



Teaching Guide				
Identifying Data				2017/18
Subject (*)	Artistic Expression	Code	771G01041	
Study programme	Grao en Enxeñaría de Deseño Industrial e Desenvolvemento do Produto			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	First	FB	6
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Didácticas Específicas e Métodos de Investigación e Diagnóstico en Educación Expresión Gráfica Arquitectónica Proxectos Arquitectónicos, Urbanismo e Composición			
Coordinador	Fraga Lopez, Francisco Javier	E-mail	javier.fraga@udc.es	
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Web	artistica.udc.es			
General description	<p>This course has two objectives:</p> <p>1) To provide students with the ability to sufficient freehand drawing (sketch), understood as basic and necessary capacity for development in the professional environment of industrial design.</p> <p>2) To ensure that students acquire the fundamental knowledge that allow them to face the analysis of the forms (in the industrial object) by drawing freehand.</p> <p>Alongside these objectives the student will take knowledge of industrial design through selected examples in which theoretical teaching and practice is based.</p>			

Study programme competences / results	
Code	Study programme competences / results
A1	Aplicar o coñecemento das diferentes áreas involucradas no Plano Formativo.
A2	Capacidade de comprensión da dimensión social e histórica do Deseño Industrial, vehículo para a creatividade e a búsqueda de solucións novas e efectivas.
A3	Necesidade dunha aprendizaxe permanente e continua (Life-long learning), e especialmente orientada cara os avances e os novos produtos do mercado.
A4	Traballar de forma efectiva como individuo e como membro de equipos diversos e multidisciplinares.
A5	Identificar, formular e resolver problemas de enxeñaría.
A6	Formación ampla que posibilite a comprensión do impacto das solucións de enxeñaría nos contextos económico, medioambiental, social e global.
A7	Capacidade para deseño, redacción e dirección de proxectos, en todas as súas diversidades e fases.
A8	Capacidade de usar as técnicas, habilidades e ferramentas modernas para a práctica da enxeñaría.
A9	Capacidade para efectuar decisións técnicas tendo en conta as súas repercusións ou custos económicos, de contratación, de organización ou xestión de proxectos.
B2	Aplicar un pensamento crítico, lóxico e creativo para cuestionar a realidade, buscar e propoñer solucións innovadoras a nivel formal, funcional e técnico.
B3	Aprender a aprender. Capacidade para comprender e detectar as dinámicas e os mecanismos que estruturan a aparición e a dinámica de novas tendencias.
B4	Traballar de forma colaborativa. Coñecer as dinámicas de grupo e o traballo en equipo.
B5	Resolver problemas de forma efectiva.
B6	Traballar de forma autónoma con iniciativa.
B9	Comunicarse de maneira efectiva nun entorno de traballo.



B10	Capacidade de organización e planificación.
B11	Capacidade de análise e síntese.
C3	Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C6	Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben afrontarse.
C7	Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C8	Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences / results		
REPRESENTATION SYSTEMS: Understanding and knowledge representation systems and procedures relating to graphic ideation and visual expression in the different phases of design.	A4 A6 A7 A8	B2 B5 B6 B9 B10 B11	C3 C6 C7
ANALYSIS OF FORMS: understanding and knowledge of the laws of perspective, the theory of shadows and tonal assessment and ability to perform phenomenological and analytical study of the forms	A1 A4 A5 A7 A8	B2 B3 B5 B6 B9 B10 B11	C6
COLOR THEORY: Understanding and knowledge of the different color theories and their application to industrial design.	A1 A7 A8	B3 B5 B6 B9 B10	C6
GRAPHIC IDEATION: ability to conceive and represent the figure, the color, texture and brightness of objects and master proportion and techniques of freehand drawing and sketching as well as the presentation and finishing.	A1 A2 A3 A4 A7 A8 A9	B2 B3 B4 B5 B6 B9 B10	C3 C7 C8

Contents	
Topic	Sub-topic
01. DRAWING AS LANGUAGE	1.1. Introduction to drawing. 1.2. Drawing as language. 1.3. Representation levels.
02. REPRESENTATION SYSTEMS AND ITS APPLICATION TO DESIGN	2.1. Projection and section: invariants and features. 2.2. Representation systems. 2.3. Classification systems and application to industrial design.



03. LINEAR PERSPECTIVE	3.1. Concepts of linear perspective. 3.2. Representation of point, line and plane. 3.3. Central and oblique perspective with visual rays.
04. FREEHAND DRAWING AND SKETCHING	4.1. Concepts of freehand drawing. 4.2. Notions of lace and proportion. 4.3. Sketching techniques. Drawing from life.
05. ANALYSIS OF FORMS AND VOLUMES	5.1. Mass and volume. 5.2. Study of the elementary volume. 5.3. Study of complex shapes. Related volumes.
06. SHADOWS ON THE GRAPHIC REPRESENTATION	6.1. Shades of points and lines. 6.2. Own and thrown shadow. 6.3. Dimensional composition.
07. GRADUATION AND TONAL ASSESSMENT	7.1. General. 7.2. Graduation apparent clarity and tonal rating. 7.3. Isophotes lines. Points lines and bright.
08. THEORY OF COLOR AND CLASSIFICATION SYSTEM	8.1. Color Theory. 8.2. Color interaction. 8.3. Color Psychology applied to design.
09. DRAWING AS A TOOL	9.1 Art and graphical representation. 9.2 Development of graphic idea. 9.3 The final design presentation.
10. COMPOSITION AND CONTEXT	10.1 Composition and support. 10.2 Incorporation of the human figure. 10.3 Adding text.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Introductory activities	A6 B2 B3 B6 B9 C3 C6 C7	2	0	2
Guest lecture / keynote speech	A4 A6 A7 A8 B2 B5 B6 B9 B10 B11 C3 C6 C7	10	0	10
Workshop	A1 A2 A4 A5 A7 A8 B2 B3 B4 B5 B6 B10 C3 C7 C8	21	60.9	81.9
Supervised projects	A1 A2 A3 A4 A9 B2 B3 B4 B5 B6 B10 B11 C3 C7 C8	3	47.1	50.1
Objective test	A4 A7 A8 B2 B5 B6 B9 B10 B11	5	0	5
Personalized attention		1	0	1
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Introductory activities	These activities are carried out before starting the process of teaching and learning in order to learn the skills, reasons and interests of the students for the achievement of the objectives related to the subject. It seeks to obtain relevant information to articulate teaching to promote effective and meaningful learning, stemming from the prior knowledge of students.



Guest lecture / keynote speech	In the keynote sessions are exposed the theoretical content of the course and the fundamental practical developments basing on use of the word and leaning mainly on image, digital presentations and drawings on the board, as the main routes of transmission of information.
Workshop	The weekly workshops are intended to put into practice the knowledge acquired, through a series of exercises given by the teacher and his ongoing support and supervision during class time.
Supervised projects	The supervised projects is a methodology designed to promote independent learning of students outside the classroom, under the guidance of the teacher. Throughout the semester a set of generic statements will be proposed to the student, to develop on their own and submit at the end of the course. Weekly tutorial schedule will voluntarily monitor these works.
Objective test	Used as a single test for the final evaluation of learning, allowing assess the capacity and skills acquired throughout the course.

### Personalized attention

Methodologies	Description
Workshop Supervised projects	The schedule tutoring, teacher, individually or in small groups, address the needs of students and inquiries related to the development and / or topics related to the subject, providing guidance, support and motivation in the learning process. It can also be made on line for specific queries through e-mail or virtual campus.

### Assessment

Methodologies	Competencies / Results	Description	Qualification
Objective test	A4 A7 A8 B2 B5 B6 B9 B10 B11	The objective test serves to evaluate the final maturation of the student at the end of the course.	50
Workshop	A1 A2 A4 A5 A7 A8 B2 B3 B4 B5 B6 B10 C3 C7 C8	Assessment practices and work in the classroom and/or completed outside. This work should give an idea of the maturity of the student in the course. It is necessary to perform in a timely manner the proposed work to be evaluated. These works will not be returned to the student.	25
Supervised projects	A1 A2 A3 A4 A9 B2 B3 B4 B5 B6 B10 B11 C3 C7 C8	It is a fundamental part of the assessment with the work done in the workshop. Its development with the minimum quality required is essential for consideration. These works will not be returned to the student.	25

### Assessment comments

Presentiality (attendance) is essential for both the experimental practices and workshop activities to lectures. Less than 80% attendance may jeopardize the positive assessment in the subject. If the subject is not overcome at the first opportunity, the student must provide new supervised projects to qualify for the second one.
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### Sources of information



<b>Basic</b>	<ul style="list-style-type: none"><li>- MARTIN, J. (1994). Aprender a abocetar. Barcelona: Naturart</li><li>- EDWARDS, B. (2000). Aprender a dibujar con el lado derecho del cerebro. Barcelona: Blume</li><li>- JULIÁN, F.; ALBARRACÍN, J. (2005). Dibujo para diseñadores industriales. Barcelona: Parramón</li><li>- CHING, F. D.K. (1990). Drawing, a creative process. Nueva York: Wiley</li><li>- LAMBERT, S. (1996). El dibujo técnica y utilidad. Barcelona: Blume</li><li>- BÄRTCSHI, W. A. (1980). El estudio de las sombras en perspectiva. Barcelona: Gustavo Gili</li><li>- KÜPPERS, H. (1995). Fundamentos de la teoría de los colores. Barcelona: Gustavo Gili</li><li>- ALBERS, J. (1979). La interacción del color. Madrid: Alianza</li><li>- PORTER, T.; GOODMAN, S. (1990). Manual de técnicas gráficas para arquitectos, diseñadores gráficos y artistas. Barcelona: Gustavo Gili</li><li>- LAWSON, P. J. (1980). Perspectiva para dibujantes. Barcelona: Gustavo Gili</li><li>- MAIER, M. (1982). Procesos elementales de proyectación y configuración. Barcelona: Gustavo Gili</li><li>- HANKS, K.; BELLISTON, L. (1990). Rapid Viz. A new method for the rapid visualization of ideas. Ontario: Crisp Learning</li><li>- DE GRANDIS, L. (1985). Teoría y uso del color. Madrid: Cátedra</li><li>- NICOLAIDES, K. (1990). The natural way to draw. Boston: Mariner Books</li><li>- WRIGHT, L. (1985). Tratado de perspectiva. Barcelona: Stylos</li><li>- FERRER, R. (2014). Dibujo para diseñadores de muebles. Barcelona: Parramón</li><li>- CABEZAS, L. (2011). Dibujo y construcción de la realidad. Madrid: Cátedra</li><li>- HENRY, K. (2012). Dibujo para diseñadores de producto. Barcelona: Promopress</li></ul> <p>&lt;br /&gt;</p>
<b>Complementary</b>	

## Recommendations

### Subjects that it is recommended to have taken before

Basic Design/771G01021

History of Art and Design/771G01038

### Subjects that are recommended to be taken simultaneously

Graphic Expression/771G01015

### Subjects that continue the syllabus

Applied Artistic Expression Techniques/771G01042

### Other comments

Students participating in mobility programs both outgoing and incoming will adapt to the same standards as other students.

(\*)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.