

Teaching Guide					
Identifying Data				2022/23	
Subject (*)	Construction 2		Code	630G02020	
Study programme	Grao en Estudos de Arquitectura				
		Descriptors			
Cycle	Period	Year	Туре	Credits	
Graduate	1st four-month period	Second	Obligatory	6	
Language	Spanish				
Teaching method	Face-to-face				
Prerequisites					
Department	Construcións e Estruturas Arquitectónicas, Civís e Aeronáuticas				
Coordinador	Seoane Gonzalez, Jose Carlos E-mail seoane@udc.es				
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General description	In this course, after an Introduction to Construction, Architectural Processes and Materials and their relation to Architecture,				
	the general characteristics of materials are studied; the conglomerates and binders with which they are manufactured, their				
	characteristics, their prescription, and their uses; attention is paid to soils and their relation to buildings; to their foundations				
	and their retaining elements; finally developing the bearing masonry walls, both in their technical aspects and in their				
	architectural connotations. The de	evelopment of the program in	cludes a historical framewor	k, typologies, regulations,	
	conception, prescription and pathologies.				

	Study programme competences / results
Code	Study programme competences / results

Learning outcomes			
Learning outcomes	Study	/ progra	mme
	con	npetenc	es/
		results	
The student will know the generic behavior of materials under certain stresses; he will know how to manufacture and use			
conglomerates; he will know the soils and their retaining elements; he will know about the different foundations that transfer			
the loads of the buildings to the ground and will master the load-bearing masonry walls with all their characteristics. You will			
also learn how to design a single-family house, without designing it.			

Contents	
Торіс	Sub-topic



TOPIC 01. ARCHITECTURE, MATERIALS AND TOPIC 01. ARCHITECTURE, MATERIALS, AND CONSTRUCTION CONSTRUCTION. TOPIC 02. CENERAL CHARACTERISTICS OF MATERIALS	
IOPIC VZ. GEINERAL CHARACTERISTICS OF MATERIALS LESSON UT. THE ARCHITECTURAL PROCESS	
TOPIC 03. CONGLOMERATES AND CONGLOMERATES Lesson 02. THE ARCHITECTURE OF MATERIALS	
TOPIC 04. SOILS	
TOPIC 05. FOUNDATION AND CONTAINMENT SYSTEMS TOPIC 02. GENERAL CHARACTERISTICS OF MATERIALS.	
SUBJECT TOPIC 06. MASONRY LOAD-BEARING WALLS Lesson 03. Construction materials	
TOPIC 07. CERAMIC FACTORIES Lesson 04. Organoleptic and physical characteristics of materials.	
TOPIC 08. CONCRETE BLOCK FACTORIES Lesson 05. Mechanical characteristics of materials	
TOPIC 09. NATURAL STONE FACTORIES Lesson 06. Thermal characteristics of materials. CTE-DB-HE	
Lesson 07. Hygrothermal characteristics of materials. CTE-DB-HE	
Lesson 08. Chemical characteristics of materials.	
Lesson 09. Acoustic characteristics of materials. CTE-DB-HR	
TOPIC 03. BINDERS AND CONGLOMERATES	
Lesson 10. Binders and Conglomerates	
Lesson 11. Plasters	
Lesson 12. Limes	
Lesson 13. Types of cement	
Lesson 14. Mixing water. Aggregates. Additives. Additions	
Lesson 15. Pastes	
Lesson 16. Mortars.	
Lesson 17. Concretes	
TOPIC 04. SOILS	
Lesson 18. Soils. Geotechnical studies. CTE-DB-SE-C	
Lesson 19. Soils: conditioning and staking out of the building.	
TODIC OF FOUNDATION AND DETAINING SYSTEMS	
Lesson 20. Direct and deen foundations. Spate Reinforcements	
Lesson 20. Direct and deep foundations. Seats. Reinforcements	
Lesson 21. containment Systems.	
TOPIC 06. MASONRY LOAD-BEARING WALLS	
Lesson 22. Masonry and load-bearing walls. Reinforced masonry. CTE-DB-SE-F.	
TOPIC 07. CERAMIC MASONRY	
Lesson 23. Ceramics and masonry work	
TOPIC 08. CONCRETE BLOCK MASONRY	
Lesson 24. Concrete blocks and masonry	
TOPIC 09. NATURAL STONE MASONRY	
Lesson 25. Natural Stones and masonry.	

Planning				
Methodologies / tests	Competencies /	Teaching hours	Student?s personal	Total hours
	Results	(in-person & virtual)	work hours	
Guest lecture / keynote speech		0	56	56
Multiple-choice questions		0	2	2



Workshop	28	28 62	90
Objective test	1	1 0	1
Personalized attention	168	168 0	168

(*)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 /	The different lessons of the program are developed, during the theoretical classes.		
keynote speech	These lessons are all presented in PowerPoint and in each one, the student is informed of the time of exposition, the		
	objectives to be achieved, the contents, and the basic and extension bibliography, if applicable.		
	We are not looking for a memorized knowledge of the contents, but an intelligent knowledge of the subject. Knowledge, in		
	which the vision of injuries related to the content allows the student to value the transcendence of the decisions taken.		
Multiple-choice	In order to encourage continuous learning and to know the results of such learning, there will be five compulsory tests which,		
questions	between them, will cover the different topics and their lessons.		
Workshop	The realization of practices is one of the bases of teaching.		
	In them, the student finds an immediate identification between the theoretical knowledge of the lectures and its constructive		
	materialization.		
	The realization of practice will be proposed by means of the constructive development of certain architectures.		
	In the development of the practical classes, examples that serve as a model for the development of the practice will be		
	exposed.		
Objective test	Where the knowledge acquired from the theoretical and practical parts of the course will be demonstrated.		

	Personalized attention
Methodologies	Description
Multiple-choice	The master classes will be attended, for clarification of concepts and doubts, through tutorials with a specific schedule and by
questions	e-mail and Moodle daily.
Guest lecture /	
keynote speech	The practical classes will have personalized attention for the development of the work and for the clarification of concepts and
Workshop	doubts, through tutorials with a specific schedule and by e-mail and Moodle daily.
Objective test	
	The presential objective test will have, before and after the test, personalized attention for clarification of concepts and doubts,
	through specific tutoring and by e-mail and Moodle.

		Assessment	
Methodologies	Competencies /	Description	Qualification
	Results		
Multiple-choice		*There will be 5 multiple-choice tests, individually evaluated out of ten (10.0), in order	42
questions		to assess the knowledge of the theoretical program of the subject.	
		2 attempts are allowed in each test, with penalties (first attempt: penalty 0 points -	
		pass 5.0; second attempt: penalty 1.5 points - pass 6.5).	
		*It is required to pass all the multiple-choice tests independently (obtain a 5.0 out of	
		10.0 in each of them, if there are no penalties for repetition).	
Workshop		*The practical exercise is graded out of ten (10) and a minimum grade of five (5.0) is	50
		required in both opportunities in order to pass it. Each practice grade will be agreed	
		upon by all the practice teachers.	
		* In the classes, it will be necessary, on the part of the students, the public exhibition	
		of their practices.	



Objective test	*It is graded out of ten (10.0) and a minimum grade of four (4.0) is required in both	8
	opportunities in order to pass it. Each grade will be agreed upon by all theory	
	professors.	

Assessment comments

The CONTINUOUS EVALUATION method is used in this course.

It will not be possible to pass the course without attending at least 80% of the theoretical classes (lectures) and practical classes (workshop). Proof of non-attendance, if any, will be presented once drafted and as soon as possible, not being admitted at the end of the course. In no case it will be possible topass the course without attending a minimum of 50% of the practical classes.

It will not be possible to pass the course with a grade lower than five (5.0) in each of the multiple-choice tests; with a grade lower than four (4.0) in the objective test; and with a grade lower than five (5.0) in the practical course.

Takinginto account the above, the final grade will be obtained by averaging the gradeof the practical test and the average grade of the remaining six grades.

The passes of the first opportunity will bekept until the second opportunity.

NO GRADES, NEITHER OF THEORY NOR OF PRACTICE, FROM PREVIOUS COURSES WILL BE KEPT.

	Sources of information			
Basic	- José Amor Cajiao (2004). Materiales I. Editorial Noroeste			
	- Theodor Hugues, Ludwig Steiger, Johann Weber (). Piedra natural. Tipos de piedra, detalles, ejemplos. GG			
	- Klaus Greilich, Theodor Hugues, Christine Peter (). Bloques cerámicos. GG			
	- AA. VV. (2009). Aplicaciones del CTE-SE-F. Monografías de los Colegios de Arquitectos.			
	- (). CTE-DB-SE-F, DB-HE, DB-SE-C.			
	- Fructuós Mañá Reixach (2007). A obra grosa . Santiago. COAG			
	- Jose Amor Cajiao_Antonio Raya de Blas (2012). Los Materiales y la Arquitectura. Editorial Noroeste			
	- Ignacio Aparicio (2000). La fachada de ladrillo. Barcelona. Bisagra			
	- (). Tectónica 15 Cerámica (I).			
	- AA. VV (1998). Manual de Geotecnia i patología, diagnosi i intervenció en fonaments. CAAT de Barcelona			
	- Richard Weston (2003). Materiales, forma y arquitectura. Barcelona. Blume			
	- Ignacio Paricio (1983 revisad post). La construcción de la arquitectura. Barcelona ITC			
	- José Laffarga y Manuel Olivares (1995). Materiales de construcción . Sevilla. Editan			
	- David Dernie (2003). Arquitectura en Piedra . Barcelona Blume			
	- Jose Amor Cagiao (2004). Materiales II. Editorial Noroeste			
	HOUSE IN MALLORCA. by Jørn Utzon -CHURCH OF ATLANTIS. Eladio Dieste. Uruguay EVANGELIST CHURCH.			
	Berlin. Rudolf Reiterman & amp; Peter Snsseroth - LANGUAGES SCHOOL. A. Albalat. A Coruña. Spain STONE			
	MUSEUM, K. Kuma - THERMAL BATHS in Vals. Zumthor - MOLEDO HOUSE. Souto de Moura - PILGRIMAGE			
	CHURCH. R. Piano - ROYAL GOLF CLUB. El Prat. C. Ferrater			
Complementary				

Recommendations
Subjects that it is recommended to have taken before
Construction 1/630G02010
Subjects that are recommended to be taken simultaneously
Architectural Analysis 2/630G02017
Subjects that continue the syllabus
Construction 3/630G02022
Other comments



(*)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.