



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Architettura		
ACADEMIC YEAR	2022/2023		
MASTER'S DEGREE (MSC)	DESIGN AN TERRITORY CULTURE		
SUBJECT	SUSTAINABLE TECHNOLOGIES WORKSHOP		
TYPE OF EDUCATIONAL ACTIVITY	B		
AMBIT	50318-Discipline tecnologiche e ingegneristiche		
CODE	19506		
SCIENTIFIC SECTOR(S)	ICAR/12		
HEAD PROFESSOR(S)	DE GIOVANNI GIUSEPPE	Professore Ordinario	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	6		
INDIVIDUAL STUDY (Hrs)	78		
COURSE ACTIVITY (Hrs)	72		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	DE GIOVANNI GIUSEPPE Friday 9:00 12:00 DIPARTIMENTO EDIFICIO N. 8		

DOCENTE: Prof. GIUSEPPE DE GIOVANNI

PREREQUISITES	The Student, to be able to understand the learning contents and objectives of the Laboratory, must possess knowledge on the history of Design, on project and on the characteristics of materials and production processes.
LEARNING OUTCOMES	<p>KNOWLEDGE AND UNDERSTANDING ABILITY: Students will acquire the necessary knowledge and tools to understand the processes that characterize the dynamics starting from the elaboration of a project to the realization of a product, paying particular attention to innovative technologies, new manufacturing techniques, materials and cycles sustainable processing.</p> <p>ABILITY TO APPLY KNOWLEDGE AND UNDERSTANDING: Students will be able to apply the knowledge gained through lectures and exercises in the project activity, solving the problems related to it. They will be able also to determine what materials and techniques to be used to ensure the best performance of an industrial product; to verify the socio-cultural and symbolic aspects of the product.</p> <p>JUDGEMENT: The Lab aims at strengthening the critical consciousness of students that, once acquired the necessary tools, will be able: to act autonomously with respect to the addressed issues and design experience; to assess which system of production and what materials choose to make a product, with particular interest in "Design for All".</p> <p>COMMUNICATION SKILLS: Students will be able: to express their ideas through sketches and drawings; in the final step, to represent the project proposals by computer-aided design techniques; to highlight problems related to the production cycle of a product, the life cycle of a product and its disposal.</p> <p>The Lab will provide the Students with the tools to develop an autonomous and critical study, through the theoretical lectures, and to solve the problems encountered during the design practice. At the end of the Lab the students will acquire a knowledge on the production and industrial systems, enabling them to continue their studies and researches with autonomy and dynamism and, also, to make the right and informed choices when they will design industrial products, to be manufactured with appropriate production systems.</p>
ASSESSMENT METHODS	<p>Regarding the verification of processing capabilities by the student, the assessment will present at least one of the following three objectives: b1) to provide independent judgments about the discipline's contents; b2) to understand the applications or implications of the contents within the discipline; b3) to frame the discipline content within the cultural context.</p> <p>The final exam will aim to assess whether the Student has knowledge and understanding of the topics, and has acquired interpretative competence and independent judgment on the practical exercitation developed during the Lab.</p> <p>Evaluation criteria: Excellent 30: excellent knowledge of the topics, excellent property of language. The student is able to apply the knowledge acquired in new contexts. Very good 26-29: excellent command of the topics, full ownership of language. The student is able to apply the knowledge acquired in new contexts. Good 24-25: basic knowledge of the main topics, good property of language with limited ability to apply knowledge independently acquired in new contexts. Satisfactory 21-23 does not have full command of the subjects but possesses them a general knowledge, satisfactory property of language, satisfactory ability to autonomously apply the acquired knowledge. enough 18-20 sufficient knowledge of the arguments and language specific, sufficient ability to independently apply the knowledge acquired. insufficient: does not possess an acceptable knowledge of the contents, lacks competence in specific language. He is not able to orient himself on more important disciplinary topics. The excellence of the mastery of the aforementioned knowledge and skills involves the awarding of praise.</p>
EDUCATIONAL OBJECTIVES	<p>The course aims to provide students with the methodological and operational theoretical tools for the analysis and understanding of the design process of industrial design in all its aspects. The course will address some aspects of the history and culture of industrial design trying to integrate the design issues in the overall context of socio-economic and technical-scientific changes, paying particular attention to the topics of environmental sustainability and innovation. Students will develop a project proposal, addressing all issues related to the conception of the industrial product and its realization.</p> <p>Therefore the learning objectives of the module will be: - Acquisition of knowledge related to the technical characteristics of the</p>

	<p>materials, production systems and performance potential of new materials and new technologies in mass production;</p> <ul style="list-style-type: none"> - ability to analyze and propose, through the design project, sustainable innovative processes within individual and collective behaviors; - knowledge of the new tools and expressive languages of contemporary life. <p>Finally, through the design experimentation, the student will acquire the ability to manage the system of relationships between materials, production processes, performance and symbolic aspects.</p>
TEACHING METHODS	Lectures, exercises, laboratory.
SUGGESTED BIBLIOGRAPHY	<ul style="list-style-type: none"> • De Fusco R., Storia del design, Laterza, Roma-Bari 1998. • Manzini E., La materia dell'invenzione, Arcadia Edizioni, Milano 1986. • Vezzoli C., Manzini E., Design per la sostenibilita' ambientale, Zanichelli, Bologna 2007. • Tomphson R., Il Manuale per il design dei prodotti industriali, Zanichelli, Bologna 2012. • Ashby M., Johnson K., Materiali e Design, Casa Editrice Ambrosiana, Rozzano (MI) 2005. • Fuad-Luke A., Eco-Design Progetti per un futuro sostenibile, Logos, Modena 2003. • Lupacchini A., Ergonomia e Design, Carocci, Roma 2008. • Fiel C. & P., Design Now, Taschen, Colonia 2006. • Potter N., Cos'e' un designer, Codice Edizioni, Torino 2010. <p>Altri testi e articoli di riviste di settore saranno consigliati durante lo svolgimento del Laboratorio.</p> <p>Other texts and articles from sector magazines will be recommended during the course development.</p>

SYLLABUS

Hrs	Frontal teaching
3	Laboratory Prolusion: Objectives, Planning and Management.
4	From the concept of function to that of form.
4	From form to material. Production and technological innovation.
4	The Designer in the History of Design and in the Culture of Industrial Design.
Hrs	Workshops
57	The laboratory exercise will concern the design of an industrial product from the conception to the technicalconstructive definition up to the prototype, also respecting the sustainability characteristics that the project must possess.