



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Architettura		
ACADEMIC YEAR	2016/2017		
BACHELOR'S DEGREE (BSC)	INDUSTRIAL DESIGN		
INTEGRATED COURSE	INDUSTRIAL DESIGN STUDIO I - TECHNICAL-CONSTRUCTIONAL FEATURES OF INDUSTRIAL DESIGN - INTEGRATED COURSE		
CODE	15797		
MODULES	Yes		
NUMBER OF MODULES	2		
SCIENTIFIC SECTOR(S)	ICAR/13, ICAR/12		
HEAD PROFESSOR(S)	PANTINA ANGELO	Ricercatore	Univ. di PALERMO
	TRAPANI VITA MARIA	Professore Ordinario	Univ. di PALERMO
OTHER PROFESSOR(S)	ANGELICO EMANUELE	Ricercatore	Univ. di PALERMO
	VITRANO ROSA MARIA	Professore Associato	Univ. di PALERMO
	PANTINA ANGELO	Ricercatore	Univ. di PALERMO
	TRAPANI VITA MARIA	Professore Ordinario	Univ. di PALERMO
CREDITS	12		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	<p>ANGELICO EMANUELE Tuesday 10:30 12:30 Dipartimento d'arch - 338.8948144</p> <p>PANTINA ANGELO Thursday 10:30 13:30 Viale delle Scienze, Edificio 8, secondo piano, Dipartimento di Architettura (ingresso dal primo piano, citofonare ed attendere).</p> <p>TRAPANI VITA MARIA Friday 11:00 13:00 Edificio 8, stanza del docente, piano 2°</p> <p>VITRANO ROSA MARIA Wednesday 11:00 12:00 edificio 14</p>		

<p>PREREQUISITES</p>	<p>Ability to apply basic methods and tools of technical drawing, knowledge of the basic elements of the history and culture of design and visual communication.</p>
<p>LEARNING OUTCOMES</p>	<p>The course aims to provide the basics to tackle the design process of a manufactured object under the aspect conceptual, construction, technology and performance</p> <p>Knowledge and understanding / Knowledge and understanding The course introduces the student to the knowledge of the areas and the design methodologies of design expertise and proposes a program aimed at understanding the project elaboration processes related objects, the objects systems and communication artifacts contemporary environment</p> <p>Capacity 'to apply knowledge and understanding / Applying knowledge and understanding The course will provide the basics to tackle the design process of a product from the point of creative and constructive. The workshop will take place in parallel to a teaching module inherent productive technical aspects of the product: you will then activate a didactic 'open' mode, able to integrate different knowledge and skills, developing the students' creative and practical skills for the design and realization of the prototype of a manufactured object.</p> <p>Making judgments / Making judgment Through the representation and critical description of objects and artifacts of communication and through classroom discussions, the course will develop the students' ability to become aware of objects and signs that make up his daily life scenario and to lay the foundations of its own scientific and professional career. It will develop the ability to independently assess the relations between the technical-constructive aspect (technologies, materials, production processes) and other aspects of the project (innovation, configuration, performance, environmental and social aspects) of the product you intend to accomplish.</p> <p>Enable 'communication / Communication Communication skills, developed in parallel on different registers of the text, image, drawing and computer representation, are proposed as a constitutive element of the idea of the design project and verified in practice and in trials. The student must expose their conceptual elaboration and practices effectively, verbally and graphically.</p> <p>Capacity 'Learning / The course will offer 'to the students the theoretical tools and attivita'pratiche (bibliographies, lectures, activities' seminars) to develop the ability' to implement their own knowledge and skills, through exercises aimed at research skills and self-learning. The completing the course students will have acquired the critical tools, methodological and operational needed to continue their studies with a high degree of autonomy</p> <p>Educational objectives / Educational objectives The Laboratory of Industrial Design 1st aims to provide students with the essential theoretical and methodological tools for the design development of objects, objects of systems and communication artifacts of the contemporary. The six-month course consists of lectures, exercises and activities' laboratory. In the first part we will be introduced notions of perception and visual communication, presentation and critical description of objects and communication products; In fact, the course aims to develop the students 'ability' to become aware of objects and signs that make up his daily life scenario. In the first part of exercises are planned: - Exercises of representation and description of the objects, with the support of texts and images; - Activities' research and communication on issues related to the culture of design. In the second part it is planned exercise that theme will be the design of an object that can be manufactured, marked by a simple technology, which expresses a clear and communicable conformative process and constructive. It will be proposed and tested the concept of a project as a succession of choices, which aims to express and to relate the techno-scientific innovation and socio-cultural changes; then they develop the essential steps in the planning process of a product: • research related to reference materials for the project • definition of the design concept, ie innovative idea from which part of the process leading to the definition of the project; • design, technical development and representation of the product; • Product communication through bi-dimensional representations The laboratory, which is integrated with the course "Technical and constructive</p>

	characters of industrial design", will be 'enriched by communications from other teachers or experts on specific themes and meetings with companies.
ASSESSMENT METHODS	<p>Both the course tests and the design exercise contribute to the final vote. The course tests concern:</p> <ul style="list-style-type: none"> -the student's representation skills; -the development of a short research, through which will be assessed the knowledge of the subject and the communication skills; -a written test concerning the understanding and ability of judgment in relation to the lectures and the recommended books <p>The design exercise development will be evaluated according to the innovativeness of the project idea, the possibility of constructive technical development of the product, the effectiveness of its communication through images and its presentation.</p> <p>The student is also required to verbally communicate the design process making use of appropriate terms in relation to the cultural and technical aspects of design.</p> <p>Both the course tests and the design exercise contribute to the final vote. The course tests concern:</p> <ul style="list-style-type: none"> -the student's representation skills; -the development of a short research, through which will be assessed the knowledge of the subject and the communication skills; -a written test concerning the understanding and ability of judgment in relation to the lectures and the recommended books <p>The design exercise development will be evaluated according to the innovativeness of the project idea, the possibility of constructive technical development of the product, the effectiveness of its communication through images and its presentation.</p> <p>The student is also required to verbally communicate the design process making use of appropriate terms in relation to the cultural and technical aspects of design.</p> <p>Both the course tests and the design exercise contribute to the final vote. The course tests concern:</p> <ul style="list-style-type: none"> -the student's representation skills; -the development of a short research, through which will be assessed the knowledge of the subject and the communication skills; -a written test concerning the understanding and ability of judgment in relation to the lectures and the recommended books <p>The design exercise development will be evaluated according to the innovativeness of the project idea, the possibility of constructive technical development of the product, the effectiveness of its communication through images and its presentation.</p> <p>The student is also required to verbally communicate the design process making use of appropriate terms in relation to the cultural and technical aspects of design.</p> <p>Grades: 30 - 30 cum laude</p> <ul style="list-style-type: none"> a) Good ability in designing and developing a project of an original and reproducible object b) Full ability to apply the knowledge acquired during the course and to formulate original judgments c) Excellent property of specific language d) Communication skills about different registers (drawing, images, presentation) <p>26- 29</p> <ul style="list-style-type: none"> a) Comprehensive ability to design and develop a project with innovative content b) Verified ability to apply the acquired knowledge and formulate judgments c) Good ability to articulate a specialized discourse d) Adequate skills of communication <p>22-25</p> <ul style="list-style-type: none"> a) Sufficient ability to design and develop a project with elements of innovation b) Basic ability to apply the acquired knowledge and formulate judgments c) Basic ability to articulate a specialized discourse d) Fair skills of communication <p>18-21</p> <ul style="list-style-type: none"> a) Low ability to design and develop a project with elements of innovation b) Low ability to apply the acquired knowledge and formulate judgments c) Low ability to articulate a specialized discourse d) Minimum skills of communication
TEACHING METHODS	Lectures, tutorials and discussion on outcomes through collective interaction mode, participation of experts and companies, laboratory with revision of the different steps of the project, final workshop

<p>PREREQUISITES</p>	<p>Ability to apply basic methods and tools of technical drawing, knowledge of the basic elements of the history and culture of design and visual communication.</p>
<p>LEARNING OUTCOMES</p>	<p>Learning outcomes course aims to provide the basics to tackle the design process of an object producible according to conceptual, constructive, technological and performance aspects.</p> <p>Knowledge and understanding The course introduces the student to the knowledge of the areas and the planning methodologies of design expertise and it proposes a program aimed at understanding the project elaboration processes related to objects, systems of objects and communication artifacts within the contemporary environment.</p> <p>Applying knowledge and understanding The course will provide the basics to tackle the design process of a product in creative and constructive terms. The laboratory will take place simultaneously to a teaching module concerning the productive technical aspects of the product: an "open" teaching mode will then be activated, in order to integrate different knowledge and skills, developing the student's creative and practical ability for designing and implementing the prototype of a producible object.</p> <p>Making judgement Through the representation and critical description of objects and communication artifacts and through classroom discussions, the course will develop the student's ability to become aware of those objects and signs which constitute the daily life scenario and set the basis for a personal scientific and professional career. It will also contribute to develop the ability to independently identify the relations between the technical-constructive aspect (technologies, materials, production processes) and other aspects of the project (innovation, configuration, performance, environmental and social aspects) in relation to the designed product.</p> <p>Communication skills The communication skills, simultaneously developed on the different registers of the text, image, drawing and computer representation, are proposed as a constitutive element of the design project idea and verified during the tutorials and tests. The student must verbally and graphically expose in an effective way conceptual and practical elaborations.</p> <p>Learning Skills The course will offer to the students the theoretical tools and practical activities (bibliographies, lectures, seminars) in order to develop the ability to implement their own knowledge and skills, through exercises aimed at the strengthening of research and self-learning skills. At the end of the course students will have acquired the critical, methodological and operational tools that are required for the continuation of their studies with a high level of autonomy.</p>
<p>ASSESSMENT METHODS</p>	<p>Both the course tests and the design exercise contribute to the final vote. The course tests concern: -the student's representation skills; -the development of a short research, through which will be assessed the knowledge of the subject and the communication skills; -a written test concerning the understanding and ability of judgment in relation to the lectures and the recommended books</p> <p>The design exercise development will be evaluated according to the innovativeness of the project idea, the possibility of constructive technical development of the product, the effectiveness of its communication through images and its presentation.</p> <p>The student is also required to verbally communicate the design process making use of appropriate terms in relation to the cultural and technical aspects of design. Grades: 30 - 30 cum laude</p> <p>a) Good ability in designing and developing a project of an original and reproducible object b) Full ability to apply the knowledge acquired during the course and to formulate original judgments c) Excellent property of specific language d) Communication skills about different registers (drawing, images, presentation) 26- 29</p> <p>a) Comprehensive ability to design and develop a project with innovative content b) Verified ability to apply the acquired knowledge and formulate judgments c) Good ability to articulate a specialized discourse d) Adequate skills of communication 22-25</p> <p>a) Sufficient ability to design and develop a project with elements of innovation</p>

	b) Basic ability to apply the acquired knowledge and formulate judgments c) Basic ability to articulate a specialized discourse d) Fair skills of communication 18-21 a) Low ability to design and develop a project with elements of innovation b) Low ability to apply the acquired knowledge and formulate judgments c) Low ability to articulate a specialized discourse d) Minimum skills of communication
TEACHING METHODS	Lectures, tutorials and discussion on outcomes through collective interaction mode, participation of experts and companies, design laboratory with revisions of the different steps of the project, final workshop

**MODULE
INDUSTRIAL DESIGN LABORATORY I**

Prof. ANGELO PANTINA - Lettere A-L, - Lettere A-L

SUGGESTED BIBLIOGRAPHY

-Bassi A., Design, il Mulino, Bologna.2013. Form. A5 pp.128
 -Pasca V., Il design italiano: elementi per una storia. in AA. VV., 1951-2001 Made in Italy? Skira editore, Milano, 2001. Da p. 104 a p. 117.
 -Thompson Rob, Il manuale per il design dei prodotti industriali, Zanichelli, Bologna, 2012.

AMBIT	50234-Design e comunicazioni multimediali
INDIVIDUAL STUDY (Hrs)	78
COURSE ACTIVITY (Hrs)	72

EDUCATIONAL OBJECTIVES OF THE MODULE

The Laboratory of Industrial Design 1° st aims to provide students with the essential theoretical and methodological tools for the the design development of objects, systems of objects and communication artifacts of the contemporary environment. The six-month course consists of lectures, exercises and workshops.

In the first part are introduced the basics of perception and visual communication, presentation and critical description of objects and communication artifacts; in fact, the course aims to develop in students the ability to become aware of those objects and signs which constitute the daily life scenario.

The first part provides the following exercises:

- Exercises of representation and description of the objects, with the support of texts and images;
- Research and communication activities about topics related to the design culture.

The second part provides exercises about the design of a producible object, characterized by a simple technology, which expresses a clear and communicable conformative and constructive process. It will be proposed and tested the concept of a project as a succession of choices, which aims to express and to relate the techno-scientific innovation and socio-cultural changes; the essential steps in the planning process of a product will be then developed:

- research related to reference materials for the project;
- definition of the design concept, namely the innovative idea from which the development process leading to the definition of the project starts;
- sizing, technical development and representation of the product;
- product communication through bi-dimensional representations.

The laboratory, which is integrated with the "Technical and constructive characters of industrial design" course, will be enriched by the participation of other teachers or experts on specific themes and a series of meetings with companies.

SYLLABUS

Hrs	Frontal teaching
6	Definition, fields and industrial design methods
6	Analysis and survey of a design product
6	The role and activities of the industrial design in the contemporary context
6	The design and communication of a product
6	Design of a product
Hrs	Practice
8	approach of exercises: observe, describe, represent, draw, shape, refer to, search, relate
8	The design and communication of a product
Hrs	Workshops
26	Elaboration of design concepts; self-construction and communication of a product

MODULE
TECHNICAL AND CONSTRUCTIONAL FEATURES OF INDUSTRIAL DESIGN

Prof. EMANUELE ANGELICO - Lettere A-L, - Lettere A-L

SUGGESTED BIBLIOGRAPHY

Dispensa del Corso di Caratteri tecnico Costruttivi del Prodotto Industriale
M.Ashby- K.Johnson: Materiali e Design, Casa Editrice Ambrosiana, Mi, 2005
E.Chiacchierini: "Tecnologia e produzione", edizione Kappa 2003
R.M. Vitrano, ARTEHA, Architettura Tecnologia Habitat, Alinea Editrice, Firenze, 2011

AMBIT	50235-Discipline tecnologiche e ingegneristiche
INDIVIDUAL STUDY (Hrs)	102
COURSE ACTIVITY (Hrs)	48

EDUCATIONAL OBJECTIVES OF THE MODULE

The course aims to provide the basic technological and performance concepts (system requirements - typological quality - technological - environmental and aesthetic) to address the design process of a product design in terms creative and constructive. It explores the construction process of a product with the elaboration of a "technical and analytical dossier" all 'inside of which will be covered: the technological relief materials refer to a basic model, the system and the structural components, structural connections and the drawing of specific technological solutions. In support of the teaching will be organized seminars and exhibitions.

SYLLABUS

Hrs	Frontal teaching
4	Theories and technological bases; analysis of needs and performance; structural loads
4	Knowledge systems and manufacturing techniques; Structural constraints and balance of structures
5	Identification of a design product subject of practice; breakdown of the structural parts; structural stresses
5	The product design study: function - specific weight - material properties
5	Phase I: methods, criteria and types of intervention for the design process of product, material specifications
6	Phase II: project definition processing; specifications on the structural connections
Hrs	Practice
6	Technical Report - form - functions – performance

MODULE
TECHNICAL AND CONSTRUCTIONAL FEATURES OF INDUSTRIAL DESIGN

Prof.ssa ROSA MARIA VITRANO - Lettere M-Z, - Lettere M-Z

SUGGESTED BIBLIOGRAPHY

Dispensa del Corso di Caratteri tecnico Costruttivi del Prodotto Industriale
M.Ashby- K.Johnson: Materiali e Design, Casa Editrice Ambrosiana, Mi, 2005
E.Chiacchierini: "Tecnologia e produzione", edizione Kappa 2003
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AMBIT	50235-Discipline tecnologiche e ingegneristiche
INDIVIDUAL STUDY (Hrs)	102
COURSE ACTIVITY (Hrs)	48

EDUCATIONAL OBJECTIVES OF THE MODULE

The course aims to provide the basic technological and performance concepts (system requirements - typological - technological - environmental and aesthetic quality) to address the design process of a "design" product in creative and constructive terms. It explores the construction process of a product with the elaboration of a "technical and analytical dossier" within which the following issues will be covered: the technological relief materials related to a basic model, the system and structural components, the structural connections and the drawing of specific technological solutions. Seminars and exhibitions will be organized to support teaching.

SYLLABUS

Hrs	Frontal teaching
4	Theories and technological bases; analysis of needs and performance; structural loads
4	Knowledge systems and manufacturing techniques; Structural constraints and balance of structures
5	Identification of a design product subject of practice work; breakdown of the structural parts; structural stresses
5	The study of a design product: function - specific weight - material properties
6	Phase I: methods, criteria and types of intervention for the design process of product, material specifications
6	Phase II: project definition; specifications on the structural connections
Hrs	Practice
6	Technical Report - form - functions - performance
12	Improvement of specific technological solutions and graphics processing

**MODULE
INDUSTRIAL DESIGN LABORATORY I**

Prof.ssa VITA MARIA TRAPANI - Lettere M-Z, - Lettere M-Z

SUGGESTED BIBLIOGRAPHY

- Alberto Bassi, Design. Progettare gli oggetti quotidiani, Il Mulino, Bologna 2013
- Maldonado Tomas, Disegno industriale: un riesame Feltrinelli, Milano 1991
- Enzo Mari, La valigia senza manico. Arte design e karaoke, conversazione con Francesca Alfano Miglietti, Bollati Boringhieri, Torino 2004.
- Alberto Bassi, Design anonimo in Italia: Oggetti comuni e progetto incognito, Electa, Milano 2007
- AA.VV. Farsi un libro, Biblioteca del vascello/ Stampa alternativa, Roma 1990

AMBIT	50234-Design e comunicazioni multimediali
INDIVIDUAL STUDY (Hrs)	78
COURSE ACTIVITY (Hrs)	72

EDUCATIONAL OBJECTIVES OF THE MODULE

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- research related to reference materials for the project;
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SYLLABUS

Hrs	Frontal teaching
2	Intoduction: program and books
2	Design: definitions and fields
5	Methods of representing and modeling for design
4	The design project: history and contemporary trends
5	Materials and construction processes
4	Meetings with companies, designers, experts
Hrs	Practice
8	Development of a search around to companies and designers related to the theme of the course
Hrs	Workshops
8	drawing and description of an object of "anonymous design"
24	project of an industrial product
10	final workshop