28604 - Building history

Información del Plan Docente

Academic Year	2016/17
Academic center	175 - Escuela Universitaria Politécnica de La Almunia
Degree	422 - Bachelor's Degree in Building Engineering
ECTS	6.0
Course	1
Period	First semester
Subject Type	Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process designed for this subject is based on the following:

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain degree, students can set their learning pace based on their own needs and availability, following the guidelines set by the teacher.

28604 - Building history

For the learning process, the student will have the basic contents available through lectures given by the teacher. These contents will give rise to both the questions considered in the practical sessions, as the work that students must develop autonomously, always tutored by the teacher.

5.2.Learning activities

Involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

— **Face-to-face generic activities:**

● **Theory Classes:** Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them. It is mainly used the method of the lecture, supported by the projection of audiovisual presentations, including numerous images and videos. The student is provided, through the educational platform Moodle, both the notes prepared by the teacher to support lessons and recommended bibliography.

● **Practical Classes:** The weight of these classes is shared between teacher and students. The teacher resolves practical cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.

● **Field practical classes and conferences:** It is very useful for learning visits to actual constructions to identify in situ elements and construction systems defined in class. It will be especially interesting to visit constructions which are in the process of rehabilitation, accompanied by the technicians responsible for its management and execution to visualize the constructive solutions used and deal with the real problems. Also contemplated within this type of activity attending conferences related to the subject, given both some of the headquarters of the University of Zaragoza and in other centers, which will be duly announced to the students by the teacher.

— Individual Tutorials: Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person (department) or online (Moodle or mail).

— Generic non-class activities:

● Study and understanding of the theory taught in the lectures.

● Understanding and assimilation of the problems and practical cases solved in the practical classes.

● Preparation of seminars, solutions to proposed practices, etc.

● Preparation of the written tests for continuous assessment and final exams.

— Reinforcement activities: activities that reinforce the basic matter of the subject are directed from Moodle. The monitoring of these activities is carried out in a personalized way. This kind of activities provides the teacher evaluation of attitude, effort and performance of student learning.

The combination of these learning activities is considered essential for students to be able to achieve the objectives.

28604 - Building history

Thus, after an initial theoretical dive, the students will be instructed in solving practical problems associated to complete their understanding of the subject and eventually they will be placed facing a problem to be addressed independently without the direct participation of teacher who, however, will exercise his role of counselor in learning.

The subject has 6 ECTS credits, which represents 150 hours of student work in the subject during the semester, in other words, 10 hours per week for 15 weeks of class.

A summary of a weekly timetable guide can be seen in the following table. These figures are obtained from the subject file in the Accreditation Report of the degree, taking into account the level of experimentation considered for the said subject is high.

Activity	Weekly school hours
Lectures	4
Practices	2
Other Activities	4

5.3.Program

PRECLASSICAL ARCHITECTURAL CONSTRUCTION

T.01. The origins: the megalithic construction

T.02. Mesopotamian and Egyptian construction

CLASSIC ARCHITECTURAL CONSTRUCTION

T.03. Greek construction and background

T.04. Roman construction and background

MEDIEVAL ARCHITECTURAL CONSTRUCTION

T.05. Early Christian and Byzantine construction

T.06. Hispanic-Visigothic, Hispanic-Islamic and Mudejar construction

T.07. Romanesque construction and Pre-Romanesque background

28604 - Building history

T.08. Gothic construction

MODERN AND CONTEMPORARY ARCHITECTURAL CONSTRUCTION

T.09. Construction from the Renaissance to the 19th century

T.10. 19th and 20th century construction

Practices:

Group practice: constructive analysis of a representative building of one of the historical periods studied in class. The results will be presented during the course in class through oral presentation, supported by a digital presentation.

Individual practice: historical-constructive analysis of some construction elements.

5.4.Planning and scheduling

Schedule sessions and presentation of works

Week	Content	
1	Presentation and T01. The origins: the megalithic construction	T02. Mesopotamian and Egyptian construction
2	T03. Greek construction	
3	T04. Roman construction	
4	T04. Roman construction	Assessment test
5	T05. Early Christian and Byzantine construction	
6	T06. Hispanic-Visigothic construction	
7	T06. Hispanic-Islamic/ Mudejar construction	
8	T07. Romanesque construction and Pre-Romanesque background	

28604 - Building history

9	T07. Romanesque construction	
10	T08. Gothic construction	
11	T08. Gothic construction	Assessment test
12	T09. Construction from the Renaissance to the 19th century	
13	T10. 19th and 20th century construction	
14	T10. 19th and 20th century construction	
15	Assessment test	

5.5.Bibliography and recomended resources

- Castro Villalba, Antonio. Historia de la construcción arquitectónica / Antonio Castro Villalba. - 2ª ed., reimp Barcelona : UPC, 2001
- Choisy, Auguste. El arte de construir en Bizancio / Auguste Choisy ; edición a acargo de: Santiago Huerta Fernández, Francisco Javier Girón Sierra ; traducción de Francisco Javier Girón Sierra, Gema López Manzanares Madrid : Centro de Estudios Históricos de Obras Públicas y Urbanismo, 1997
- Choisy, Auguste. El arte de construir en Roma / Auguste Choisy ; edición a cargo de Santiago Huerta Fernández, Francisco Javier Girón Sierra ; traducción de Manuel Manzano-Monís López-Chicheri ; ensayo introductorio y bibliografía de Enrique Rabasa Díaz [Madrid] : Instituto Juan de Herrera, [1999]
- Benevolo, Leonardo. Historia de la arquitectura moderna / Leonardo Benevolo . - 8ª ed., rev. y amp., 4ª tirada Barcelona : Gustavo Gili, 2007
- Choisy, Auguste,. Historia de la arquitectura / Auguste Choisy ; traducido por S. Gallo y B. Iribarren. - 1ª edic Buenos Aires : Víctor Lerú, 1944
- Heyman, Jacques. El esqueleto de piedra : mecánica de la arquitectura de fábrica / Jacques Heyman ; traducción de Gema M. López Manzanares ; revisión y prólogo de Santiago Huerta Fernández [Madrid] : Instituto Juan de Herrera, [1999]
- Hitchcock, Henry-Russell. Arquitectura de los siglos XIX y XX / Henry-Russell Hitchcock ; [versión española de Luis E. Santiago] . - 2a. ed. Madrid : Cátedra, D.L. 1985
- Magro Moro, Julián V.. La construcción en la Baja Edad Media / Julián V. Magro Moro, Rafael Marín Sánchez. - 1ª edición Valencia : Universidad Politécnica Valencia, Departamento de Construcciones Arquitectónicas, D.L. 1999
- Marín Sánchez, Rafel. La Construcción griega y romana / Rafael Marín Sánchez. - 1ª edición Valencia : Universidad Politécnica de Valencia. Servicio de Publicaciones, DL 2000
- Viollet-Le-Duc, Eugène Emmanuel. La construcción medieval : el artículo ?Construcción? del Dictionnaire raisonné de l'architecture française du XI AU XVI Siècle / E. viollet-Le-Duc ; edición a cargo de Enrique Rabasa Díaz y Santiago Huerta Fernández ; prólogo, traducción y notas de Enrique Rabasa Díaz ; introducción y bibliografía de Rafael García García Madrid : CEHOPU Centro de estudios históricos de obras públicas y urbanismo [etc.], D.L. 1996
- Vitrubio Polión, Marco. Los diez libros de arquitectura / Marco Lucio Vitruvio Polión ; introducción por Delfín Rodríguez Ruiz ; versión española de José Luis Oliver Domingo . - 1º ed., 5ª reimp. Madrid : Alianza, 2006
- Adam, Jean Pierre. La construcción romana : materiales y técnicas / Jean- Pierre Adam ; [traducción, Cristina Colinas Carbajo] . - 1a ed. León : Editorial de los Oficios, 1996
- Benedicto Salas, Roberto. Introducción a la construcción megalítica / Roberto Benedicto Salas Zaragoza : Mira Editores, 2010
- Giedion, Sigfried. El presente eterno, los comienzos del arte : una aportación al tema de la constancia y el cambio /

28604 - Building history

Sigfried Giedion ; versión española de María Luisa Balseiro . - [1a. ed.] Madrid : Alianza, D.L. 1981
- Huerta Fernández, Santiago. Arcos, bóvedas y cúpulas : geometría y equilibrio en el cálculo tradicional de estructuras de fábrica / Santiago Huerta Madrid : Instituto Juan de Herrera, Escuela Técnica Superior de Arquitectura, cop. 2004
- Kubach, Hans Erich. Arquitectura románica / Hans Erich Kubach ; [traducción del texto original alemán por Juan Novella Domingo] . - [1a. ed.] Madrid : Aguilar, 1974
- López Guzmán, Rafael. Arquitectura mudéjar : del sincretismo medieval a las alternativas hispanoamericanas / Rafael López Guzmán Madrid : Cátedra, cop. 2000
- Magro y Moro, Julián V.. Textos para una historia de la construcción / Julián V. Magro Moro. - 1ª edición Valencia : Universidad Politécnica de Valencia, DL 1994
- Tecnología arquitectónica hasta la revolución científica : arte y estructura de las grandes construcciones / Robert Mark (ed.) ; traducción, José Miguel Gómez Acosta y Daniel López Martínez Tres Cantos (Madrid) : Akal, D.L. 2002
- Mas-Guindal Lafarga, Antonio José. Mecánica de las estructuras antiguas ó cuando las estructuras no se calculaban / Antonio José Mas-Guindal Lafarga. - 1ª edición Madrid : Munilla-Lería, 2011
- Robertson, Donald Struan. Arquitectura griega y romana / D. S. Robertson ; traducción de R. Fontán Barreiro y L. Abad Casal . - 3ª ed. Madrid : Cátedra, D. L. 1985
- Trachtenberg, Marvin. Arquitectura : De la prehistoria a la postmodernidad, la tradición occidental / Marvin Trachtenberg, Isabelle Hyman Los Berrocales del Jarama, Madrid : Akal, 1990
- Truñó, Ángel. Construcción de bóvedas tabicadas / Ángel Truñó ; edición a cargo de, Santiago Huerta y José Luis González Moreno- Navarro ; con la colaboración de, Esther Redondo Martínez ; prólogo de Santiago Huerta ; ensayo introductorio de José Luis González Moreno-Navarro Madrid : Instituto Juan de Herrera, Escuela Técnica Superior de Arquitectura, cop. 2004