UNIVERSIDADE DA CORUÑA

| Teaching Guide | | | | |
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| Identifying Data | | | | 2016/17 |
| Subject (*) | Construción 3 | | Code | 630G01022 |
| Study programme | Grao en Arquitectura | | | |
| Descriptors | | | | |
| Cycle | Period | Year | Type | Credits |
| Graduate | 1st four-month period | Third | Obligatoria | 6 |
| Language | SpanishEnglish | | | |
| Teaching method | Face-to-face | | | |
| Prerequisites | | | | |
| Department | Construcións Arquitectónicas | | | |
| Coordinador | Raya de Blas, Antonio | E-mail | antonio.raya@udc.es | |
| Lecturers | Amor Cagiao, Jose Antonio<br>Antelo Tudela, Enrique<br>Bermudez Graiño, Jose Manuel<br>Hermo Sanchez, Victor Manuel<br>Pita Abad, Carlos Alberto<br>Raya de Blas, Antonio | E-mail | j.amor@udc.es<br>enrique.antelo@udc.es<br>jose.bermudez@udc.es<br>victor.hermo@udc.es<br>c.pita@udc.es<br>antonio.raya@udc.es | |
| Web | | | | |
| General description | In this course, the student acquire the ability to design interior partition systems, vertical circulation systems and interior/exterior finishes. The historical setting, typologies, materials, rules, design, safety, measurements and estimate, prescription, preservation, pathologies and repair of each system will be analyzed. | | | |

| Study programme competences | |
|---|---|
| Code | Study programme competences |
| A2 | PROXECTOS DE EXECUCIÓN: aptitude ou capacidade para elaborar proxectos integrais de execución de edificios e espazos urbanos en grao de definición suficiente para a súa completa posta en obra e equipamento de servizos e instalacións. |
| A3 | DIRECCIÓN DE OBRAS: aptitude ou capacidade para dirixir obras de edificación e urbanización desenvolvendo proxectos, replanteando no terreo, aplicando os procedementos de construción adecuados e coordinando oficios e industrias. |
| A8 | PROXECTO DE OBRA ACABADA: aptitude ou capacidade para dimensionar, deseñar, programar e poñer en obra e integrar en edificios e conxuntos urbanos as solucións construtivas, encontros e remates dos sistemas de obra acabada, divisións interiores, carpintería, escaleiras e demais obra acabada, en conxunto e en detalle, así como para asesorar tecnicamente sobre estes aspectos. |
| A11 | XESTIÓN DE NORMAS CONSTRUCTIVAS: aptitude ou capacidade para aplicar as normas de construción, de homologación, de protección, de mantemento, de seguridade e de cálculo nos proxectos integrados e na execución, tanto de obras de edificación como de espazos urbanos. |
| A28 | PROXECTO DE SEGURIDADE EN OBRA: aptitude ou capacidade para redactar e executar proxectos de seguridade, prevención de riscos e hixiene laboral en obras de edificación e de urbanización. |
| A32 | VALORACIÓN DE OBRAS: aptitude ou capacidade para elaborar medicións e orzamentos e dar fe dos costos de todo tipo no proxecto e execución de edificios e espazos urbanos. |
| A47 | ECOLOXÍA E SOSTENIBILIDADE: comprensión ou coñecemento da responsabilidade do arquitecto respecto aos principios básicos de ecoloxía, de sostenibilidade e de conservación dos recursos e do medio ambiente na edificación, o urbanismo e a paisaxe. |
| A58 | MATERIAIS DE CONSTRUCCIÓN: comprensión ou coñecemento das características físicas e químicas, os procedementos de fabricación e homologación, a análise patolóxica e as aplicacións e restricións de uso dos materiais empregados en obra estrutural, civil, grosa e acabada. |
| A59 | SISTEMAS CONSTRUTIVOS CONVENCIONAIS: comprensión ou coñecemento das características físicas, os procedementos de fabricación e homologación, os tratamentos e acabados, a organización dimensional, os métodos de montaxe e a análise patolóxica dos compoñentes construtivos convencionais na obra estrutural, civil, grosa e acabada. |
| A64 | MÉTODOS DE VALORACIÓN: comprensión ou coñecemento dos métodos de medición, valoración e taxación, de programación económica e de cálculo de custos e fiscalización destes, nas obras de carácter arquitectónico e urbanístico e no planeamento. |
| B1 | Learn how to learn |

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| B2 | Resolver problemas de forma efectiva. |
| B3 | Aplicar un pensamento crítico, lóxico e creativo. |
| B6 | Comportarse con ética e responsabilidade social como cidadán e como profesional. |
| B8 | Visión espacial. |
| B9 | Creatividade. |
| B10 | Sensibilidade estética. |
| B12 | Toma de decisións. |
| B13 | Imaxinación. |
| B15 | Capacidade de organización e planificación. |
| B16 | Motivación pola calidade. |
| B21 | Intuición mecánica. |
| C1 | Expresarse correctamente, tanto de forma oral coma escrita, nas linguas oficiais da comunidade autónoma. |
| C2 | Dominar a expresión e a comprensión de forma oral e escrita dun idioma estranxeiro. |
| C3 | Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida. |
| C4 | Desenvolverse para o exercicio dunha cidadanía aberta, culta, crítica, comprometida, democrática e solidaria, capaz de analizar a realidade, diagnosticar problemas, formular e implantar solucións baseadas no coñecemento e orientadas ao ben común. |
| C5 | Entender a importancia da cultura emprendedora e coñecer os medios ao alcance das persoas emprendedoras. |
| C6 | Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse. |
| C7 | Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida. |
| C8 | Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade. |

| Learning outcomes | | | |
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| Learning outcomes | Study programme competences | | |
| Partition systems: The student must know the performance required by the architectural spaces, the applicable rules and propose solutions. Must know prescribe the solution, the repair and the maintenance in accordance with the architectural project. | A2<br>A8<br>A11<br>A28<br>A47<br>A58<br>A59<br>A64 | B1<br>B2<br>B3<br>B6<br>B8<br>B9<br>B10 | C1<br>C3<br>C4<br>C5<br>C6<br>C7<br>C8 |
| Interior / Exterior finishes: The student must know the performance required by the architectural spaces, the applicable rules and propose solutions. Must know prescribe the solution, the repair and the maintenance in accordance with the architectural project. | A2<br>A8<br>A11<br>A28<br>A32<br>A47<br>A58<br>A59<br>A64 | B1<br>B2<br>B3<br>B6<br>B8<br>B9<br>B10<br>B12<br>B13<br>B15<br>B16 | C1<br>C2<br>C3<br>C4<br>C5<br>C6<br>C7<br>C8 |

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| Vertical circulation systems: The student must know the performance required by the architectural spaces, the applicable rules and propose solutions. Must know prescribe the solution, the repair and the maintenance in accordance with the architectural project. | A2<br>A8<br>A11<br>A28<br>A32<br>A58<br>A59<br>A64 | B1<br>B2<br>B3<br>B6<br>B8<br>B9<br>B10<br>B12<br>B13<br>B15<br>B16 | C1<br>C3<br>C4<br>C5<br>C6<br>C7<br>C8 |
| The student must achieve the ability to integrate and lead a multidisciplinary team capable of building partition systems, vertical circulation systems as well as interior and exterior finishes; solving unexpected events and modifications in the performance required, rules, estimate, maintenance and ecological sensitivity. | A2<br>A3<br>A8<br>A11<br>A28<br>A32<br>A47<br>A58<br>A59<br>A64 | B1<br>B2<br>B3<br>B6<br>B8<br>B9<br>B10<br>B12<br>B13<br>B15<br>B16<br>B21 | C1<br>C2<br>C3<br>C4<br>C5<br>C6<br>C7<br>C8 |

| Contents | |
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| **Topic** | **Sub-topic** |
| Lesson 01 PARTITION SYSTEMS | Performance and regulatory requirements.<br>Historical setting, typologies, materials, rules, conception, design, safety, measurements and estimate, prescription, preservation, pathologies and repair of:<br>Drywalls.<br>Heavy partitions.<br>Dry lined walls.<br>Movable partitions.<br>Doors. |
| Lesson 02 VERTICAL CIRCULATION SYSTEMS | Performance and regulatory requirements.<br>Historical setting, typologies, materials, rules, conception, design, safety, measurements and estimate, prescription, preservation, pathologies and repair of:<br>Stairs.<br>Ramps.<br>Elevators.<br>Handrails. |
| Lesson 03 INTERIOR FINISHES | Performance and regulatory requirements.<br>Historical setting, typologies, materials, rules, conception, design, safety, measurements and estimate, prescription, preservation, pathologies and repair of:<br>Ceilings.<br>Paving.<br>Interior vertical surfaces. |

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| Lesson 04 EXTERIOR FINISHES | Performance and regulatory requirements.<br>Historical setting, typologies, materials, rules, conception, design, safety, measurements and estimate, prescription, preservation, pathologies and repair of:<br>Outdoor paving. |

| Planning | | | | |
|---|---|---|---|---|
| Methodologies / tests | Competencies / Results | Teaching hours (in-person & virtual) | Student?s personal work hours | Total hours |
| Guest lecture / keynote speech | A2 A11 A32 A47 A58 A59 A64 B1 B2 B6 B8 B9 B10 B12 B13 B15 B16 B21 C1 C2 C4 C5 C6 C7 C8 | 28 | 4 | 32 |
| Workshop | A2 A3 A8 A11 A28 A32 A47 A58 A59 A64 B1 B2 B3 B6 B8 B9 B10 B12 B13 B15 B16 B21 C1 C2 C3 C4 C5 C6 C7 C8 | 28 | 56 | 84 |
| Case study | A2 A3 A8 A11 A28 A32 A47 A58 A59 A64 B1 B3 B6 B8 B9 B10 B12 B13 C3 C4 C5 C6 C7 C8 | 3 | 2 | 5 |
| Objective test | A11 A32 A47 A58 A59 A64 B1 B2 B3 B8 B9 B12 B15 B16 B21 C1 C2 C3 C4 C5 C6 C7 C8 | 1 | 11 | 12 |
| Workbook | A47 A58 A59 A64 B1 B2 B3 B6 C2 C5 C6 C7 C8 | 0 | 10 | 10 |
| Multiple-choice questions | A11 A58 A59 B3 C3 C5 C6 C7 C8 | 0 | 6 | 6 |
| 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 | |
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| Methodologies | Description |
| Guest lecture / keynote speech | Lectures where several building systems (historical setting, typologies, materials, rules, conception, design, safety, measurements and estimate, prescription, preservation, pathologies and repair) are explained from performance required and in accordance with the architectural project.<br>Reference documentation and examples of buildings will be provided in order to learn from the mistakes and the decisions. An intelligent knowledge is sought instead of rote learning.<br>The student must pass an objective test and several multiple-choice questions. |

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| 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.<br>Several subjects merge around the idea of architecture, ensuring optimization of teaching resources and streamlining the student's work.<br>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.<br>Different projects will be developed mandatory. |
| 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.<br>They have documentary support of books and own notes based on a practical case. |
| Workbook | Specific readings support the lectures. These readings serve to introduce the topic, helping the students understand technical texts. It will be assessed within the objective test. |
| Multiple-choice questions | In order to promote learning and continuous assessment, students must complete four mandatory testing of different topics. These tests are carried out within the distance learning platform UDC Moodle. |

| Personalized attention | |
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| **Methodologies** | **Description** |
| Workshop<br>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 encourage students to use them for solving doubts and questions. |

| Assessment | | | |
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| **Methodologies** | **Competencies / Results** | **Description** | **Qualification** |
| Guest lecture / keynote speech | A2 A11 A32 A47 A58 A59 A64 B1 B2 B6 B8 B9 B10 B12 B13 B15 B16 B21 C1 C2 C4 C5 C6 C7 C8 | In order to pass the subject, attendance required is at least 75%. (January and July opportunities)<br>When attendance is complete will be preserved in subsequent opportunities.<br>Students must pass an objective test and several multiple-choice questions tests. The final mark will be the average only if they get at least a 4 score (out of 10) in the objective test. | 0 |
| Objective test | A11 A32 A47 A58 A59 A64 B1 B2 B3 B8 B9 B12 B15 B16 B21 C1 C2 C3 C4 C5 C6 C7 C8 | The objective tests seek to verify the application of knowledge and the skills acquired by students. They will have documentary support of books and own notes.<br>Students must pass an objective test and several multiple-choice questions tests. The final mark will be the average only if they get at least a 4 score (out of 10) in the objective test.<br>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:<br>Acoustical bridges; finishes: absence of expansion joints; wrong dimensions for stairs; contact between incompatible materials. | 25 |
| Workbook | A47 A58 A59 A64 B1 B2 B3 B6 C2 C5 C6 C7 C8 | It will be assessed within the objective test. | 0 |

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| Multiple-choice questions | A11 A58 A59 B3 C3 C5 C6 C7 C8 | Students must complete four mandatory testing of different topics. They must get at least a 5 score (out of 10) in each test (including penalizations). Three attempts in each is allowed with cumulative penalty of two points (first attempt: 0 points penalty, second attempt: 2 points, etc.)<br>When students get at least a 5 score (out of 10), mark will be preserved until July (included) (for each test independently).<br>These tests are carried out within the distance learning platform UDC Moodle. | 25 |
| Workshop | A2 A3 A8 A11 A28 A32 A47 A58 A59 A64 B1 B2 B3 B6 B8 B9 B10 B12 B13 B15 B16 B21 C1 C2 C3 C4 C5 C6 C7 C8 | Attendance required: 80%.<br>The assessment for compulsory projects is not restricted to content, the authorship must be proved.<br>There will be no compensation between this evaluation and other qualifications of the subject.<br>In the assessment, the delivery of each case study will be considered.<br>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.<br>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).<br>According to the documentation from ETSAC degree in Architecture memory, a Board of Assessment will be convened to analyze the results and resolve, if appropriate, specific cases of student assessment.<br>Students who fail the workshop in January will have a second chance in July. If they obtain a "NO PRESENTADO" (absent from assessment), they won't have the second opportunity (July).<br>Students who fail the specific part of the subject (Construction 3) (January and July) must develop in consecutive opportunities, with the appropriate adjustments, the project failed.<br>This will happen in all opportunities and calls.<br>Students with partial validations or exchange programs will have a set treatment for each case. | 50 |
| Case study | A2 A3 A8 A11 A28 A32 A47 A58 A59 A64 B1 B3 B6 B8 B9 B10 B12 B13 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 |

| Assessment comments |
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| The program, delivered at the beginning of the course, will include information about minimum contents, delivery dates, dates multiple choice tests, lessons, partial deliveries and everything needed to study the subject.<br>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.<br>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.<br>Students who failed in January will be able to pass the subject in the second opportunity (July) but if they obtain a "NO PRESENTADO" (absent from assessment), they won't have a second chance.<br>If students do not pass every part of the subject (Objective test, Multiple-choice questions tests, Workshop and Case study), even if they fail, or the minimum attendance, will obtain a "NO PRESENTADO" (absent from assessment) (in each opportunity) |

| Sources of information |
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|---|---|
| **Basic** | -Código Técnico de la Edificación. CTE -González Martín, Jesús. Pinturas. UNED, Getafe, Madrid, 1993 -Campany salvador, Juan. Carpintería de aluminio. UNED. Madrid 1988 -Real Decreto 505/2007 de 20 de abril: Condiciones básicas de -Decreto 35/2000, Lei de accesibilidade e supresión de barreiras na Comunidade Autónoma de Galicia -CTE DB-SUA -A. Bahamón, A. Campello, A. Vicens, Intervenciones arquitectónicas en el paisaje. Parramón, Barcelona 2008 -Tectónica nº 30, Espacios exteriores -AA.VV. Paisaje: producto/producción. Fundación Caja de Arquitectos. Barcelona -AGUILÓ, Miguel. El paisaje construido. Una aproximación a la idea de lugar. Colegio de Ingenieros de Caminos, Canales y Puertos, Madrid, 1999 -McLeod, Virginia. El detalle en el paisajismo construido. Blume. 2008 -Aronson, S. Aridscapes: proyectar en tierras ásperas y frágiles Gustavo Gili 2008 |
| **Complementary** | |

| **Recommendations** |
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| **Subjects that it is recommended to have taken before** |
| Construction 1/630G01010<br>Física 2/630G01013<br>Proxectos 4/630G01016<br>Análise Arquitectónico 2/630G01017<br>Estruturas 1/630G01019<br>Construción 2/630G01020 |
| **Subjects that are recommended to be taken simultaneously** |
| Proxectos 5/630G01021<br>Urbanística 2/630G01024 |
| **Subjects that continue the syllabus** |
| Construción 4/630G01027 |
| **Other comments** |
| According to the documentation from ETSAC degree in Architecture: "Students will simultaneously take all the subjects at the workshop if it is the first time they sign up". "Students have to take (previously or simultaneously) all subjects related to previous workshops not completely passed". |