companies and research centres, to enable "on the field" project verification, to this effect this may also involve internship activities included in the programme of studies. Under such circumstances, the student can be mentored by an external dissertation advisor operating at universities or partner companies.

The topic of the final dissertation and final method of assessment must be decided with a mentor who teaches at ISIA and they may be supported by one or more advisers, subject to project complexity.

Employment perspectives

Graduates of the Second Level Academic Diploma in *Product Design and Design with Advanced Materials* will pursue qualified professional activities in the field of design and design project management. Acquired competencies will

enable them to coordinate highly complex projects involving specialists with different specialisations, maintaining necessary focus on various aspects of social significance.

Graduates will be able to pursue a career at professional firms, as freelancers or associates. They may also choose to work in design studios or corporate design forms or may choose to pursue a career in teaching.

Cultural anthropology

Main field of study: ISSU/01

1st year

Lesson hours: 75

Credits: 6

Oral Exam

The course focuses on the relationship between mankind, the evolution of its habitat and relative cultural forms, within the scope of design planning and possible applications in the fields of industry, architecture and services.

To this effect, the origins of the anthropological concept of culture are investigated, along with relationships between different cultures across different periods of history, with a furthering of knowledge of migratory processes, globalisation and societies of knowledge, so as to embrace the multi-cultural nature of societies.

Topics covered include urban landscapes, territories of absence, work and entertainment-related problems, from past to present.

The aim is to provide a stimulating perspective for young designers, enabling them to dialogue with a contemporary cultural and expressive culture, analysing anthropological aspects during the course pertaining to creativity, dynamism and the differentiation of cultures.

Experimental Prototype Creation (Design of Accessories)

Main field of study: ISDE/05

2nd year

Lesson hours: 75

Credits: 6

Oral exam, presentation of course work

Course integrated with ISDR/03 activity Modelling (50 hours/ 2 credits)

The aim of the course is to study innovation processes in fashion and sports products, accessories in particular, with reference to formal, aesthetic and economic aspects for design which connote evolutionary trends of habits in society. Theoretical-practical teaching will provide an overview of conceptual, project development and instrumental knowledge to develop competencies useful in the management of accessory design projects during technical-productive phases.

Modelling

Main field of study: ISDE/03

2nd year

Lesson hours: 50

Credits: 2

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course in experimental prototype creation (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and experimental verification, with reference to prototyping.

Communication Design I

Main field of study: ISDC/05

1st year

Lesson hours: 75

Credits: 6

Oral exam, presentation of course work

The course is based on advanced design and professional simulation, tackling project development aspects which are the competence of the graphic designer, from *corporate image* to so-called "unconventional communication", grounded in an applicative and cross-media perspective. The aim of the course is for students to acquire a level of project development autonomy which enables them to define concept strategies and coordinate a communication plan, interacting with complex systems which are rolled out across different media.

Surface Design

Main field of study: ISDE/01

1st year

Lesson hours: 75

Credits: 6

Oral exam, presentation of course work

Course integrated with ISDR/03 activity Modelling (50 hours/ 2 credits)

The course aims to provide the necessary tools for analysing and understanding the quality of a decoration applied to an object, by means of the theoretical knowledge of processes and direct experimentation with decorative design. The aim is to develop the ability to recognise a distinctive creative process, evaluate its characteristics, construction difficulties and costs so as to define project constants and variables. Students will learn a methodology for the creation of multicoloured patterns used by the artistic industry or small-series production.

The end-of-course assessment will be based on a recognised ability to define a product in decorative terms, with the attribution of the values of quality, complexity, innovation and affordability; on the examination of personal aesthetic research, project development activities with reference to pictorial and composition instruments used.

Modelling

Main field of study: ISDE/03

1st year

Lesson hours: 50

Credits: 2

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course in surface design (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and experimental verification, with reference to prototyping.

Ceramic Product Design

Main field of study: ISDE/01

2nd year

Lesson hours: 75

Credits: 6

Oral exam, presentation of course work

Course integrated with ISDR/03 activity Modelling (50 hours/ 2 credits)

The course develops on the ideas, methods and new technologies of industrial and ceramic design, seen not only as a furnishing and interior design element, but also as a hi-tech performance material, suitable for use in a vast array of industrial fields.

Holistic project development skills are forged, alongside a humanistic culture of execution, for effective ceramic and collection product design projects. In particular, the aim is to enable students to become skilled at structuring visions and overall creative strategies for the artistic ceramic industry, capable of evolving into co-design and technological transfer that is compatible with industry, an area of great potential for designers of today. The course also aims to

develop skills for the interpretation of new needs and their translation into ceramic products, also matched with other materials, aligned with the evolution of society and therefore production.

Modelling

Main field of study: ISDR/03

2nd year

Lesson hours: 50

Credits: 2

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course in *Ceramic product design* (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and experimental verification, with reference to prototyping, manually or on an industrial scale, also with the use of 3D printers.

Design of Services

Main field of study: ISDE/03

2nd year

Lesson hours: 50

Credits: 4

Oral exam, presentation of course work

The aim of this course is to understand the methodologies for the analysis and elaboration of data and information for planning, the organisation and management of digital industrial activities, considering different phases which characterise the process for the definition of products, systems and services. The course provides an introduction to a systemic vision of design, in which the innovation of services means a complex system of relations which, starting from an investigation of the social context, identifies areas of opportunities and defines service systems, including the development of interfaces, apps, data display and interaction design.

Product Design

Main field of study: ISDE/01

2nd year

Lesson hours 100

Credits: 8

Oral exam, presentation of course work

Course integrated with ISDR/03 activity Modelling (75 hours/ 3 credits)

The aim of the course is to provide students with conceptual and instrumental knowledge to activate critical and analytical processes applicable to current design scenarios. In light of contemporary complexities, new methodological approaches will be analysed in order to re-think the characteristics and methods of use of things and spaces which surround us, by means of a project which will be a carrier of thought and quality, capable of transforming ideas into aesthetic experiences. An aware and open project, for evolved living, placing mankind at the centre of research, with all its needs, dreams and future.

Modelling

Main field of study: ISDR/03

2nd year

Lesson hours: 75

Credits: 3

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course in *Product design* (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and

experimental verification, with reference to prototyping, manually or on an industrial scale, also by means of *digital fabrication*.

Project Management

Main field of study: ISSE/01

2nd year

Lesson hours 50

Credits: 4

Oral Exam

The aim of the course is for students to acquire skills in marketing techniques applied to design, with particular reference to base micro and macroeconomic concepts, production and market forms and structures. In more specific terms, relations between the context and industrial product will be analysed in greater detail.

Dynamics which directly influence strategic-environmental, technical-productive, goods and commercial configurations of industrial products will also be investigated, with reference to new exploitation and process channels: the internet, television network, exhibition facilities, visual media, hardcopy. There will be particular focus on the study of marketing strategies via social networks and the management thereof.

Innovative Processes and Materials

Main field of study: ISST/03

2nd year

Lesson hours: 75

Credits: 6

Oral Exam

Course integrated with ISDR/03 activity Modelling (50 hours/ 2 credits)

The course focuses on the study of fundamental industrial transformation processes of polymeric, metal, ceramic and composite materials, with in-depth analysis of the main elements for the assessment of the most innovative project and production solutions, with particular emphasis on creations in the design sector. It also includes the application of the most advanced technologies in the field of research.

Modelling

Main field of study: ISDR/03

2nd year

Lesson hours: 50

Credits: 2

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course Processes and innovative materials (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and experimental verification, with reference to prototyping.

Planning

Main field of study: ISDE/01

1st year

Lesson hours 100

Credits: 8

Oral exam, presentation of course work

Course integrated with ISDR/03 activity Modelling (75 hours/ 3 credits)

The course focuses on the theories, methods and techniques of industrial planning. Conceptual and instrumental knowledge will be developed to activate critical and analytical processes applied to scenarios of contemporary society, for the development of innovation processes in products, with particular focus on aesthetic-formal research. As part of an inter-disciplinary conception of design embracing social, scientific and artistic research, competencies are developed to enable students to manage the project process as a whole: from general context analysis for the identification of social and cultural needs of defined subjects, up to the control of all technological-production and market processes. Concrete verifications of project development in conjunction with scientific research centres and industrial companies operating in different fields are an integral part of the sector. The course also delves further into new design technologies such as digital fabrication.

Modelling

Main field of study: ISDR/03

1st year

Lesson hours: 75 hours

Credits: 3

Assessment: presentation of course work and prototypes

The course constitutes the physical assessment for the design and building of models and any prototypes for the course in Design (exam plus this course), with reference to systems and techniques designed to communicate the industrial product in a material manner. Considering the involvement of several operative fields and functional significance, project communication is studied in terms of technical-executive formalisation, modelling and experimental verification, with reference to prototyping.

Integrated Product Design

Main field of study: ISDE/04

1st year

Lesson hours 100

Credits: 8

Oral Exam

The course develops the design process for a new product with a logical sequence, providing information and instructions on product development methods (without delving into executive and detailed design) and on assessing the result of a project. The following topics are covered: product project, design methods, design and quality, functional product modelling, ethics and the designer's responsibility, invention and product protection, design for assembly, sustainable design and product assessment.

Psychology for Design and Communication

Main field of study: ISSU/03

2nd year

Lesson hours: 50

Credits: 4

Oral Exam

The aim of the course is to analyse material and symbolic, subjective, inter-subjective and social behaviours in relation to relationship mechanisms, both biological and socio-cultural in nature. Topics covered highlight a dual approach: the initial, more general one consists of an overview of relationship processes (cognitive, emotional, action) with the physical and socio-cultural context, which generates specificities and unique constructions of individual and collective personality. The second, more targeted approach focuses on experimental aspects of cognition, with particular reference to the psychology of form and perception..

Life Cycle Assessment

Main field of study: ISST/03

1st year

Lesson hours: 50

Credits: 4
Oral Exam

The course enables students to quantify the environmental impact of the entire life cycle of products and to acquire in-depth knowledge on the integration of environmental aspects within project development processes. The course provides an introduction and case studies on the methodology, involving the use of calculation systems which enable product life cycle modelling and engineering and support of LCA study phases such as: definition of product systems; collection and elaboration of data on consumption and industrial process emissions; environmental impact assessment and interpretation of results for the definition of scenarios for improving ecological quality. One module is entirely dedicated to green design.

During the course, students will assess an industrial product with the support of software systems and data bases available at ISIA.

Digital Video

Main field of study: ISDC/04

1st year

Lesson hours: 75

Credits: 6

Oral exam, presentation of course work

The course studies digital video production with reference to the development of interactive audiovisual contents, focused in particular on technologies and the production languages of new media. Particular attention is paid to technical-functional and aesthetic-expressive aspects of project development. During the course, students will develop in-depth knowledge of hardware, software procedures and expressive methods suitable for the pursuit of video development. They will acquire the capacity to develop information material in the most effective way, reaching out to several distribution channels (internet, mobile phone network, television network, exhibition facilities, optical media, hardcopy).

Internship

1st year

Hours: 225

Credits: 9

Assessment by ISIA tutor.

Active presence at companies, professional firms or service agencies to gain work experience in a context in which interns can apply competencies acquired during their course of studies.

Autonomous Student Activities

1st and 2nd years

Credits: 6

Activities selected by students and completed during the two -year period. Consist of supplementary activities organised by ISIA (participation in events, workshops, conferences) or external activities proposed by individual student, subject to authorisation from the Academic Council.

Final Dissertation Assessment

2nd year

Credits: 9

The Second Level Academic Diploma dissertation constitutes the final assessment of competencies acquired by the student and must culminate in a project which clearly demonstrates project development aspects and phases as well as research carried out by the candidate, leveraging previous years of study. The final assessment project must also

demonstrate aspects of a cultural and socio-economic nature, with particular focus on production and relative market factors. According to preference, the final assessment may be carried out with companies and research centres, to enable "on the field" project verification, to this effect it may also involve internship activities included in the programme of studies. Under such circumstances, the student can be mentored by an external dissertation advisor operating at universities or partner companies.

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