MASTER OF SCIENCE IN INDUSTRIAL DESIGN ENGINEERING

DESCRIPTION

The aim of the Industrial Design Engineering Master program is educating professionals with a whole understanding of the design process and able to integrate and leader multidisciplinary design teams. Our program Master is focused on teaching a comprehensive idea of the entire design process, in which the needs and expectations of the users, the scientific and technological aspects and the economic viability are integrated.

All the same, and in parallel with the strength of our School, the Industrial Master Engineering program emphasis the scientific and technological aspects, relating to manufacturing materials and technologies, stressing emerging technologies and new materials and their influence in alternative and new design solutions. We have also a commitment with environmental topics and we take into consideration the entire life cycle of the product, incorporating concepts like “from birth to the grave,” “from cradle to cradle,” or “Design for Disassembly”.

Nevertheless, we are conscious that the product design field is changing rapidly. At present, our Master studies are evolving toward a wider vision of: the industrial design field (increasingly a transdisciplinary occupation); products (not only tangible but also intangible goods, services and processes); designers (not only professionals, but also teams in which is also important the community participation in the design process),...

The Master program is structured in three parts:

a) Design management, with subjects related with design methodologies, innovation and marketing.

b) Design development, with subjects related with strategies and tools for the development of a design from the initial concept to their entire definition.

c) Product development, materials, analysis and simulation and fabrication.

MASTER UNIVERSITARIO EN INGENIERÍA EN DISEÑO INDUSTRIAL
MASTERS' DEGREE IN INDUSTRIAL DESIGN ENGINEERING
(PLAN 56AD)

(Classes are taught in Spanish)

MÓDULO	MODULO	CODE	ASIGNATURAS	COURSES	ECTS	Type	Semester
MÓDULO 1 GESTIÓN DELDISEÑO	MODULO 2 DESIGN MANAGEMENT	563000061	Metodología del diseño y desarrollo de productos	Design Methodology and Product Development	3	C	1
		563000062	Certificación y calificación de productos	Certification and Qualification of Products	1.5	C	1
		563000063	Gestión de la innovación y marketing	Innovation Management and Marketing	3	C	1
		TOTAL MODULE 1			**7.5**		
MODULO 2 DESARROLLO DEL DISEÑO	MODULO 2 DESIGN DEVELOPMENT	563000064	Diseño avanzado de sólidos y superficies	Advanced Design of Solids and Surfaces	4.5	C	1
		563000065	Digitalización tridimensional	Three-Dimensional Digitalization	4.5	C	1
		563000066	Prototipado	Prototypin	4.5	C	2
		563000067	Presentación del diseño	Presentation of the Design	3	C	2
		TOTAL MODULE 2			**16.5**		
MODULO 3 DESARROLLO DEL PRODUCTO	MODULO 3 PRODUCT DEVELOPMENT	563000068	Selección de Materiales y Procesos	Materials and Processes Selection *	**3**	C	1
		563000069	Conocimientos Avanzados de Materiales y Degradación	Advanced Knowledge and Degradation of Materials	**3**	C	1
		563000070	Diseño y Modelado de Productos por Elementos Finitos (CAE)	Product Design and Modelling by Finite Elements (CAE)	**3**	C	1
		563000071	Diseño y Fabricación Basado en Montaje	Design and Manufacturing Based on Assembly *	4.5	C	1
		563000072	Desarrollo de Proyectos de Fabricación en Entornos CAM	Manufacturing Projects Developed in CAM Environments	4.5	C	2
		TOTAL MODULE 3			**18**		
MODULO 4 OPTATIVAS (ELEGIR 6 ECTS)	MODULO 4 (SELECT 6 ECTS)	563000073	Prácticas Externas	External Internships	6	E	2
		563000074	Ecoeficiencia y Ecoinnovación	Ecoefficiency and Ecoinnovation*	3	E	2
		563000075	Energías Renovables en el Diseño de Producto	Renewable Energies in Product Design	3	E	2
		563000076	Comunicación Visual	Visual Communication	3	E	2
		563000077	Gestión de Proyectos y Dirección Técnica de Productos	Project Management and Technical Management of Products	3	E	2
		563000078	Materiales Poliméricos y Nanocompuestos Para Envase y Embalaje	Polymer Materials and Nanocomposites Applied on Packaging *	3	E	2
		563000079	Gestión de la Calidad en el Diseño y la Producción Aplicada a la Industria del Automóvil	Quality Management in Design and Production Applied to the Automotive Industry	3	E	2
		563000080	Diseño de Mecanismos	Design of Mechanisms	3	E	2
		TOTAL MODULE 4			**6**		
TRABAJO FIN DE MÁSTER	MASTER'S THESIS				**12**		
		TOTAL			**60**		

C = Compulsory and E = Elective * Courses taught in English.