



Teaching Guide

Teaching Guide				
Identifying Data				2019/20
Subject (*)	Sustainable strategies with traditional constructive solutions		Code	670526013
Study programme	Mestrado Universitario en Edificación Sostenible (Plan 2017)			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Obligatory	3
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Construcións e Estruturas Arquitectónicas, Cívicas e Aeronáuticas			
Coordinador	Pintos Pena, Santiago	E-mail	santiago.pintos.pena@udc.es	
Lecturers	Pintos Pena, Santiago	E-mail	santiago.pintos.pena@udc.es	
Web	http://estudios.udc.es/es/study/start/4526v01			
General description	The technological evolution has carried us to reach technological strategies to give solution to problems in the edificación, the traditional systems constitute an alternative to these systems, that although in a moment have gone losing, in the current constructions can provide solutions to go back them sustainable. Recovering ancestral constructive solutions and applying them to the contemporary constructions provide solutions a high degree of sustainability and that in a lot of cases have not been surpassed by the contemporary solutions. This subject treats to give a vision and global criteria based in the study of the half, of the solutions of the vernacular architecture and in general in the architecture and passive construction.			

Study programme competences

Code	Study programme competences
A1	CE01 Diseñar sistemas constructivos eficientes e sustentables, mediante a aplicación de solucións técnicas e sistemas constructivos tradicionais ou avanzados.
A3	CE03 Coñecer e aplicar as solucións tecnolóxicas necesarias para mellorar o comportamento térmico da envolvente dun edificio.
B1	CB01 Posuír e comprender coñecementos que acheguen unha base ou oportunidade de ser orixinais no desenvolvemento e/ou aplicación de ideas, a miúdo nun contexto de investigación.
B2	CB02 Saber aplicar os coñecementos adquiridos e a súa capacidade de resolución de problemas en contornas novas ou pouco coñecidos dentro de contextos máis amplos (ou multidisciplinares) relacionados coa súa área de estudo.
B3	CB03 Ser capaces de integrar coñecementos e enfrontarse á complexidade de formular xuízos a partir dunha información que, sendo incompleta ou limitada, inclúa reflexións sobre as responsabilidades sociais e éticas vinculadas á aplicación dos seus coñecementos e xuízos.
B4	CB04 Saber comunicar conclusións e os coñecementos e razóns últimas que as sustentan? a públicos especializados e non especializados dun modo claro e sen ambigüidades.
B5	CB05 Posuír as habilidades de aprendizaxe que permitan continuar estudando dun modo que haberá de ser en gran medida autodirigido ou autónomo.
B7	CG02 Capacidade de organización e planificación.
B12	CG07 Traballo en equipo.
B17	CG12 Adaptación a novas situacións.
B18	CG13 Creatividade.
B22	CG17 Sensibilidade cara a temas ambientais.
B24	CG19 Orientación ao cliente.
B25	CG20 Coñecer os principios básicos do paradigma da sustentabilidade, os seus debates e implicacións ambientais, socioculturais e económicas.
B26	CG21 Entender e coñecer as dinámicas e problemáticas aparecidas co fenómeno da globalización e a súa relación coa sustentabilidade global.
B27	CG22 Coñecer o impacto que o uso da tecnoloxía ten sobre a sociedade que o adopta e os principios básicos para unha tecnoloxía da sustentabilidade.



B28	CG23 Analizar os fluxos materiais e enerxéticos que se dan nun sistema e a súa interrelación co territorio e os recursos que o sostén.
B29	CG24 Coñecer a lexislación vixente e a normativa aplicable en materia de sustentabilidade, eficiencia enerxética e xestión da calidade ambiental no ámbito da edificación.
B30	CG25 Coñecer os principios físicos relacionados cos problemas enerxéticos e de sustentabilidade e saber aplicalos no deseño construtivo.
B31	CG26 Deseñar, planificar, executar e avaliar proxectos tecnolóxicos, científicos ou de xestión nun marco de sustentabilidade.
B32	CG27 Analizar e comparar as prestacións de distintas alternativas tecnolóxicas, e seleccionar as solucións máis adecuadas con criterios de sustentabilidade e eficiencia.
B33	CG28 Xestionar a explotación do edificio, implementando as melloras necesarias para adecuar os parámetros ambientais e enerxéticos.
C6	CT06 Valorar críticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C7	CT07 Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C8	CT08 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	
When finalizing the subject, the student will be able to know and choose technical solutions and traditional constructive systems with criteria of sustainability and efficiency for the new work or the rehabilitation.		AC1	BC1 CC6
		AC3	BC2 CC7
			BC3 CC8
			BC4
			BC5
			BC7
			BC12
			BC17
			BC18
			BC22
			BC24
			BC25
			BC26
			BC27
			BC28
			BC29
			BC30
			BC31
			BC32
			BC33

Contents	
Topic	Sub-topic
INTRODUCTION. TRADITIONAL ARCHITECTURE POINT OF VIEW.	The climate in the architecture The user Answer of the architecture Passive Strategies traditional of the *edificación Applicable Rules
COMPATIBILITY OF THE MATERIALS And USE IN TRADITIONAL CONSTRUCTIVE SYSTEMS And INNOVATIVE.	Traditional materials. Current materials. Cases.



MIXED SYSTEMS WITH TRADITIONAL And INNOVATIVE MATERIALS.	Concepts. Types
TECHNICAL SOLUTIONS And TRADITIONAL CONSTRUCTIVE SYSTEMS	Detail of technicians and systems.
METHODS OF ELECTION OF MATERIALS And CONSTRUCTIVE SYSTEMS WITH CRITERIA OF SUSTAINABILITY And EFFICIENCY.	Criteria. Cases.
PRACTICAL CASES And EXAMPLES OF WORKS BUILT.	Relation of notable cases.

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student's personal work hours	Total hours
Guest lecture / keynote speech	A3 B1 B5 B22 B25 B26 B27 B28 B29 B30 C6 C7 C8	15	23	38
Supervised projects	A1 A3 B1 B2 B3 B4 B5 B7 B12 B17 B18 B22 B24 B25 B26 B27 B28 B29 B30 B31 B32 B33 C6 C7 C8	3	25	28
Oral presentation	B4 B12 B17 B24	3	5	8
Workbook	A3 B3 B5 B22 B25 B27 B28 B29 B30 B32 C8	0	0	0
Online forum	B2 B3 B4 B12 B17 B18 B28 B32 C6	0	0	0
ICT practicals	A1 A3 B1 B2 B3 B4 B5 B7 B12 B25 B26 B27 B28 B29 B30 B31 B32 B33 C6 C8	0	0	0
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	It will realize an exhibition of the contents through audiovisual means.



Supervised projects	Methodology designed to promote the autonomous learning of the students, under the tutela of the professor and in stages varied (academic and professionals). It is referred prioritariamente to the learning of the How do the things?. It constitutes an option based in the assumption by the students of the responsibility by his own learning. This system of education bases in two basic elements: the independent learning of the students and the follow-up of this learning by the professor-tutor. Along the course, the student will develop a work in team that will conclude with a brief oral presentation in front of his mates. For his realization, pose two types of alternative work between which will be able to opt. Nevertheless, the professors will orient to the student in relation with the subject that propose, and reserve the right to readjust the subjects with educational ends. To) technical Proposal of application of a system of passive traditional architecture for an edificación-current existent construction. They will study the following appearances: - Description, composition and applications. - Design of the constructive system. Technical feasibility of the proposal. - Durability of the proposal. - Improvements that provides the new application. - Assessment of the solution of recycled of the material of waste. - Sustainability in the industrial production of the material/constructive system. Each team will be able to pose freely any proposal that adjust to the general requirements established. Nevertheless, the professors will orient to the students in relation with the subject that propose, and reserve the right to readjust the subjects with educational ends. b) Study in depth of a traditional passive strategy, composed by: - Material used. - Existent constructive systems studied - Possible applications of the system to the edificación current with an energetic treatment, constructive, of design and innovation. It will choose any of the constructive systems of the temario proposed by the professor for this end. NOTE: it exists the possibility that a same work was developed jointly in the matters "Sustainable strategies with traditional constructive solutions?" And "Constructive strategies in passive and bioclimatic architecture". For this, the subject proposed will have to fulfill the requirements established in the educational guides of both matters simultaneously, and will have to be approved by the professors of the matter before his start. In this case, the work will have to have an extension and a level of development in accordance with the time of dedication foreseen in the planning of both matters.
Oral presentation	It will realize a presentation of the work tutelado in front of the mates, the professor will boost the participation in the discussion about the subject after the presentation. It will be compulsory the presentation of an academic work writing, a presentation type power-point and a signpost summary in size To1 on cardboard feather.
Workbook	
Online forum	
ICT practicals	

Personalized attention

Methodologies	Description
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Supervised projects	The student will be attended in schedule of tutorías for explanations about the subjects treated in the activities posed.
Guest lecture / keynote speech	The professor will realise a follow-up with attention to groups of work guiding them in the development of the same.
Oral presentation	
ICT practicals	

Assessment			
Methodologies	Competencies	Description	Qualification
Supervised projects	A1 A3 B1 B2 B3 B4 B5 B7 B12 B17 B18 B22 B24 B25 B26 B27 B28 B29 B30 B31 B32 B33 C6 C7 C8	It will realize in group awarding the same note to all the components of the same. The professors reserve the right to assign different qualifications to each component, when they detect differences in the level of work of each one.	50
Guest lecture / keynote speech	A3 B1 B5 B22 B25 B26 B27 B28 B29 B30 C6 C7 C8	It will be compulsory the assistance at least of 80% of the sessions.	20
Oral presentation	B4 B12 B17 B24	They will value the skills of the students as well as the audiovisual means, maquetas, signposts, samples to scale real, etc. that they use in the same.	30
Workbook	A3 B3 B5 B22 B25 B27 B28 B29 B30 B32 C8		0
Online forum	B2 B3 B4 B12 B17 B18 B28 B32 C6		0
ICT practicals	A1 A3 B1 B2 B3 B4 B5 B7 B12 B25 B26 B27 B28 B29 B30 B31 B32 B33 C6 C8		0

Assessment comments
The subject stand up with a system of continuous evaluation, for which is important the assistance of the student to the activities posed. This type of evaluation develops with the support of the personalized attention of the professor, with special importance of the work developed during the course, that concludes with the oral presentation of the same. This continuous evaluation conforms the first opportunity to surpass the subject. In case that it do not reach a minimum in the activities proposed will offer two options to the student that constitute the second opportunity to surpass the subject: redo the work arriving to a greater technical depth of the subject treated and his presentation through the platform of teletraining in the dates designated to such effect, or the realization of a final examination.

Sources of information	
Basic	- IÑAKI Y SEBASTIÁN URKIA LUS (2007). ENERGÍA RENOVABLE PRÁCTICA. PAMPLONA: PAMIELA - CARIDE ZUÑIGA, IGNACIO (2015). ARQUITECTURA PASIBA EN LA COSTA ATLÁNTICA: ZONA DE ESTUDIO RIAS BAIXAS. UDC. REPOSITORIO - CAAMAÑO SUÁREZ, MANUEL (2006). AS CONSTRUCCIÓNS DA ARQUITECTURA POPULAR: PATRIMONIO ETNOGRÁFICO DE GALICIA.. A CORUÑA: HERCULES EDICIONES - DE LLANO CABADO, PEDRO (1983). ARQUITECTURA POPULAR EN GALICIA: A CASA MARIÑEIRA, A CASA DAS AGRAS, A CASA DO VIÑO E AS CONSTRUCCIÓNS ADXETIVAS. SANTIAGO DE COMPOSTELA: COAG - DE LLANO CABADO, PEDRO (1989). ARQUITECTURA POPULAR EN GALICIA: A CASA-VIVIENDA E AS SERRAS.. SANTIAGO DE COMPOSTELA: COAG - DE LLANO CABADO, PEDRO (2006). ARQUITECTURA POPULAR EN GALICIA: RAZÓN Y CONSTRUCCIÓN.. A CORUÑA: EDICIÓNS XERAIS DE GALICIA
Complementary	



Recommendations
Subjects that it is recommended to have taken before
Constructive strategies in passive and bioclimatic architecture/670526010
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Master Thesis/670526027
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.