Teaching Guide					
Identifying Data					2022/23
Subject (*)	Industrial Design			Code	630G02054
Study programme	Grao en Estudos de Arquitectura				
Descriptors					
Cycle	Period	Year		Type	Credits
Graduate	2nd four-month period	Fifth		Optional	6
Language	SpanishGalicianEnglish				
Teaching method	Face-to-face				
Prerequisites					
Department	Proxectos Arquitectónicos e UrbanismoProxectos Arquitectónicos, Urbanismo e Composición				
Coordinador	Martinez Raído, Jose Luis		E-mail	jose.luis.martinez.raido@udc.es	
Lecturers	Martinez Raído, Jose Luis Vidal Pérez, Francisco José		E-mail	jose.luis.martinez.raido@udc.es francisco.vidal@udc.es	
Web					
General description	The object of the course is to introduce the student to the traditional link between the architect and industrial design. The subject is close to the discipline of industrial design and architectural figures who have developed a relevant professional activity within this field. The theoretical contents of the subject support the practices of industrial design of objects. It deals with the history of furniture; the material in the design process (wood, glass, steel); solutions with assemblies, screws and gluing; ergonomics in design.				

Study programme competences / results	
Code	Study programme competences / results
A1	"Ability to apply graphical procedures to the representation of spaces and objects (T) "
A2	Ability to conceive and represent the visual attributes of objects and master proportion and drawing techniques, including digital ones (T)
A3	Knowledge of spatial representation systems and projections adapted and applied to architecture
A4	Knowledge of the analysis and the theory of form and the laws of visual perception adapted and applied to architecture and urbanism
A17	Ability to apply technical and construction standards and regulations
A26	Adequate knowledge of the physical and chemical characteristics, production procedures, pathology and use of building materials
A27	Adequate knowledge of industrialized building systems
A30	Knowledge of the organization of professional offices
A34	Ability to design, implement and develop sketches and drafts, concept designs, developed designs and technical designs (T)
A36	Ability to design, implement and develop construction management (T)
A39	Ability to remove architectural barriers (T)
A40	Ability to practise architectural criticism
A48	Adequate knowledge of general theories of form, composition and architectural types
A49	Adequate knowledge of the general history of architecture
A50	Adequate knowledge of the methods of studying the processes of symbolization, practical functions and ergonomics
A51	Adequate knowledge of the methods of studying the social requirements, living conditions, habitability and basic housing programmes
A52	"Adequate knowledge of ecology, sustainability and the principles of conservation of energy and environmental resources. "
A53	Adequate knowledge of the architectural, urban and landscape traditions of Western culture, as well as their technical, climatic, economic, social and ideological foundationsxicos.
A54	Adequate knowledge of aesthetics and theory and history of fine arts and applied arts
A55	Adequate knowledge of the relationship between cultural patterns and social responsibilities of the architect
A61	Knowledge of feasibility analysis and the surveillance and coordination of integrated projects
A67	Coñecemento avanzado de aspectos específicos da materia de Proxectos no contemplados expresamente na Orde EDU/2075/2010
B1	Students have demonstrated knowledge and understanding in a field of study that is based on the general secondary education, and is usually at a level which, although it is supported by advanced textbooks, includes some aspects that imply knowledge of the forefront of their field of study

B2	Students can apply their knowledge to their work or vocation in a professional way and have competences that can be displayed by means of elaborating and sustaining arguments and solving problems in their field of study
B3	Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues
B4	Students can communicate information, ideas, problems and solutions to both specialist and non-specialist public
B5	Students have developed those learning skills necessary to undertake further studies with a high level of autonomy
B6	Knowing the history and theories of architecture and the arts, technologies and human sciences related to architecture
B7	Knowing the role of the fine arts as a factor that influences the quality of architectural design
B11	"Knowing the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into planning "
B12	Understanding the relationship between people and buildings and between these and their environment, and the need to relate buildings and the spaces between them according to the needs and human scale
C1	Adequate oral and written expression in the official languages.
C3	Using ICT in working contexts and lifelong learning.
C4	Exercising an open, educated, critical, committed, democratic and caring citizenship, being able to analyse facts, diagnose problems, formulate and implement solutions based on knowledge and solutions for the common good
C5	Understanding the importance of entrepreneurial culture and the useful means for enterprising people.
C6	Critically evaluate the knowledge, technology and information available to solve the problems they must face
C7	Assuming as professionals and citizens the importance of learning throughout life
C8	Valuing the importance of research, innovation and technological development for the socioeconomic and cultural progress of society.

Learning outcomes			
Learning outcomes	Study programme competences / results		
Knowing the history of design	A53 A54 A55 A67	B1 B2 B3 B4 B5 B6 B7	C3 C4 C5 C6 C7 C8
Knowing the history of furniture design	A53 A54 A55 A67	B1 B2 B3 B4 B5 B6 B7	C3 C4 C5 C6 C7 C8
Knowing the scale of objects	A1 A2 A3 A48 A50 A67	B1 B2 B3 B5	C6 C8

Consider scale of objects in design	A1 A2 A4 A26 A50 A67	B2 B3	
Knowing physical characteristics of materials used in the production of objects	A26 A27		
Knowing and applying characteristics of screws, joints and assemblies	A17 A26 A27 A67	B1 B2 B3 B4 B5	C6 C8
Being able to modify the design of industrially produced objects	A1 A2 A3 A4 A26 A27 A40 A48 A50 A54 A55 A67	B1 B2 B3 B4 B12	C1 C3 C4 C5 C6 C7 C8
Being able to design industrially producible objects	A1 A2 A3 A4 A17 A26 A27 A34 A48 A67	B2 B3 B4 B5 B12	C1 C3 C4 C5 C6 C7 C8
Applying ergonomics to object design	A39 A50 A51 A67	B2 B3 B4 B5 B12	C3 C6 C7 C8
Knowing manufacturing processes	A26 A27 A30 A34 A36 A52 A61 A67	B2 B3 B4 B5	C4 C5 C6 C7 C8

Adaptation of design to manufacturing processes	A26 A27 A30 A55 A61	B2 B3 B4 B5	C4 C5 C6 C7 C8
Cooperate in industrial design teams	A30 A61 A67	B2 B3 B4 B11 B12	C1 C3 C4 C5 C6 C8
Understanding the social function of design and its usefulness	A48 A50 A51 A53 A54 A55	B2 B3 B4 B5 B6 B7	C4 C8
Making a review on industrial design products	A40 A48 A49 A54 A55	B2 B3 B4 B5	C3 C4 C5 C6 C7 C8
Relating the industrial design with the architectural space	A26 A27 A34 A39 A48 A49 A50 A51 A54	B2 B3 B4 B5 B12	C4 C6 C7 C8
Become familiar with the design and its qualities intuitively	A34 A36 A40 A48 A50 A53 A54	B2 B3 B7	C4 C8

Contents	
Topic	**Sub-topic**
History of furniture. History of industrial design. The material in the design process. Wood, glass, steel. Solutions with assemblies, screww and glued assemblies. The space of architecture and small objects. Ergonomics in the use of design.	varieties of solutions

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Directed discussion	A1 A2 A3 A4 A34 A36 A39 A40 A48 A53 A54 A55 A61 A67 B1 B2 B3 B5 B6 B7 C1 C3 C4 C7	50	0	50
Guest lecture / keynote speech	A17 A26 A27 A30 A49 A50 A51 A52 A53 A54 A55 B6 B7 B12 C5 C6 C7 C8	25	50	75
Mixed objective/subjective test	A53 A54 A55 B2 B3 B4 B5 B6 B7 B12 C3	2	6	8
Events academic / information	A1 A2 A3 A4 A34 A40 A48 A54 A55 B2 B3 B4 B7 C1 C3 C8	2	4	6
Field trip	A27 A30 B3 B4 B11 C5 C6 C7 C8	6	0	6
Personalized attention		5	0	5
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Directed discussion	Coursework correction.
Guest lecture / keynote speech	Lecture / exposure about the different topics of the course program with the support of image projection.
Mixed objective/subjective test	Theory and practice
Events academic / information	Elaboration of synthesis material about the work done in the subject for taking part on the event exibition event organized by the Department of Architectural Design, Urbanism and Composition: "Architectures in Progress. DPAUC" (panels, models, drawings, videos, texts, etc.). Attendance to informative events (congresses, lectures, symposia, conferences, etc.), organized by the ETSAC, the DPAUC, etc., indicated by the teachers of the subject as part of the teaching content of the course, with the aim of providing students with current knowledge and experiences, relating to a particular study field of the subject.
Field trip	Visits to wood and metal carpentry companies, etc.

Personalized attention	
Methodologies	Description
Directed discussion Guest lecture / keynote speech Field trip Mixed objective/subjective test Events academic / information	Face-to-face work.

Assessment			
Methodologies	Competencies / Results	Description	Qualification
Directed discussion	A1 A2 A3 A4 A34 A36 A39 A40 A48 A53 A54 A55 A61 A67 B1 B2 B3 B5 B6 B7 C1 C3 C4 C7	Progress and evolution of the proposals are scored as well as the occupation that is being acquired.	40
Mixed objective/subjective test	A53 A54 A55 B2 B3 B4 B5 B6 B7 B12 C3	Personalized learning is analyzed, evaluating the final work presented and the face-to-face test, making up a total of 60% of the grade in the score. The final work will represent 40% and the face-to-face test will represent 20%, adding between the two the total of 60%.	60
Others			

Assessment comments
The final mark is set when evaluating the final work. At the end of the course the student has a certain capacity that must be satisfactory. The evaluation criteria for both, the first and the second opportunity, includes: - 40% of the grade marks the progress and evolution of the proposals, as well as the skill that is acquired through participation in the guided discussion; - 60% of the grade depends on the mixed test, where 40% assesses the final work of the course and 20% the exam at classroom. Whether attending the first or the second opportunity, for the qualification corresponding to the participation and evolution in the directed discussion (reviews in class), it is necessary that the student attends and participates regularly in the classes, being considered as such a minimum of 80% attendance.

Sources of information	
Basic	2100 metal tubular chairs : a typology by Mácel, OtakarRotterdam : Van Hezik-Fonds 90, [2006]Ideología y utopía del diseño Contribución a la teoría del diseño industrial Selle, Gert.Barcelona : Gustavo Gili, 1975El diseño industrial y su estética Dorfles, Gillo.Barcelona : Labor, 19776. Aulas/talleresSidi (1984-1988) Sidi, cinco años de diseño Ambrós i Monsonis, Jordi.Barcelona : Aram, D.L. 1989Historia del diseño industrial Torrent, Rosalía.Madrid : Cátedra, 2005Objects of Design from The Museum of Modern Art Antonelli, Paola.New York : The Museum of Modern Art, [2003]Charles Rennie Mackintosh the complete furniture. Furniture drawings & interior designs Billcliffe, Roger.Guildford : Lutterworth Press, 1979The furniture of Charles and Ray Eames Weil am Rhein : Vitra , [2007]Scandinavian design Watabe, Chiharu.Tokyo : Petit Grand Publishing, [2003-2004]Breve historia del mueble Lucie-Smith, Edward.Barcelona : Destino, 1998Historia del mueble Feduchi, Luis.Barcelona : Blume, [1975]Manual de sistemas de unión y ensamble de materiales Caridad Obregón, Francisco Antonio.México : Trillas, 1986
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments
A certain fondness for the design of furniture and objects related to architecture is recommended.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.