

BASIC DETAILS:

Subject:	MAQUETAS Y PROTOTIPOS		
Id.:	33494		
Programme:	GRADUADO EN DISEÑO DIGITAL Y TECNOLOGÍAS CREATIVAS. PLAN 2020		
Module:	DESARROLLO CURRICULAR		
Subject type:	OBLIGATORIA		
Year:	1	Teaching period:	Primer Cuatrimestre
Credits:	6	Total hours:	150
Classroom activities:	68	Individual study:	82
Main teaching language:	Inglés	Secondary teaching language:	Castellano
Lecturer:	ALVAREZ ATARES, FRANCISCO JAVIER (T)	Email:	fjalvarez@usj.es

PRESENTATION:

The analytical capacity of the model is valued, the expressive synthesis that can make it a skillful instrument of knowledge of the complex network of ideas that underlies the shape of the design or architectural object.

The practice in the construction of objects is accompanied by a theoretical journey through different procedures for making models in the world of Architecture and Design in recent decades, also linking the execution of models with those of other contemporary artistic objects.

The student will be instructed in the existing material possibilities for the elaboration of models and their relationship with contemporary construction materials, as well as in the knowledge and use of the appropriate tools for each material.

PROFESSIONAL COMPETENCES ACQUIRED IN THE SUBJECT:

General programme competences	G02	Analizar, valorar y exponer las cualidades creativas de los distintos soportes técnicos y materiales en el campo del diseño digital.
Specific programme competences	E10	Conocer las metodologías, programas, técnicas, normas y estándares, además de ser capaz de utilizar la base de conocimiento adquirida con elementos específicos para el diseño y desarrollo de encargos profesionales.
	E11	Adquirir sensibilidad estética y artística para tomar decisiones durante el proceso creativo, demostrando habilidad en el manejo de las técnicas y procedimientos específicos del arte digital, así como desarrollar comprensión compleja bidimensional y tridimensional del espacio físico-virtual y los objetos que en él puedan existir.
	E12	Elaborar con destreza maquetas y prototipos de naturaleza física que sintetizen y expresen de forma coherente los conceptos de diseño perseguidos.
	E13	Prototipar un sistema interactivo a través de un diseño digital y saber visualizar y comunicar visualmente la información mediante el dominio de las técnicas propias de la expresión gráfica en 2D y 3D, estática y animada, y de la informática gráfica, sabiendo presentar los resultados en base a cánones estéticos.
	E15	Capacidad para generar nuevas ideas en el campo del diseño digital a partir de los modelos artísticos de los diferentes movimientos a lo largo de la historia del arte, propiciando la puesta en práctica sus habilidades creativas y la facultad de anticipación e innovación.
Learning outcomes	R01	Elaborar con cierta destreza maquetas y prototipos de objetos vinculados al mundo del Diseño y la Arquitectura.
	R02	Analizar, sintetizar y expresar de forma coherente los conceptos buscados a través de la maqueta.
	R03	Entender y aplicar los conocimientos adquiridos en el contexto teórico y cultural de los procedimientos de realización de maquetas y prototipos.
	R04	Elegir el material más adecuado a los objetivos buscados y manipularlo de acuerdo a su naturaleza.
	R05	Manejar distintas herramientas para la producción de maquetas y prototipos, así como de elegir la herramienta adecuada para cada material utilizado.

PRE-REQUISITES:

NOTE: Students must attend to the course with the sole exception of repeating students who are also enrolled in other courses that take place simultaneously. Students in this situation must attend to the newly enrolled one yet they are compelled to keep their tasks updated and comply with any planned deadline. Additionally, they should inform the teacher about their situation, should they need to make any adjustments on their schedule.

SUBJECT PROGRAMME:

Subject contents:

1 - Function and creative methodology
2 - Materials, tools and workplace
3 - Techniques
4 - History of the working model and prototypes
5 - 3D Printing

Subject planning could be modified due unforeseen circumstances (group performance, availability of resources, changes to academic calendar etc.) and should not, therefore, be considered to be definitive.

TEACHING AND LEARNING METHODOLOGIES AND ACTIVITIES:

Teaching and learning methodologies and activities applied:

This is an eminently practical subject in which the lectures and the theory of innovation will be combined throughout the semester, but the dynamics of most of the course will be a combination of studies / case studies and workshops with frequent individualized corrections and a final crit.

Another pillar of the subject will be the corrections between students oriented to the students to analyze and value the work among them. In order to encourage cooperative work and make an activity closer to reality, it will be encouraged that the work can be developed in groups depending on the total number of students.

Each type of sessions, work and activities are designed for the development of the competences that the student must acquire in the course. The most important recommendations made to students can be summarized in the following scheme:

- _ Attendance to the theoretical sessions in a participatory and critical way.
- _ Complement the topics covered in these sessions with the information offered in the bibliography or commented in class.
- _ Use, at any time, tutorial sessions to resolve any doubt or problem.
- _ Begin performing practical tasks without postponing them too early.
- _ Resolve the difficulties encountered with colleagues.
- _ Search, research, propose.
- _ Use the PDU for this collaboration and teacher participation is considered important.

Student work load:

Teaching mode	Teaching methods	Estimated hours
Classroom activities	Master classes	16

	Practical work, exercises, problem-solving etc.	32
	Coursework presentations	8
	Participation in seminars, conferences etc.	4
	Assessment activities	2
	Extra-curricular activities (visits, conferences, etc.)	2
	Asistencia a tutorías	4
Individual study	Individual coursework preparation	32
	Research work	20
	Recommended reading	10
	Portfolio	7
	Extra-curricular activities (visits, conferences, etc.)	8
	Other individual study activities	5
	Total hours:	150

ASSESSMENT SCHEME:

Calculation of final mark:

Individual coursework:	10 %
Group coursework:	5 %
Final Work:	10 %
Work Units:	60 %
Presentations:	15 %
TOTAL	100 %

*Las observaciones específicas sobre el sistema de evaluación serán comunicadas por escrito a los alumnos al inicio de la materia.

BIBLIOGRAPHY AND DOCUMENTATION:

Basic bibliography:

DUNN, Nick. Maquetas de Arquitectura. Medios, tipos, aplicación; Blume, 2010
HALLGRIMSSON, Bjarki. Diseño de Producto. Maquetas y prototipos. Barcelona; Promopress, 2013

Recommended bibliography:

CONSALEZ, Lorenzo. BERTAZZONI, Luigi. Maquetas. La representación del espacio en el proyecto arquitectónico. Barcelona; Ed. GG, 2014
FLORES & PRATS. Pensando a mano. La arquitectura de Flores y Prats. Barcelona. Ed. Arquine
SANTONJA V., Alberto. El Prototipo Como Proceso Del Diseño Industrial I. Procesos Para La Obtención de Prototipos . Valencia. UPV. 2007

Recommended websites:

Design Boom	https://www.designboom.com/
Pinterest	https://www.pinterest.es/
Flores & Prats	https://floresprats.com/
Oscar San Martin Vargas	https://www.oscarsanmartin.com/
Lola Simón Sceneries	https://lolasimonsceneries.blogspot.com/