Teaching Guide				
Identifying Data				2021/22
Subject (*)	Architectural Graphic Expression II [In extinction]		Code	670G01013
Study programme	Grao en Arquitectura Técnica			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	1st four-month period	Second	Obligatory	6
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Expresión Gráfica Arquitectónica			
Coordinador	Perez Doval, Luis	E-mail	luis.pdoval@udc.es	
Lecturers	Perez Doval, Luis	E-mail	luis.pdoval@udc.es	
Web				
General description	When initiating the third cuatrimestre, the student already knows the rules of the architectural language, has surpassed, likewise, other asignaturas parallel, but fundamental for a progress in the understanding of the architectural fact and his graphic expression. It deepens in this reality called Architecture facilitating to the student, the rules and knowledges that allow him cover and solve each concrete architectural problem, from his foundations. For this is precise a desmenuzamiento of the constructive fact, the arrive to his last details, to his expression, to the knowledge of the distinct constructive solutions, to the Drawing of Constructive Details, to the Drawing anyway. Understand the drawing like a language, doing him see to the student the universality and precision that the Graphic Representation represents like element of communication, as well as the foundations of the graphic representation and his need.			
Contingency plan	1. Modifications to the contents 2. Methodologies *Teaching methodologies that are maintained *Teaching methodologies that are modified 3. Mechanisms for personalized attention to students 4. Modifications in the evaluation *Evaluation observations: 5. Modifications to the bibliography or webgraphy			

Study programme competences / results	
Code	Study programme competences / results
A2	Adquirir os coñecementos fundamentais sobre os sistemas e aplicacións informáticas específicos e xerais utilizados no ámbito da edificación.
A6	Coñecer e aplicar os distintos sistemas de representación así como as técnicas e procedementos de expresión gráfica aplicados á edificación e ás construcións arquitectónicas.
B2	Capacidade de organización e planificación.
B3	Capacidade para a procura, análise, selección, utilización e xestión da información.
B5	Capacidade para a resolución de problemas.
B6	Capacidade para a toma de decisións.
B7	Capacidade de traballo en equipo.

B14	Aprendizaxe autónomo.
B15	Adaptación a novas situacións.
B25	Hábito de estudo e método de traballo.
B27	Capacidade de comunicación a través da palabra e da imaxe.
B28	Capacidade de improvisación e adaptación para enfrontarse a novas situacións.
C1	Adequate oral and written expression in the official languages.
C3	Using ICT in working contexts and lifelong learning.
C4	Acting as a respectful citizen according to democratic cultures and human rights and with a gender perspective.
C5	Understanding the importance of entrepreneurial culture and the useful means for enterprising people.
C6	Acquiring skills for healthy lifestyles, and healthy habits and routines.
C7	Developing the ability to work in interdisciplinary or transdisciplinary teams in order to offer proposals that can contribute to a sustainable environmental, economic, political and social development.
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		
Capacity of work in team.		B7	
Capacity to apply the development of the croquis, the proporcionalidad, the language and the technicians of the Graphic Representation of the elements and constructive processes.	A6		
Capacity of organisation and planning.		B2	
Capacity for it searches, analysis, selection, utilization and management of the information.		B3	
Capacity for the resolution of problems.		B5	
Capacity for it takes of decisions.		B6	
Autonomous learning.		B14	
Adaptation to new situations.		B15	
Frock of study and method of work.		B25	
Capacity of communication through the word and of the image		B27	
Sensibility to subjects related with the protection, preservation and put in value of the cultural and architectural heritage.	A6	B2 B3 B5 B6 B7 B14 B15 B25 B27	
Capacity of improvisation and adaptation stop to confronted the new situation.		B28	
Prpers expressed correctly, so much of oral form as writing, in the official tongues of the autonomous community.			C1
Use the basic tools of the technologies of the information and the communications (TIC) necessary stop the exercise of the his profession and stop the learning along the his life.			C3
Prpers developed stop the exercise of an open citizenship, literate, critical, engaged, democratic and solidary, able to analyze the reality, diagnose problems, formulate and implant solutions based in the knowledge and geared to the very common.			C4
Understand the importance of the entrepreneurial culture and know the means to the range of the entrepreneurial people.			C5
Value critically the knowledge, the technology and the available information to resolve the problems with the that owe to confronted.			C6
Assume how professional and citizen the importance of the learning along the life.			C7
Value the importance that has the investigation, the innovation and the technological development in the socioeconomic and cultural advance of the society.			C8

Adquirir os coñecementos fundamentais sobre os sistemas e aplicacións informáticas específicos e xerais utilizados no ámbito da edificación.	A2		

Contents	
Topic	**Sub-topic**
Concept of constructive section. Types. Criteria of election.	Learn to represent the parts seccionadas of the buildings with unseen parts of these with complex internal composition. - Differentiate the multiple types of sections that can employ in the definition of the building, executing them in the appropriate place. - Use the number of necessary sections to define the construction of a building.
Conditioning of the Terrain. You disassemble.	Demoliciones, explanaciones, disassemble, terraplenados, castings, resolve and pozos. Simbologia And representation grafica. Planes of group and of detail.
Saneamientos, drainages and avenamientos.	Elements of drainage, drain superficial and drain linear. Caskets, pozos, manifolds, works of drainage Types of drainage: -Drainage of walls of containment -Drainages of cimentaciones -Drainages of soleras, of trasdós, etc Planes of group and of details.
Cimentaciones.	Containments: -Walls of gravity -resistant Walls -Screens -Pilot -Superficial: run, losas, beams centradoras, zapatas.
Structures.	Of steel, Space, Forged, Supports, Beams, Zancas, Of factory, of Concrete, of Brick, of Stone. General planes and of detail.
Carpinterias.	Of steel, of Light Alloys, of Hormigon, wooden, of PVC, general Planes and of detail.
Defences, Rails, Closings.	Persianas: Types and Systems Rails, Fixations,etc Folding , extensible, enrollables, etc Guides, capialzados, drum, motorisation etc general Planes and of detail.
Factories.	Of block Of brick Of glass Prefabricated Etc general Planes and of detail.

Installations.	Audiovisual Climatización Electricity Fontaneria Gas Salubridad Rubbishes Depuración and poured Smokes and gases saneamiento Ventilation Of transport Simbologia, general planes and of details.
Partitions.	Mamparas: Steel, Light Alloys, Wood, etc Doors Septums: Brick, Prefabricated, general Planes and of detail.
Covers.	Azoteas Ladscaped Transitables No transitables Lucernarios Roofs of fibrocemento Galvanised light Alloys Synthetic Blackboard Of Knit Of General Flat Zinc and of detail.
Revestimientos.	And paramentos vertical and horizontals: Tiled, chapados, enfoscados,light, industrial, wooden, laminados, moquetas,of ceilings etc. General Planes and of detail.
New materials and systems of ultima generation.	Façades trasventiladas: Stone, Marmol, fenolicos. Ceramicos, Aluminium Etc Signposts no portantes of coating of the structural plot of a building. General planes and of detail.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Supervised projects	A2 A6 B2 B3 B5 B6 B7 B14 B15 B25 B27 B28 C1 C3 C8	25	55	80
Document analysis	A6 B3 C3 C4 C8	0	25	25
Introductory activities	A2 A6 B25 C1 C3	0	5	5
Student portfolio	A2 A6 B2 B14 C6 C7 C8	5	0	5
Guest lecture / keynote speech	A6 B3 B6 B14 B25 B27 C1 C3 C4 C6	18	0	18
Field trip	B15 B28 C5	2	0	2

Personalized attention		15	0	15
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	**Description**
Supervised projects	The student will develop different works or specific practices, referents to the distinct explanations given, following the different marked guidelines and controlled by the professor.
Document analysis	Utilisation of the corresponding bibliography, basic and complementary, facilitated.
Introductory activities	Realisation of drawings manually heaved in which they reflect the work of documentation realised on architectural details of the corresponding bibliography.
Student portfolio	In the folder or archivador of the student will go classifying his practical works by dates. And regularly they will have personal sessions, tutorías personalised, with each one for realisations of autoevaluación and comments of the professor on his progress
Guest lecture / keynote speech	Weekly, before or the time that expose the practical exercises that they will have to develop the students, will realise an oral presentation in the blackboard and supported with audiovisual means of the contents of the practice or exercises to realise.
Field trip	Inside the possibilities, will try some visit guided to a company or factory of recognised prestige, where the student will be able to observe of direct form, cuales are the processes of manufacture of a material or of a concrete constructive system, as well as of his back put in work.

Personalized attention	
Methodologies	**Description**
Field trip Guest lecture / keynote speech Supervised projects Introductory activities Student portfolio	In the folder or archivador of the student will go classifying his practical works by dates. And regularly they will have personal sessions, tutorías personalised, with each one for realisations of autoevaluación and comments of the professor on his progress. To the "Alumnado with recognition of dedication part time and dispenses academician of exemption of assistance", recommends them put in knowledge of the corresponding professor, said circumstance, to be able to concretise the development of this activity as it consider more suitable.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Field trip	B15 B28 C5	Specified in the section 5.	10
Supervised projects	A2 A6 B2 B3 B5 B6 B7 B14 B15 B25 B27 B28 C1 C3 C8	They will supervise all and each one of the works developed by the student to personal level, and will orient him regarding his quality of grafismo, constructive appearances and presentation and where has to incidir to improve the appearances indicated previously.	80
Student portfolio	A2 A6 B2 B14 C6 C7 C8	In the folder or archivador of the student iran classifying his practical works: And regularly they will have personal sessions, tutorias personalised, with each one for realisations of autoevaluación and comments of the professor on his progress.	10

Assessment comments
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Sources of information

Basic	EL DELINEADO EN LA COSTRUCCIONENRIQUE ANGURA CAMAMANUAL DEL DIBUJO ARQUITECTONICOF.CHIGPRACTICA DEL DIBUJO ARQUITECTONICOF.GARCIA RAMOSNORMAS TECNOLOGICAS DE LA EDIFICACIONPREFABRICADOS DE HORMIGONFERNANDO VILAGUREL LADRILLO Y SUS FABRICASF. CASINELLOLA MADERA EN LA CONSTRUCCIONH. KULLMANARQUITECTURA EN MADERA Y SUS TECNICASHAUS JURGEN HAUSENANALISIS DE DETALLES CONSTRUCTIVOS PARA OBRA DE NUEVA PLANTA / AUTOR : ROMÁNGONZÁLEZ ÁLVAREZ ; TUTOR : SANTIAGO LÓPEZ PIÑEIRO.2001.APROXIMACIONES DE LA ARQUITECTURA AL DETALLE / EDITOR ALEJANDRO CRISPIANI.Santiago de Chile : ARQ, [2001].ATLAS DE DETALLES CONSTRUCTIVOS : CON MÁS DE 400 EJEMPLOS.1ª ed., 3ª reimp.Barcelona : GG, [2006] (2007 imp.).BANCO DE DETALLES ARQUITECTÓNICOS 2002.[Sevilla] : El Autor, [2002].BIBLIOTECA DE DETALLES.Madrid : Ediciones Trazos, [1994].BIBLIOTECA DE DETALLES CONSTRUCTIVOS FORJADOS INCLINADOS : ESTRUCTURAS DECUBIERTA Y FORJADOS INCLINADOS DE HORMIGÓN ARMADO PARA EDIFICACIÓN.UNIDIRECCIONALES, RETICULARES Y LOSAS MACIZAS : MÁS DE 550 DETALLESCONSTRUCTIVOS ADAPTADOS A LA INSTRUCCIÓN EHE / VICENTE CASTELL, BERNABÉ FARRÉ,FLORENTINO REGALADO.[Alicante] : CYPE Ingenieros, [2004].BIBLIOTECA DE DETALLES CONSTRUCTIVOS METÁLICOS, DE HORMIGÓN Y MIXTOS ENESTRUCTURAS DE EDIFICACIÓN 600 DETALLES ... ADAPTADOS A LA INSTRUCCIÓN EHE /VICENTE CASTELL, BERNABÉ FARRÉ ORO, FLORENTINO REGALADO TESORO.4ª ed.[Madrid] : CYPE Ingenieros, [2004].CATÁLOGO DE ELEMENTOS CONSTRUCTIVOS [RECURSO ELECTRÓNICO] / [COORDINACIÓN, FCO.COSME DE MAZARREDO PAMPLÓ, CARMEN SUBIRÓN RODRIGO ; REDACTORES, JAVIER BLANCOCARRANZA ... (ET AL.)].Valencia : Instituto Valenciano de la Edificación, [2007].Ford, Edward R.THE DETAILS OF MODERN ARCHITECTURE.Cambridge : Mit Press, 1990-1996.McLeod, Virginia.EL DETALLE EN EL PAISAJISMO CONTEMPORÁNEO.Barcelona : Blume, 2008.McLeod, Virginia.DETALLES CONSTRUCTIVOS DE LA ARQUITECTURA DOMÉSTICA CONTEMPORÁNEA.Barcelona : Gustavo Gili, [2007].Regalado Tesoro, Florentino.DETALLES CONSTRUCTIVOS PRÁCTICOS METÁLICOS, DE HORMIGÓN Y MIXTOS EN ESTRUCTURASDE EDIFICACIÓN / FLORENTINO REGALADO TESORO, BERNABÉ FARRÉ ORO.2ª ed.[Madrid] : CYPE Ingenieros, 1997.Ramsey, Charles George.LAS DIMENSIONES EN ARQUITECTURA / CHARLES GEORGE RAMSEY, HAROLD REEVE SLEEPER ;EDITOR IN CHIEF JOHN RAY HOKE, JR.Esteban Castro, Anselmo.EXPERIENCIAS SOBRE SOLUCIONES DE MADERA Y SU EMPLEO EN EDIFICACIÓN.Madrid : Proiescon, [2008].Nutsch, Wolfgang.MANUAL DE CONSTRUCCIÓN : DETALLES DE INTERIORISMO.Barcelona : Gustavo Gili , 2006.Diversas páxinas web sobre materiais e sistemas constructivos.
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Descriptive Geometry [In extinction]/670G01004
Architectural Graphic Expression I [In extinction]/670G01008
Construction I [In extinction]/670G01009
Construction Materials I/670G01105
Subjects that are recommended to be taken simultaneously
Construction II [In extinction]/670G01011
Materials II [In extinction]/670G01012
Facilities I [In extinction]/670G01014
Subjects that continue the syllabus
Geometry of Illustrations [In extinction]/670G01018
Topography [In extinction]/670G01020
Technical Projects I/670G01023
Technical Projects II/670G01027
Final Dissertation/670G01036
Interior, Garden and Landscape Design/670G01042
Other comments

La asignatura desarrolla, como métodos para la representación de la arquitectura, la construcción y sus detalles, el dibujo a mano alzada (imprescindible para la representación de detalles constructivos en obra) y el delineado mediante programas informáticos y su aplicación concreta a la representación arquitectónica y constructiva (imprescindible para el trabajo en estudio). En base a esto último es imprescindible el conocimiento previo de algún programa de dibujo asistido por ordenador, preferiblemente CAD.