



## Teaching Guide

| Teaching Guide      |                                                           |        |                                                                       |           |
|---------------------|-----------------------------------------------------------|--------|-----------------------------------------------------------------------|-----------|
| Identifying Data    |                                                           |        |                                                                       | 2016/17   |
| Subject (*)         | Construcción 4                                            |        | Code                                                                  | 630G02027 |
| Study programme     | Grao en Estudos de Arquitectura                           |        |                                                                       |           |
| Descriptors         |                                                           |        |                                                                       |           |
| Cycle               | Period                                                    | Year   | Type                                                                  | Credits   |
| Graduate            | 2nd four-month period                                     | Third  | Obligatoria                                                           | 6         |
| Language            | Spanish                                                   |        |                                                                       |           |
| Teaching method     | Face-to-face                                              |        |                                                                       |           |
| Prerequisites       |                                                           |        |                                                                       |           |
| Department          | Construccions Arquitectónicas                             |        |                                                                       |           |
| Coordinador         | Rodriguez Cheda, Jose Benito                              | E-mail | jose.benito.rodriguez.cheda@udc.es                                    |           |
| Lecturers           | Rodriguez Cheda, Jose Benito<br>Rodriguez Garcia, Enrique | E-mail | jose.benito.rodriguez.cheda@udc.es<br>enrique.rodriguez.garcia@udc.es |           |
| Web                 |                                                           |        |                                                                       |           |
| General description |                                                           |        |                                                                       |           |

## Study programme competences

| Code | Study programme competences                                                                                                                                                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A12  | Ability to conceive, calculate, design, integrate in buildings and urban units and execute building structures (T)                                                                                                                                                                                |
| A15  | Ability to conceive, calculate, design, integrate in buildings and urban units and execute foundation solutions (T)                                                                                                                                                                               |
| A17  | Ability to apply technical and construction standards and regulations                                                                                                                                                                                                                             |
| A18  | Ability to maintain building structures, foundations and civil works                                                                                                                                                                                                                              |
| A20  | Ability to assess the construction works                                                                                                                                                                                                                                                          |
| A21  | Ability to maintain the structural work                                                                                                                                                                                                                                                           |
| 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                                                                                                                                                                   |
| A27  | Adequate knowledge of industrialized building systems                                                                                                                                                                                                                                             |
| 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 entrepreneur                                                                                                                         |
| 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 |       |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A12                         | B1 C1 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A15                         | B2 C3 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A17                         | B3 C4 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A18                         | B4 C5 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A20                         | B5 C6 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A21                         | B6 C7 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A25                         | B7 C8 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A26                         | B9    |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A27                         | B10   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A31                         | B11   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A32                         | B12   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A63                         |       |
| Capacitar al alumno para proyectar la construcción partiendo del planteamiento arquitectónico.                                                                                                                                                                                                                                                                            |  | A12                         | B1 C1 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A15                         | B2 C3 |
| Aportarle los conocimientos necesarios para que aprecie las repercusiones arquitectónicas de cada sistema constructivo y de cada material en el proyecto, tratando de encontrar el difícil equilibrio entre éste y su construcción.                                                                                                                                       |  | A17                         | B3 C4 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A18                         | B4 C5 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A20                         | B5 C6 |
| Iniciar al alumno en el desarrollo de documentos de proyecto que expresen el hecho arquitectónico junto con su construcción, dotándole de rigor, especificidad, coherencia y claridad en su expresión gráfica y escrita.                                                                                                                                                  |  | A21                         | B6 C7 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A25                         | B7 C8 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A26                         | B9    |
| Conocer los sistemas porticados en hormigón apoyándose en el estudio de edificios relevantes, utilizando para ello las clases prácticas. Se analizarán las prestaciones del sistema, las características de los elementos, las juntas y la disposición de las armaduras. Finalmente, se pasará a la concreción de especificaciones y al manejo de la normativa aplicable. |  | A27                         | B10   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A31                         | B11   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A32                         | B12   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A63                         |       |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A12                         | B1 C1 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A15                         | B2 C3 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A17                         | B3 C4 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A18                         | B4 C5 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A20                         | B5 C6 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A21                         | B6 C7 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A25                         | B7 C8 |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A26                         | B9    |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A27                         | B10   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A31                         | B11   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A32                         | B12   |
|                                                                                                                                                                                                                                                                                                                                                                           |  | A63                         |       |

|  |     |     |    |
|--|-----|-----|----|
|  | A12 | B1  | C1 |
|  | A15 | B2  | C3 |
|  | A17 | B3  | C4 |
|  | A18 | B4  | C5 |
|  | A20 | B5  | C6 |
|  | A21 | B6  | C7 |
|  | A25 | B7  | C8 |
|  | A26 | B9  |    |
|  | A27 | B10 |    |
|  | A31 | B11 |    |
|  | A32 | B12 |    |
|  | A63 |     |    |
|  |     |     |    |
|  | A12 | B1  | C1 |
|  | A15 | B2  | C3 |
|  | A17 | B3  | C4 |
|  | A18 | B4  | C5 |
|  | A20 | B5  | C6 |
|  | A21 | B6  | C7 |
|  | A25 | B7  | C8 |
|  | A26 | B9  |    |
|  | A27 | B10 |    |
|  | A31 | B11 |    |
|  | A32 | B12 |    |
|  | A63 |     |    |
|  |     |     |    |
|  | A12 | B1  | C1 |
|  | A15 | B2  | C3 |
|  | A17 | B3  | C4 |
|  | A18 | B4  | C5 |
|  | A20 | B5  | C6 |
|  | A21 | B6  | C7 |
|  | A25 | B7  | C8 |
|  | A26 | B9  |    |
|  | A27 | B10 |    |
|  | A31 | B11 |    |
|  | A32 |     |    |
|  | A63 |     |    |
|  |     |     |    |

| Contents |           |
|----------|-----------|
| Topic    | Sub-topic |
|          |           |
|          |           |
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[illegible]

| Planning                       |                                                                                                                         |                      |                               |             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------|-------------|
| Methodologies / tests          | Competencies                                                                                                            | Ordinary class hours | Student?s personal work hours | Total hours |
| Guest lecture / keynote speech | A63 A32 A31 A27<br>A26 A25 A21 A20<br>A18 A17 A15 A12 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 | 30                   | 21                            | 51          |
| Supervised projects            | A12 A63 A32 A31<br>A27 A26 A25 A21<br>A20 A18 A17 A15 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 | 30                   | 39                            | 69          |
| Workbook                       | A63 A32 A31 A27<br>A26 A25 A21 A20<br>A18 A17 A15 A12 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 | 0                    | 20                            | 20          |
| Objective test                 | A63 A32 A31 A27<br>A25 A21 A20 A18<br>A17 A15 A12 B1 B2<br>B3 B4 B5 B6 B7 B9<br>B10 B11 B12 C1 C3<br>C4 C5 C6 C7 C8     | 6                    | 0                             | 6           |
| Personalized attention         |                                                                                                                         | 4                    | 0                             | 4           |

(\*)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 |             |
| Supervised projects            |             |



|                |  |
|----------------|--|
| Workbook       |  |
| Objective test |  |

## Personalized attention

| Methodologies       | Description |
|---------------------|-------------|
| Supervised projects |             |
| Objective test      |             |

## Assessment

| Methodologies                     | Competencies                                                                                                            | Description | Qualification |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------|---------------|
| Supervised projects               | A12 A63 A32 A31<br>A27 A26 A25 A21<br>A20 A18 A17 A15 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 |             | 70            |
| Guest lecture /<br>keynote speech | A63 A32 A31 A27<br>A26 A25 A21 A20<br>A18 A17 A15 A12 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 |             | 0             |
| Workbook                          | A63 A32 A31 A27<br>A26 A25 A21 A20<br>A18 A17 A15 A12 B1<br>B2 B3 B4 B5 B6 B7<br>B9 B10 B11 B12 C1<br>C3 C4 C5 C6 C7 C8 |             | 0             |
| Objective test                    | A63 A32 A31 A27<br>A25 A21 A20 A18<br>A17 A15 A12 B1 B2<br>B3 B4 B5 B6 B7 B9<br>B10 B11 B12 C1 C3<br>C4 C5 C6 C7 C8     |             | 30            |

## Assessment comments

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## Sources of information

|               |  |
|---------------|--|
| Basic         |  |
| Complementary |  |

## Recommendations

Subjects that it is recommended to have taken before



(\*)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.