

## International Offer UNIRSM - AA 2026/2027

### FALL SEMESTER

Course	SSD	ISCED Code	ECTS
Computational Structural Mechanics	CEAR-06/A	0732 – Building and Civil Engineering	9
Composite Materials	CHEM-06/A	0712 – Environmental Protection Technology	6
Social Media Marketing	SECS-P/08	0220 – Humanities	6
Advertising 3.0	M-FIL/05	0220 – Humanities	6
Design Drawing Lab	CEAR-08/D	0212 – Fashion Interior and Industrial Design	8
Product Design Lab 3	CEAR-08/D	0212 – Fashion Interior and Industrial Design	8
Product Design Lab 4	CEAR-08/D	0212 – Fashion Interior and Industrial Design	8
Critica del Contemporaneo	CEAR-08/D	0220 – Humanities	6
Design Workshop Fall semester	Extra credits		2
Communication Design Lab 2	CEAR-08/A		8
Design management e Business Communication	SECS-P/08		6
Interaction Design	CEAR-08/D	0212 – Fashion Interior and Industrial Design	6
Teorie e Tecniche dell'Interazione	CEAR-08/D	0212 – Fashion Interior and Industrial Design	3
Human Factors - Modulo di Fondamenti	PSIC-01/A	0313 – Psychology	3
Human Factors - Modulo Applicativo	PSIC-01/A	0313 – Psychology	3
Workshop Experience Design	CEAR-08/D	0212 – Fashion Interior and Industrial Design	2

Workshop Design and Strategies for Territorial Development	CEAR-08/D	0413 – Management and Administration	2
Workshop Service Design	CEAR-08/D	0212 – Fashion Interior and Industrial Design	2
Materials Technology for Design	IMAT-01/A	0715 – Mechanics and Metal Trades	6

### **Computational Structural Mechanics**

**SSD: ICAR/08**

**9 ECTS**

**(Master)**

Introduction to computational mechanics (Variational approaches; Strong and weak form of the fundamental equations; Numerical analysis).

Finite Element Method 1D (Weak form of one-dimensional differential problems; Galerkin method; Interpolation of the primary variables; Assembly; Boundary conditions).

Axially loaded beams (Stiffness matrix; Weak form; Numerical integration; Stiffness matrix of trusses: analytical and numerical procedures).

Euler-Bernoulli beam (Stiffness matrix; Weak form; Hermite interpolation functions).

Timoshenko beam (Stiffness matrix; Weak form; Shear locking).

Numerical analysis in dynamics (Natural frequency analysis; Linear dynamic analysis; Newmark methods).

Numerical analysis of frames (Euler-Bernoulli and Timoshenko models).

Finite Element Method 2D (Weak form of two-dimensional differential problems; Interpolation of the primary variables; Triangular and quadrilateral elements; Mapping and numerical integration; Higher-order finite elements).

Plane stress and plane strain problems (Weak form of the governing elasticity equations).

Plates in bending (Weak form of the governing equations: Reissner-Mindlin and Kirchhoff-Love models; Conforming and nonconforming finite elements).

The course aims to provide an adequate introduction to the computational techniques used for getting the numerical solution of some structural mechanics problems. Differential problems are discretized and the corresponding discrete models are presented. The Finite Element Method is finally developed for each structural model.

### **Composite Materials**

**CHIM-07**

**6 ECTS**

**(Master)**

This course aims to provide the basic knowledge and understanding of the characteristics and design methodologies of composite materials.

A composite is a material that combines two or more constituent phases featuring different physical and chemical properties. The appropriate selection of the ingredient materials, their relative volume fractions, and their spatial distribution leads to a new material with unique mechanical and physicochemical properties.

Owing to their outstanding mechanical performance, design flexibility, and lightweight nature, composites are essential in a broad range of high-value industries with applications, for example, in construction, aerospace, automotive, medical and energy technologies.

## **Social Media Marketing**

SECS-P/08

6 CFU

(Bachelor)

Introduction to the vast world of Social Media Marketing, with a focus on the course objectives and topics that will be covered. Strategy, Planning, and Operations

In-depth exploration of the most common social media platforms and their practical use. The phases involved in strategically planning and executing a campaign will be demonstrated, with practical classroom exercises for implementing a real social media communication campaign.

Research, Conversion, and Monitoring Analysis of data and costs. Profiling of campaigns and interpretation of key monitoring metrics on social media.

Every student will acquire the fundamental skills to approach the world of Social Media Marketing consciously. After a brief theoretical introduction, the phases of an integrated social media campaign, planning, execution, and monitoring will be explored. Once the fundamental knowledge is acquired, students will put it into practice through exercises during the lessons.

## **Advertising 3.0**

**M-FIL/05**

**6 ECTS**

**(Bachelor)**

Through a group project work, the course will cover the following topics with a focus on the creative strategy of high-digital advertising.

### **CREATIVE AWARENESS**

There is an important difference between creative skill and artistry. Developing the former is crucial for valuable advertising, and everyone can do it with practice.

### **ON-BRAND CREATIVITY**

Creativity for advertising should always reflect the values of the brand it works for. It is essential to align creativity with the "purpose" of the brand.

### **SOCIAL IMPACT OF CREATIVITY**

No matter if it is a private company, a public one or a nonprofit organization, advertising in the era of globalization can no longer avoid considering its impact on living beings and the environment.

### **TEST & LEARN**

Prototyping and testing during the creative process are essential to highlight those critical issues that could generate failures and cause significant loss of time, resources and reputation, but above all to raise new questions that can uncover further opportunities for improvement.

### **REPRESENTATION**

In the age of the digital revolution, which continually offers new creative opportunities, the forms of expression in advertising are increasingly novel and complex. Thus, it becomes even more important to represent them effectively to the client and their employees.

## LANGUAGES AND MEDIA

Contemporary advertising creativity is literally limitless in strategy, narrative, technology, and channels, and the wealth of results it can generate is immense.

The course is intended as a deepening, integration and advancement of the Advertising 2.0 course, present in the first year of the three-year Communication and Digital Media program. By the end of the course each student will have acquired the ability to produce creative - i.e., interesting, engaging, effective - ideas that are functional for the commissioning brand, with a focus on digital campaigns (social media, viral audiovisuals, augmented reality, etc.). During the course each student will be able to practice and test, alone or in groups, different creative ideas, never in an abstract way but always with reference to concrete briefs from tourism communication, territorial marketing, social and institutional communication in the field of health and environmental sustainability, commercial communication in the agribusiness sector, and marketing of business, political and trade union associations.

### **Design Drawing Lab**

**ICAR/13**

**8 ECTS**

**(Bachelor)**

Recognising the cognitive value of drawing as a tool for observation, the course will encourage the student to begin and maintain a regular and independent practice of freehand drawing, by keeping a sketchbook as the foundation for building a visual memory. The student will discover and draw spaces and objects, annotating their qualities and characteristics and experiment with various sketching techniques and tools. Theoretical lectures will be followed by practical exercises to explore the elements of drawing, the processes of visual perception and the themes involving the interaction between man, objects and space. A special focus will be dedicated to the theory of colour.

Systems of representation: reading and constructing drawings.

Historical notions on the evolution of representation systems and techniques.

Introduction to technical drawing: tools, precision drawing.

Basic notions of scale, line, dimensioning, graphic standards (UNI).

Introduction to measuring techniques and tools.

Basic notions and practice of projective and descriptive geometry:

- Parallel projection: orthogonal and axonometric projections

- Central projection: perspective.

Themes for the analysis of objects – human-centred design.

Notions of methodology, based on the reading of "Da cosa nasce cosa" by Bruno Munari. Anthropometrics and ergonomic; cognitive ergonomics and the "Norman doors".

Analysis of an object: the final project for the course will consist in measuring, documenting in technical drawings and analysing the typology, function and form of an object, in a project to be drafted entirely by hand.

During the course, a workshop to be held by a visiting professor will introduce rendering techniques by hand with markers, coloured pencils and other materials

### **Product Design Lab 3**

**ICAR/13**

**8 ECTS**

**(Bachelor)**

The first part of the Laboratory will be dedicated, through frontal lessons, to transmitting to students the tools and theoretical foundations to direct the skills acquired in previous years towards a spatial contextualization of their project. Topics concerning the construction and perception of internal space and the implications of the relationship between internal environments and objects and their interaction with man will be introduced. A part of the initial lessons will also be dedicated to environmental, technological and material issues from which interior design cannot ignore in terms of ideation and construction. The theme of the workshop will focus on the design of a minimal living space in which the transformative characteristics over time are mainly delegated to the display component of complex and multifunctional objects.

The course aims to deepen and experiment with design tools to tackle a discipline such as that of product design located in space with the necessary awareness and responsibility. The artifact does not exist in abstract isolation, but is placed in a context, promoting interactions between man and the artificial or natural environment. It can and must act as central in relation to cultural, economic, social and ecological scenarios in continuous and profound transformation.

### **Critica del contemporaneo**

ICAR/13

6 ECTS

(Master)

### **Design Workshop Fall semester**

Extra credits

2 ECTS

### **Communication Design Lab 2**

CEAR-08/A

8 ECTS

### **Design and Communication Management**

**SECS-P/08**

**6 ECTS**

**(Bachelor)**

The course is structured into two distinct theoretical modules but also integrated with a part of practical exercise/workshop. In the first Design Management module we start from the analysis of the scenario and the context to understand what the role of Design can and must be as a driver of innovation, though not only a clear organization of the processes, but also and above all with the affirmation of a shared culture. We touch on the themes of corporate organisation, the scenario, the mission, the resulting strategy, marketing, its levers, and particularly the concept of positioning, also with historical notes and practical examples. Finally, we go deeper to see how design can be integrated with other functions up to the modern definition of design management. In the second part, the main aspects of Corporate Communication are examined, starting from the concept of corporate culture and above all the value of the Brand (Brand Equity). A clear analysis is made of the communication process and its purposes, after which the different techniques and tools of integrated communication are addressed: brand, corporate and visual identity, advertising, public relations, sponsorships, promotions up to the most modern ones such as web communication, social media and guerrilla marketing tools. All supported by historical notes and concrete cases. The course intends to analyse the aspects that are upstream, downstream and behind the pure creative act, proposing an integrative logic that overcomes the traditional divisions between business and culture, marketing and design, product and communication. The goal is to merge them in

an interdisciplinary vision that must guide the entire process, from preliminary research and analysis of the idea to its implementation, introduction into the market and communication. The goal is to raise a new breed of hybrid designers, who will be able to deeply understand their role within a company and society.

### **Interaction Design**

**ICAR/13**

**6 ECTS**

**(Master)**

Teaching is organized in lectures and classroom exercises. It provides for the creation of a final project, a synthesis of all the technical, theoretical and practical skills learned that will be materialized into a prototype. The development of the final project lays the foundation on the one hand on bibliographic sources, on the other hand on field research methodologies such as UX research, design thinking, lateral thinking, and co-design approaches, in a constant confrontation with the areas of interface design, user experience, information architecture, visual design and product interaction design.

The student acquires basic notions for the design of two- and three-dimensional interactive artifacts, delving into the relationship between humans and the technological object from both a theoretical and application perspective. Through lectures and practical exercises, the student will be able to learn the main mechanics of interaction, the related technologies, the UX research methods and the design of behaviors by experimenting contextually on interfaces, objects and spaces.

### **Theories of Interaction Design Studies**

**ICAR/13**

**3 ECTS**

**(Master)**

Designing interfaces for mobile devices and their specificities related to information design, supporting behavioral change, will be the focus of the course's design exercise.

The course delves into theoretical and practical aspects of interaction design, starting from the design of two-dimensional interfaces to the development of systems enabling interaction between humans and urban spaces.

The design of interfaces for mobile devices in relation to the environment and built structures, along with the ability to use one's personal data and that shared by other users, constitute a new resource for designing services that emerge from user needs.

### **Human factors - Fundamentals of Human Factors**

**M-PSI/01**

**3 ECTS**

**(Master)**

Human Factors definition

History of the discipline and application area

Elements of cognitive psychology: perception, memory, attention, decision making

Implication for design and guidelines

Task analysis

Usability analysis

Human Factors fundamentals

Key concepts of cognitive psychology: perception, memory, attention, decision making.  
Human Factors methods and techniques for the design of products and services.

### **Human factors - Modulo applicativo**

**M-PSI/01**

**3 ECTS**

**(Master)**

From automation factors to human factors: knowing machines to understand the peculiarities of the person;

- Applications and case studies related to automation in daily life;
- Interaction design in the automation of services and systems;
- Design research laboratory.
- Know the Human Factors research methodology for designing interactive products and services;
- Ability to apply Human Factors research methodology for designing interactive products and services;
- Ability to formulate the research plan with objectives, hypotheses, research activities, data analysis and theory formulation;
- Ability to transform the results of the research activity into knowledge for designing interactive products and services.

### **Workshop Experience Design**

**ICAR/13**

**2 ECTS**

**(Master)**

### **Materials Technology for Design**

**ING-IND/22**

**6 ECTS**

**(Bachelor)**

This course is structured with theoretical lessons and practical exercises to immediately apply what is learned in class.

The theoretical part consists of thematic meetings organized as follows:

- Historical introduction to technological innovations.
- Plastics: origin, types, and transformation processes with case studies.
- Metals: origin, types, and transformation processes with case studies.
- Composites: origin, types, and transformation processes with case studies.
- Wood: origin, types, and transformation processes with case studies.
- Ceramics and Glass: origin, types, and transformation processes with case studies.

- Auxetic Structures: what they are, where to find them, and how they are employed through new production technologies.
- Biomimicry and future materials: nature as a source of inspiration for design.

The practical part, alongside the theoretical, involves students in choosing an object. Subsequently, students will proceed with the disassembly phase to explore what is hidden inside. This includes elements that we cannot normally see or know, enriching our ability to observe and understand. The students will acquire theoretical fundamentals about the main transformational technology widely used to produce the final product and half-processed products.

### **Workshop Business & Entrepreneurship**

**ICAR/13**

**2 ECTS**

**(Master)**

### **Workshop Service Design**

**ICAR/13**

**2 ECTS**