



Teaching Guide

Identifying Data					2020/21
Subject (*)	Drawing in Architecture	Code	630G02002		
Study programme	Grao en Estudos de Arquitectura				
Descriptors					
Cycle	Period	Year	Type	Credits	
Graduate	1st four-month period	First	Basic training	6	
Language	SpanishEnglish				
Teaching method	Hybrid				
Prerequisites					
Department	Expresión Gráfica Arquitectónica				
Coordinador	Fernandez-Gago Longueira, Paula	E-mail	paula.fernandez-gago@udc.es		
Lecturers	Caridad Yañez, Eduardo Fernandez-Gago Longueira, Paula Fraga Lopez, Fernando Fraga Lopez, Francisco Javier Mantiñan Campos, Carlos	E-mail	eduardo.caridad@udc.es paula.fernandez-gago@udc.es fernando.fraga@udc.es javier.fraga@udc.es carlos.mantinan@udc.es		
Web	http://departamentos.etsa.udc.es/webryta/				
General description	<p>This subject aims to introduce students to the graphic representation of architecture, from two different perspectives: Architectural Drawing and Freehand Drawing.</p> <p>Drawing in Architecture in essence, will be taught under the face-to face system, including the theoretical contents in the practical approach or development. During this academic year 2020_21, and due to the exceptional Covid-19 limitations as well as to the insistence of the faculty leadership, there is an isolated hour for theory untied from the practice hours.</p> <p>Decision that has been reached against the subject teaching staff, because since forever both, theory and practice were gathered together to make easier their total integration. In addition, the theoretical hour must be divided in two parts to attend both methodologies of the subject. For this reason, the keynote speech hours devoted for the theoretical contents will be taught under virtual mode through Teams in order to avoid a mass of people in the classroom, and to ease the transition between both theoretical blocks of contents. As soon as the threat of the virus is overcome, it will return to a face-to face teaching mode taking up the four hours format that this subject has always had.</p>				



Contingency plan	<p>1. Modifications to the contents</p> <ul style="list-style-type: none"> - No modifications will be made. <p>2. Methodologies</p> <p>*Teaching methodologies that are maintained</p> <ul style="list-style-type: none"> - Keynote speech - Supervised projects - Workshop <p>*Teaching methodologies that are modified</p> <p>3. Mechanisms for personalized attention to students</p> <ul style="list-style-type: none"> - Email. Temporality: Daily. Use: To ask for virtual appointments (tutorials) and for monitoring the proposed projects/exercises. - Moodle. Temporality: Daily. Use: According to the student's need to have the materials provided, for the delivery of the different assignments, or for the use of the thematic forums. - Teams. Temporality: This dynamic will be adjusted to the temporal development of the subject in face-to-face mode with the necessary weekly sessions to be able to carry out all the theoretical and practical classes as well as to carry out tutorials. Use: Hybrid, in such a way as to follow a normalized and adjusted monitoring of the learning needs of the students to develop the work of the subjects. <p>4. Modifications in the evaluation</p> <p>What is indicated in the subjects teaching guide is maintained, because the change into virtual teaching mode does not imply changes in the procedures or in the way of evaluation.</p> <p>*Evaluation observations: Those as indicated in the subject teaching guide are maintained.</p> <p>5. Modifications to the bibliography or webgraphy</p> <p>Students will have available in Moodle, a series of sources of information in pdf format. No modifications will be made in relation to this issue.</p>
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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
A5	"Knowledge of the metric and projective geometry adapted and applied to architecture and urbanism "
A63	Development, presentation and public review before a university jury of an original academic work individually elaborated and linked to any of the subjects previously studied
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



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
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.
C2	Mastering oral and written expression in a foreign language.
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		
Ability to apply graphic representation systems. Ability to handle projection and section systems. Ability to handle the quantitative and selective aspect of the scale. Ability to establish the relationship between the plane and depth.	A1	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8
Ability to conceive and represent the figure, color, texture and brightness and also dominate the objects proportion. Knowledge of the drawing techniques, all of them fundamental to the correct approach to the projectual skill, a prelude to the project representation. Knowledge and understanding of the stages of graphic learning, from the initial preceptual stage to the final creative representation.	A2	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8
Knowledge and understanding of systems of spatial representation and their relation to the processes of graphical conceptualisation and visualisation of the different stages of architectural and urban design.	A3	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8



Knowledge and understanding of the laws of proportion and visual perception, theories of form and image, aesthetic theories of color and phenomenological analysis of architectural and urban form.	A4	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8
Knowledge and understanding of the metric and projective geometry as the foundations of the layout, design and architectural composition.	A5	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8
Ability to apply knowledge and skills in relation to Systems of Representation, Graphical Conceptualisation, Analysis of forms and Graphical Restoration, for the production, presentation and defense before a University Board of Examiners of an original piece of academic work based on the student's own research in relation to any of the areas covered by the course.	A63	B1 B4 B5 B6 B7 B12	C1 C2 C3 C4 C5 C6 C7 C8

Contents	
Topic	Sub-topic
FREEHAND DRAWING Workshop Methodology	Graphic learning methodology applied to architectural perception. Expressive representation as a first step concerning graphic learning. Lineal perspective applied to freehand drawing. Expressive volume representations: axonometric, perspectives, models...
INTRODUCTION TO ARCHITECTURAL DRAWING Supervised Projects methodology	Graphic conventions. Scale and proportions. Plans, elevations and architectural sections.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student's personal work hours	Total hours
Introductory activities	A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8	2	0	2
Supervised projects	A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8	22	45	67



Workshop	A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8	22	45	67
Guest lecture / keynote speech	A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8	13	0	13
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	With these activities, it is aimed to approach the students into the different type of contents, methodologies, and the learning outcomes of this subject (and Analysis of Architectural Forms belonging to the second four-month period) and how they will be evaluated.
Supervised projects	<p>This methodology is based on competences and contents of Architectural Technical Drawing; students will be required to complete several assignments during both class time practice sessions and non-class time hours allocated for these activities, always under the supervision of the teaching staff. .</p> <p>Some of the assignments will consist of exams.</p> <p>This section of the course focuses on learning ?how things are done? and the promotion of supervised independent learning (this is why the flipped classroom teaching strategy for the theoretical contents is used).</p> <p>Class contact hours will be used for:</p> <ol style="list-style-type: none"> 1)The proposal and discussion of project topics and related theoretical considerations. 2)Class time will also include a series of group and/or individual project monitoring sessions, and time for carrying out particular tasks on the project in process. 3)The exams included in the planning, will be done during part of the class hours as well.
Workshop	<p>The workshop section of the module includes both class time practice sessions and non-class time spent on workshop tasks assigned and supervised by the professor. This methodology is based on competences and contents of Freehand Drawing, and it is focused on learning ?how things are done? (therefore the suitability of the interspersed of the theory into ?condensed pills? within the practice) and encouraging supervised independent learning under the supervision of the teaching staff.</p> <p>Students will be required to produce a set amount of graphical work (defined in advance by the professor) during the hours allocated for workshop activities that the students must perform on a mandatory basis.</p> <p>Workshop activities will be based on the following categories and assessed individually, with each task accounting for a specific portion of the overall mark:</p> <ol style="list-style-type: none"> 1) Class work (ordinary class hours) 2) Weekly practical tasks (student's personal work hours) 3) Final test drawings (final exam)



<p>Guest lecture / keynote speech</p>	<p>Although according to the Annual Teaching Plan (PDA in Spanish) there is an hour devoted for the theoretical contents assigned in this subject (due to an administrative and homogenizer UDC matter), for years theoretical lessons have never been taught in a traditional way. The theoretical contents have always been included within the practice, as it is evidenced by multiple evidences and communications for teaching innovation conferences. However, this academic year, and due to the insistence of the faculty leadership, and against the teaching staff, there is an isolated hour for theory untied from the practice hours, that will have to be divided in two parts to attend both methodologies of the subject.</p> <p>Theoretical contents will be divided according to the module's two main subject areas and taught using a non-linear approach, based on the make-up of the group and the learning objectives proposed by the teaching staff.</p> <ul style="list-style-type: none"> - In the Supervised project methodology, theoretical contents will be taught following the instructional strategy called "flipped classroom". That strategy reverses the traditional learning environment by delivering instructional content outside of the classroom. At the beginning of the class-hours, possible doubts on the contents given in advance will be solved; after that, a test will be carried out to check whether everything has been understood. - On the other hand, the theoretical contents in the Workshop methodology will be developed in theoretical-practical sessions. In general, oral presentations will be carried out, using audiovisual aids and other resources, intended to convey knowledge and encourage learning. <p>This academic year and due to the exceptional Covid-19 limitations, and to avoid infections, the theoretical contents will be taught under virtual mode through Teams.</p> <p>The only in-person theoretical session will be held, if possible, for developing the Introductory Activities the first week of the four-month period.</p>
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Personalized attention

Methodologies	Description
<p>Introductory activities Guest lecture / keynote speech Supervised projects Workshop</p>	<p>Personalized attention refers to one-to-one meetings between teachers and students, or small group tutoring sessions, designed to offer guidance, support and motivation to students throughout the learning process, and an opportunity to discuss any questions or difficulties they may have in relation to specific module tasks and activities.</p> <p>For this section of the module, as in the other sections, students will be required to keep the professor informed as to the progress of their assignments, to ensure projects meet the necessary standards in each case.</p> <p>Given the emphasis on personalized teaching and learning in this module, students will be strictly required to avail of all opportunities for engagement offered by the syllabus. Students will ask their teachers for an appointment by email, to guarantee both, compliance and temporary provision and avoid unnecessary waiting for students.</p> <p>This academic activity, will be carried out by the teaching staff, individually or in a small group, and may be virtual by Teams or in person at the choice of each teacher.</p>

Assessment

Methodologies	Competencies / Results	Description	Qualification
<p>Guest lecture / keynote speech</p>	<p>A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8</p>	<p>As already indicated, the theoretical contents of this subject, are focused on how are they put into practice. For this reason, it is not assessed independently and therefore it does not count in the evaluation.</p>	<p>0</p>
<p>Supervised projects</p>	<p>A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8</p>	<p>The final grade in this methodology will be the sum of the following marks:</p> <ul style="list-style-type: none"> -The weighted average of all the practical work and exams carried out during the four-month period, will account for the 60% of the global mark of this module - The mark obtained in the final exams (official schedule January and or July) will account for the 40% of the global mark of this module. A mark under 5 in the final exam will result in a failing grade in this module of the subject. 	<p>50</p>



Workshop	A1 A2 A3 A4 A5 A63 B1 B4 B5 B6 B7 B12 C1 C2 C3 C4 C5 C6 C7 C8	The final grade in this methodology will be the sum of the following marks: - Class work and Weekly practical tasks will account for a 60% of the total final mark for the module - Final assessment control drawings (final exam) will account for a 40% of the total final mark for the module (official schedule January and or July)-	50
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Assessment comments



1) Class attendance is compulsory for both methodologies workshop and supervised projects (theoretical and practical sessions) as well as the tutoring attendance. Students who fail to attend to the 80% to all classes will be recorded as ?Absent?. Absences due to illness or other unforeseen circumstances should not exceed the remaining 20%.

Attendance will be recorded by the completion of a series of tests in time and form, exercises and all the scheduled deliveries for the different methodologies.

Students under part-time commitment and other UDC academic exemptions, will not have to meet the previous attendance requirement. However, they will have to meet, everything in relation to the delivery of all the assignments.

2) In both methodologies, all the exams will be evaluated by the whole staff of lecturers of the subject to guarantee the homogeneity of the level in all the subgroups.

3) The final grade for the course will be the arithmetic mean of the marks achieved by the students in both methodologies, according to the criteria established in each case and obtained according to the percentages (%) indicated above.

Weighted average in the Supervised Projects intends to express the desire to give more value to the latest projects so that to allow the students to mature their graphic skills towards the end of the four-month period.

VERY IMPORTANT: A mark under 5 in one of the methodologies (workshop or Supervised Projects), will result in a failing grade in this subject.

In an extraordinary way, students who have passed one of the methodologies and failed the other at the first opportunity, will not have to repeat the approved part at the second opportunity.

Students who have to take the subject again the next year, will have to pass both methodologies again.

4) In relation to the delivery of all the assignments, the following requirements, will be taken into account:

- Workshop: Class work assignments will be handed in weekly, at the end of the class session; non-class assignments will be handed the week following the proposal.

- Supervised Projects: Assignments will be collected on the day set in the planning or in the proposal.

Late delivery is not allowed. Students who fail to meet this requirement will be recorded as ?Absent?.

For both methodologies, Students under part-time commitment and other UDC academic exemptions, will have to meet the delivery dates of all the assignments. In case this is not possible, they will have to agree with their teachers a new delivery date in advance, as well as for doing the exam (control exercise) if it is needed.

In order to pass the module, either during the first-opportunity term exams in June, or during the second-opportunity examination period in July, students will be required to have done 100% of all assigned work in each methodology, and achieve the minimum specified mark for each of the compulsory assignments, under the appropriate direction and supervision of the professor. Students who fail to meet this requirement will be recorded as ?Absent (NP)? and have their assessment deferred to a subsequent examination period.

Project supervision will only be deemed to have taken place where the supervising lecturer can confirm that student work on projects during class time is consistent with work completed outside of class hours. Students who fail to attend the weekly tutorial meetings (at the minimum 1 hour), will be recorded as ?Absent?.

5) Second Opportunity (July)

Students who need to sit for the second opportunity, should develop all the assignments assessed as ?absent? and/or those that hadn't got the minimum mark to get a pass in the first opportunity.

In addition, they should take into account the following requirements:

- In relation to the Supervised Projects methodology, they should develop a new ?development assignment? posed by the professors at the beginning of the second semester, to give students enough time to do it and to have it supervised by their teachers. The deadline to deliver this task will be 15 days before the date of the exam of the second opportunity. The weighted average of all the practical work will be part for the 60% of the global mark of this module.

- In relation to the Workshop methodology, students should develop a new 'sketchpad' posed by the professors at the beginning of the second semester, to give students enough time to do it and to have it supervised by their teachers. The deadline to deliver this task will be the date of the exam of the second opportunity.

- For both methodologies, the weighted average of all the practical work will be part for the 60% of the global mark of this module.

Students who only sit for the second opportunity (in July), will be strictly required to do all the assigned work during the course with particular emphasis to the teacher supervision of all these tasks.

7) Given the emphasis on personalized teaching and learning in this module, students will be strictly required to avail of the opportunities for engagement offered by the syllabus. Students who fail to attend the weekly tutorial meetings (at the minimum 1 hour), will be recorded as ?Absent?. Students under part-time commitment and other UDC academic exemptions, will also have to meet the previous requirement.

8) Teaching, testing and assessment in respect of mobility programme students, will be adapted to meet any special circumstances or supervision



needs these students may have.



Sources of information

Basic	<ul style="list-style-type: none">- Campanario, Gabriel (2012). THE ART OF THE URBAN SKETCHING. Massacgusetts. Ed. Quarry Books- Cooper, Douglas (1992). DRAWING AND PERCEIVING. Nueva York. Ed. John Wiley & Sons- Ching, Francis (1982). MANUAL DE DIBUJO ARQUITECTÓNICO. México. Ed. G.G. México- Ching, Francis (1990). DRAWING. A CREATIVE PROCESS. New York. Ed. Wiley and Son- Ching, Francis (1999). DIBUJO Y PROYECTO. México. Ed. G.G. México- Edwards, Betty (1979). APRENDER A DIBUJAR CON EL LADO DERECHO DEL CEREBRO. Nueva York. Ed. Urano- Gonzalez, Lorenzo; Bertazzoni, L. (2000). MAQUETAS. LA REPRESENTACIÓN DEL ESPACIO EN EL PROYECTO ARQUITECTÓNICO. México. Ed. G.G. México- Jacoby, Helmut (1973). NUEVOS DIBUJOS DE ARQUITECTURA. Barcelona. Ed. G.G.- Janke, Rolf (1978). ARCHITECTURAL MODELS. Londres, Academy Editions- Knoll, W. y Hechinger, M. (1982). MAQUETAS DE ARQUITECTURA: TÉCNICAS Y CONSTRUCCIÓN. México. Ed. G.G. México- Mills, Criss B. (2000). DESIGNING WITH MODELS. Nueva York. Ed. John Wiley & Sons- Moneo, R. y Cortés, J. (1982). COMENTARIO SOBRE 20 ARQUITECTOS DEL SIGLO XX. Barcelona. Ed. U. Politecnica Cataluña- Navarro Lizandra, José Luis (2000). MAQUETAS, MODELOS Y MOLDES: MATERIALES Y TÉCNICAS PARA DAR FORMA A LAS IDEAS . Castelló de la Plana. Publicacions de la Universitat Jaume I.- Nicolaides, Kimon (1990). The Natural Way to Draw: A Working Plan for Art Study. Harcourt Brace and Company- Porter y Goodman (1983-1984-1985). MANUAL DE TÉCNICAS GRÁFICAS PARA ARQUITECTOS. VOL 1,2,3 Y 4. Barcelona. Ed. G.G.- Redondo, E. y Delgado, M. (). DIBUJO A MANO ALZADA PARA ARQUITECTOS.. Barcelona. Ed. Parramón- Richards, James (2013). FREEHAND DRAWING AND DISCOVERY. New Jersey. Ed. Wiley and Son- Uddin, M.S. (2000). DIBUJO AXONOMÉTRICO. México. Ed. McGraw Hill- Uddin, M.S. (2000). DIBUJO DE COMPOSICIÓN. México. Ed. McGraw Hill- VanDyke, Scott (1984). DE LA LINEA AL DISEÑO. México. Ed. G.G. México
Complementary	

Recommendations

Subjects that it is recommended to have taken before

Subjects that are recommended to be taken simultaneously

Descriptive Geometry/630G02003

Introduction to Architecture/630G02005

Subjects that continue the syllabus

Analysis of Architectural Forms/630G02007

Other comments

It would be advisable for new students before joining this subject, that previously had completed courses in high school on technical and freehand drawing.

(*)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.