Teaching Guide				
Identifying Data				2018/19
Subject (*)	Construction 6		Code	630G02037
Study programme	Grao en Estudos de Arquitectura			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Fourth	Obligatory	6
Language	SpanishEnglish			
Teaching method	Face-to-face			
Prerequisites				
Department	Construcións e Estruturas Arquitectónicas, Civís e Aeronáuticas			
Coordinador	Raya de Blas, Antonio	E-mail	antonio.raya@udc.es	
Lecturers	Amo Perez, Maria Pilar De Antelo Tudela, Enrique Bermudez Graiño, Jose Manuel Muñoz Fontenla, Carlos M. Raya de Blas, Antonio	E-mail	m.pilar.amo@udc.es enrique.antelo@udc.es jose.bermudez@udc.es c.fontenla@udc.es antonio.raya@udc.es	
Web				
General description	In this course, the students acquire the ability to design interior partition systems, vertical circulation systems and interior/exterior finishes. They will learn the standards requirements in order to choose the appropriate system (performance). Each system will be analysed in order to know how to prescribe every solution, its repair and maintenance, as well as estimate its cost, always in accordance with the architectural project.			

Study programme competences / results	
Code	Study programme competences / results
A13	Ability to conceive, calculate, design, integrate in buildings and urban units and execute interior partition walls, carpentry, stairs and other finished work (T)
A17	Ability to apply technical and construction standards and regulations
A19	Ability to maintain the finished work
A20	Ability to assess the construction works
A25	Adequate knowledge of conventional construction systems and pathology
A26	Adequate knowledge of the physical and chemical characteristics, production procedures, pathology and use of building materials
A29	Knowledge of administrative, management and professional procedures
A31	Knowledge of methods of measurement, assessment and expert´s report
A32	Knowledge of the project of health and safety at the construction site
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
B2	Students can apply their knowledge to their work or vocation in a professional way and have competences that can be displayed by means of elaborating and sustaining arguments and solving problems in their field of study
B3	Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues
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
B9	Understanding the problems of the structural design, construction and engineering associated with building design and technical solutions

B10	Knowing the physical problems, various technologies and function of buildings so as to provide them with internal conditions of comfort and protection against the climate factors in the context of sustainable development
B11	"Knowing the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into planning "
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	Expressing themselves correctly, both orally and in writing, in the official languages of the autonomous region
C3	Using basic tools of information technology and communications (ICT) necessary for the exercise of the profession and for 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 entrepreneurship and knowing the means available to the enterpreneur
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	Assessing the importance of research, innovation and technological development in the socio-economic advance of society and culture

Learning outcomes			
Learning outcomes	Study programme competences / results		
Partition systems: The student must acquire the ability to design interior partition systems and know the standards requirements in order to chose the appropriate system (performance). The student must know how to prescribe the solution, the repair and the maintenance in accordance with the architectural project.	A13 A17 A19		C1 C3 C6 C7 C8
Interior / Exterior finishes: The student must acquire the ability to use the materials used as interior/exterior finishes and know the standards requirements in order to chose the appropriate system (performance). The student must know how to prescribe the solution, the repair and the maintenance in accordance with the architectural project.	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63	B1 B2 B3 B4 B5 B6 B7	C1 C3 C4 C5 C6 C8
Vertical circulation systems: The student must acquire the ability to design vertical circulation systems and know the standards requirements in order to chose the appropriate system (performance). The student must know how to prescribe the solution, the repair and the maintenance in accordance with the architectural project.	A13 A17 A25 A26 A29 A31 A32	B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12	C1 C5 C6 C7 C8

The students must acquire the abilities to be a part of a multidisciplinary team (and to be able to lead it) that can design and build partition systems, vertical circulation systems as well as interior and exterior finishes; They will learn the standards requirements in order to choose the appropriate system (performance). They will be able to prescribe (from a ecological sensitivity point of view) every solution, its repair and its maintenance, as well as estimate its cost, always in accordance with the architectural project.	A20 A25 A26	B1 B2 B3 B4 B5 B6 B9 B10 B11 B12	C4 C5

Contents	
Topic	**Sub-topic**
Lesson 01 PARTITION SYSTEMS	Objectives, contents and sources of information. Building-code requirements. Drywalls. Glass walls and movable/demountable partitions. Masonry partitions. Doors.
Lesson 02 VERTICAL CIRCULATION SYSTEMS	Objectives, contents and sources of information. Introduction. Stairs and ramps. Elevators. Appendices.
Lesson 03 INTERIOR FINISHES	Objectives, contents and sources of information. Introduction. Building-code requirements. Floor systems. Wall finishes. Ceiling coverings. Appendices.
Lesson 04 EXTERIOR PAVEMENTS	Objectives, contents and sources of information. Glossary. Technical requirements. Landscape construction. Appendices.

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C8	28	4	32

Workshop	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	28	56	84
Case study	A13 A17 A19 A20 A25 A26 A29 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	3	2	5
Objective test	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	1	11	12
Multiple-choice questions	A13 A17 A25 A26 A29 A31 A32 B1 B2 B3 B5 B7 B11 B12 C3 C6 C7	0	6	6
Workbook	A17 A25 A26 A29 A31 A32 B1 B3 B4 B5 B6 B7 B10 B11 C4 C5 C6 C7	0	10	10
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**
Guest lecture / keynote speech	Lectures aim to provide to the student the knowledge of several building systems (interior partition systems, vertical circulation systems and interior/exterior finishes). The standards requirements in order to choose the appropriate system (performance) will be explained, and each system will be analysed in order to know how to prescribe every solution, its repair and maintenance, as well as estimate its cost, always in accordance with the architectural project. Reference documentation and several examples of buildings will be provided to learn from the mistakes and the decisions took. An intelligent knowledge is sought instead of rote learning. The student must pass an objective test and several multiple-choice questions.
Workshop	The workshop is a workspace where students develop their architectural projects, applying the skills learnt during lectures. They will learn the relationship between the compositional processes of architecture and its construction. Several subjects merge around the idea of architecture, ensuring optimization of teaching resources and streamlining the student's work. The workshop aims to establish mechanisms for coordination and mainstreaming across studies, avoiding duplication and repetition in the content to facilitate an effective transit between semesters. Different mandatory projects will be developed.
Case study	The professors will show architectural projects of outstanding quality in order to serve as a model to develop the students? projects during the workshop. The projects will be shown to teach the relationship between the compositional processes of architecture and its construction. It will be assessed within the workshop.
Objective test	The objective tests seek to verify the application of knowledge and the skills acquired by students. Students may use documentary support (books, own notes based on a practical case, etc.)
Multiple-choice questions	Students must complete four mandatory testing about different topics in order to promote learning and continuous assessment. These tests are carried out within the learning platform UDC Moodle.

Workbook	Specific readings support the lectures. These readings introduce the constructive topic, helping the students to understand technical texts. It will be assessed within the objective test.

Personalized attention	
Methodologies	**Description**
Workshop Case study	Besides regular supervision during the workshop and case studies (the projects will be developed in open sessions in the presence of all students), professors offer weekly office hours, and they will encourage students to use them for solving doubts and questions.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Guest lecture / keynote speech	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C8	In order to pass the subject, attendance required is at least 75%. (First and second opportunities) When attendance is completed, it will be preserved in subsequent opportunities. Students must pass an objective test and several multiple-choice questions tests. The final mark will be the average of them, only if they get at least a 4 score (out of 10) in the objective test.	0
Workshop	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	Attendance required: 80%. The assessment for compulsory projects is not restricted to content; the authorship must be proved. There will be no compensation between this evaluation and other qualifications of the subject. In the assessment, the delivery of each case study will be considered. Students must get at least a 5 score (out of 10). If so, the final mark will be an average between the workshop and the objective test/multiple-choice questions tests. In order to pass, first year students must deliver every part of the workshop. If not, they will obtain a "NO PRESENTADO" (absent from assessment). According to the documentation from ETSAC degree in Architectural Studies memory, a Board of Assessment will be convened to analyze the results and resolve, if appropriate, specific cases of student assessment. Students who fail the workshop in June will have a second chance in July. If they obtain a "NO PRESENTADO" (absent from assessment), they cannot attend the second opportunity (July). Students who fail the specific part of the subject (Construction 6) (June and July) must develop in consecutive opportunities, with the appropriate adjustments, the project failed. This will happen in all opportunities and calls. Students with partial validations or exchange programs will have a set treatment for each case.	50
Case study	A13 A17 A19 A20 A25 A26 A29 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	The professors will show architectural projects of outstanding quality in order to serve as a model to develop the students? projects during the workshop. The projects will be shown to teach the relationship between the compositional processes of architecture and its construction. It will be assessed within the workshop.	0

Objective test	A13 A17 A19 A20 A25 A26 A29 A31 A32 A63 B1 B2 B3 B4 B5 B6 B7 B9 B10 B11 B12 C1 C3 C4 C5 C6 C7 C8	The objective tests seek to verify the application of knowledge and the skills acquired by students. Students may use documentary support (books and own notes). Students must pass an objective test and several multiple-choice questions tests. The final mark will be the average of them, only if they get at least a 4 score (out of 10) in the objective test. Objective test: when students get at least a 5 score (out of 10), mark will be preserved until July (included). Students will not pass the objective test if they made serious mistakes such: Acoustical bridges; finishes: absence of expansion joints; stairs: wrong dimensions; contact between incompatible materials.	25
Workbook	A17 A25 A26 A29 A31 A32 B1 B3 B4 B5 B6 B7 B10 B11 C4 C5 C6 C7	Workbook will be assessed within the objective test.	0
Multiple-choice questions	A13 A17 A25 A26 A29 A31 A32 B1 B2 B3 B5 B7 B11 B12 C3 C6 C7	Students must complete four mandatory testing about different topics. They must get at least a 5 score (out of 10) in each test (including penalizations). Three attempts in each are allowed with cumulative penalty of two points (first attempt: 0 points penalty, second attempt: 2 points, third attempt: 4 points, etc.). When students get at least a 5 score (out of 10), mark will be preserved until July (included) (for each test independently). These tests are carried out within the learning platform UDC Moodle.	25

Assessment comments
The program of the subject, delivered at the beginning of the course, will include information about minimum contents, delivery dates, dates of multiple choice tests, lessons, partial deliveries and everything needed to study the subject. In order to promote continuous assessment, attendance will be controlled and the final mark will depend on the attitude and the work of the student. Students must pass theoretical and practical tests (Objective test, Multiple-choice questions tests), the workshop and case study. This will confirm if the student assimilated the concepts, the competences, and methods of work of the subject. Students will pass the subject when they get the minimum attendance and the next scores: workshop, at least a 5 score (out of 10); multiple-choice questions, at least 5 (out of 10); objective test, at least 4 score (out of 10). If they do so, the final mark will be an average between the workshop score and the average between objective test +model score and multiple-choice question tests average. If students do not get the minimum attendance or do not deliver every part of the subject (Objective test, Multiple-choice questions tests, Workshop and Case study), then they will obtain a "NO PRESENTADO" (absent from assessment) (in each opportunity). Students who failed in June will be able to pass the subject at the second opportunity (July), but if they obtain a "NO PRESENTADO" (absent from assessment), they cannot attend the second opportunity.

Sources of information	
Basic	Las indicadas en cada lección
Complementary	Las indicadas en cada lección

Recommendations
Subjects that it is recommended to have taken before

Urbanism 4/630G02032 Systems 1/630G02030 Structures 4/630G02034 Architectural Design 6/630G02026 Construction 5/630G02033
Subjects that are recommended to be taken simultaneously
Systems 2/630G02039 Structures 5/630G02038 Architectural Design 7/630G02031
Subjects that continue the syllabus
Construction 7/630G02045 Legal Architecture/630G02046
Other comments
According to the documentation from ETSAC degree in Architectural Studies: "Students must study simultaneously all the subjects within the workshop if it is the first time they sign up"... "Students must study (previously or simultaneously) all subjects related to previous workshops not completely passed".