



## Teaching Guide

| Teaching Guide      |                                                                                                                                                                                                  |        |                       |           |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------|-----------|
| Identifying Data    |                                                                                                                                                                                                  |        |                       | 2016/17   |
| Subject (*)         | Architectural Drawing                                                                                                                                                                            |        | Code                  | 630G01002 |
| Study programme     | Grao en Arquitectura                                                                                                                                                                             |        |                       |           |
| Descriptors         |                                                                                                                                                                                                  |        |                       |           |
| Cycle               | Period                                                                                                                                                                                           | Year   | Type                  | Credits   |
| Graduate            | 1st four-month period                                                                                                                                                                            | First  | FB                    | 6         |
| Language            | SpanishEnglish                                                                                                                                                                                   |        |                       |           |
| Teaching method     | Face-to-face                                                                                                                                                                                     |        |                       |           |
| Prerequisites       |                                                                                                                                                                                                  |        |                       |           |
| Department          | Representación e Teoría Arquitectónica                                                                                                                                                           |        |                       |           |
| Coordinador         | Fraga Lopez, Fernando                                                                                                                                                                            | E-mail | fernando.fraga@udc.es |           |
| Lecturers           | Fraga Lopez, Fernando                                                                                                                                                                            | E-mail | fernando.fraga@udc.es |           |
| Web                 | departamentos.etsa.udc.es/webryta/                                                                                                                                                               |        |                       |           |
| General description | This subject aims to introduce students to the graphic representation of architecture, from three different perspectives: the Architectural Drawing, Computer Aided Design and Freehand Drawing. |        |                       |           |

## Study programme competences

| Code | Study programme competences                                                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A10  | REPRESENTACIÓN ESPACIAL: aptitude ou capacidade para aplicar, tanto manual como informaticamente, os sistemas de representación gráfica, dominando os procedementos de proxección e corte, os aspectos cuantitativos e selectivos da escala e a relación entre o plano e a profundidade. |
| A13  | IDEACIÓN GRÁFICA: aptitude ou capacidade para concibir e representar graficamente a figura, a cor, a textura e a luminosidade dos obxectos e dominar a proporción e as técnicas de debuxo, incluídas as informáticas.                                                                    |
| A37  | ANÁLISE DE FORMAS: comprensión ou coñecemento das leis da percepción visual e da proporción, as teorías da forma e da imaxe, as teorías estéticas da cor e os procedementos de estudo fenomenolóxico e analítico das formas arquitectónicas e urbanas.                                   |
| A38  | SISTEMAS DE REPRESENTACIÓN: comprensión ou coñecemento dos sistemas de representación espacial e a súa relación cos procedementos de ideación gráfica e de expresión visual das distintas fases do deseño arquitectónico e urbanístico.                                                  |
| B1   | Learn how to learn                                                                                                                                                                                                                                                                       |
| B3   | Aplicar un pensamento crítico, lóxico e creativo.                                                                                                                                                                                                                                        |
| B4   | Traballar de forma autónoma con iniciativa.                                                                                                                                                                                                                                              |
| B5   | Traballar de forma colaborativa.                                                                                                                                                                                                                                                         |
| B6   | Comportarse con ética e responsabilidade social como cidadán e como profesional.                                                                                                                                                                                                         |
| B7   | Comunicarse de maneira efectiva nun entorno de traballo.                                                                                                                                                                                                                                 |
| B8   | Visión espacial.                                                                                                                                                                                                                                                                         |
| B9   | Creatividade.                                                                                                                                                                                                                                                                            |
| B10  | Sensibilidade estética.                                                                                                                                                                                                                                                                  |
| B11  | Capacidade de análise e síntese.                                                                                                                                                                                                                                                         |
| B13  | Imaxinación.                                                                                                                                                                                                                                                                             |
| B14  | Habilidade gráfica xeral.                                                                                                                                                                                                                                                                |
| B17  | Cultura histórica.                                                                                                                                                                                                                                                                       |
| B18  | Razoamento crítico.                                                                                                                                                                                                                                                                      |
| B19  | Traballo nun equipo de carácter interdisciplinar.                                                                                                                                                                                                                                        |
| 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.                                                                                                          |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |                                                                                         |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------|----------------------|
| Learning outcomes                                                                                                                                                                                                                                                                                                                                                                                                                         | Study programme competences |                                                                                         |                      |
| Ability to apply graphic representation systems.<br>Ability to handle projection and section systems.<br>Ability to handle the quantitative and selective aspects of the scale.<br>Ability to establish the relationship between the plane and depth.                                                                                                                                                                                     | A10                         | B1<br>B3<br>B4<br>B5<br>B7<br>B8<br>B9<br>B10<br>B11<br>B13<br>B14<br>B17<br>B18<br>B19 | C3<br>C6<br>C7<br>C8 |
| Ability to conceive and represent the figure, colour, texture, and brightness and also dominate the objects proportion.<br>Knowledge of the drawing techniques -including the computer ones-, all of them fundamental to the correct approach to the projectual skill, a prelude to the project representation. Detailed study of the stages of graphic learning, from the initial perceptual stage to the final creative representation. | A13                         | B1<br>B3<br>B4<br>B5<br>B7<br>B8<br>B9<br>B10<br>B13<br>B14<br>B17<br>B18               | C3<br>C6<br>C7<br>C8 |
| Knowledge and understanding of the visual perception and proportion laws, form and image theories, the aesthetic theories of color and procedures of phenomenological and analytical study of the architectural and urban forms.                                                                                                                                                                                                          | A37                         | B1<br>B3<br>B4<br>B5<br>B7<br>B8<br>B9<br>B10<br>B11<br>B13<br>B14<br>B17<br>B18        | C3<br>C6<br>C7<br>C8 |



|                                                                                                                                                                                                        |     |     |    |
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| Knowledge and understanding of the spatial representation systems and its relation with the graphic inventiveness and visual expression of the different phases of the urban and architectonic design. | A38 | B1  | C3 |
|                                                                                                                                                                                                        |     | B3  | C6 |
|                                                                                                                                                                                                        |     | B4  | C7 |
|                                                                                                                                                                                                        |     | B5  | C8 |
|                                                                                                                                                                                                        |     | B6  |    |
|                                                                                                                                                                                                        |     | B8  |    |
|                                                                                                                                                                                                        |     | B9  |    |
|                                                                                                                                                                                                        |     | B10 |    |
|                                                                                                                                                                                                        |     | B11 |    |
|                                                                                                                                                                                                        |     | B13 |    |
|                                                                                                                                                                                                        |     | B14 |    |
|                                                                                                                                                                                                        |     | B17 |    |
|                                                                                                                                                                                                        |     | B18 |    |

| Contents                               |                                                                                                                                                                                                |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Topic                                  | Sub-topic                                                                                                                                                                                      |
| FREEHAND DRAWING                       | Graphic learning methodology applied to architectural perception.<br>Expressive representation as a first step concerning graphic learning.<br>Lineal perspective applied to freehand drawing. |
| INTRODUCTION TO ARCHITECTURAL DRAWING. | Graphic conventions.<br>Scale and proportion.<br>Plans, elevations and architectural sections.<br>Expressive volume representations: axonometric, perspectives, models?                        |

| Planning                                                                                                                        |                                                                                             |                      |                               |             |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|-------------------------------|-------------|
| Methodologies / tests                                                                                                           | Competencies                                                                                | Ordinary class hours | Student?s personal work hours | Total hours |
| Student portfolio                                                                                                               | A10 A13 A37 A38<br>B11 B10 B9 B8 B7 B6<br>B5 B4 B3 B1 B19 B18<br>B17 B14 B13 C3 C6<br>C7 C8 | 0                    | 143                           | 143         |
| Objective test                                                                                                                  | A10 A13 A37 A38                                                                             | 6                    | 0                             | 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     |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methodologies     | Description                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Student portfolio | Esta asignatura tiene extinguida su docencia presencial de acuerdo con el cronograma de implantación de la titulación de Grado en Estudios de Arquitectura.                                                                                                                                                                                                                                                                       |
| Objective test    | A practical examination used to the evaluation of the learningship whose distinctive aspect is the possibility to determine whether the acquired learningship is the expected to pass the examination.<br>It is a measure instrument, rigorously elaborated which allows to evaluate the capacities, abilities and attitudes.<br>It will consist of 2-4 drawings (6 hours), as the examination official timetable will establish. |

| Personalized attention |             |
|------------------------|-------------|
| Methodologies          | Description |



|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>This academic activity will be developed by the professor, either individual or in small group and its finality is to have into consideration the student's needs and doubts in relation with the current essays, helping and motivating them during the learning process.</p> <p>For this subject and the already exposed methodologies it is fundamental to consult the professor about the weekly improvement to assure the quality of the essays according to the criteria which will be indicated in each case.</p> <p>Considering the importance the personalized care this subject has, this tutorial is compulsory for the students. Non assistance to the arranged tutorials (1h), the students will be given a ?non evaluated?.</p> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Assessment        |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |
|-------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Methodologies     | Competencies                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qualification |
| Student portfolio | A10 A13 A37 A38<br>B11 B10 B9 B8 B7 B6<br>B5 B4 B3 B1 B19 B18<br>B17 B14 B13 C3 C6<br>C7 C8 | <p>El alumno presentará un trabajo de dibujo arquitectónico propuesto por los profesores en MOODLE.</p> <p>Asimismo realizará un bloc de apuntes y dibujos en los que deberá al menos realizar todos aquellos propuestos por los profesores en MOODLE.</p> <p>La no presentación de todos los ejercicios arriba indicados, conllevará la calificación de NO PRESENTADO.</p>                                                                   | 30            |
| Objective test    | A10 A13 A37 A38                                                                             | <p>OBJECTIVE ASSESSMENT: 50% of the qualification.</p> <p>This methodology is meant to determine whether the student improvement has been sufficient and in concordance with what has been done in the workshops. It will be divided into two parts, three hours each, where the essays proposed by the professors will be developed.</p> <p>Students must obtain five points over ten in this methodology in order to pass this subject.</p> | 70            |

| Assessment comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>To pass this subject, in any of the two evaluations within the course (the one belonging to the term or in the second opportunity in July) is an essential requirement to have done all the proposed essays in the different methodologies with the minimum established level and the correct professor tutorial. Otherwise the student will be consider non evaluated.</p> <p>Students who only attend the second opportunity in July will be specially obligated to fulfill what has been exposed above.</p> <p>A minimum of 80% of assistance is compulsory to pass the subject, otherwise students will be non evaluated.</p> <p>Considering the importance the personalized care this subject has, this tutorial is compulsory for the students. Non assistance to the arranged tutorials (1h), the students will be given a ?non evaluated?.</p> |

| Sources of information |
|------------------------|
|------------------------|



|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Basic         | <ul style="list-style-type: none"><li>- Janke, Rolf (1978). ARCHITECTURAL MODELS. Londres, Academy Editions</li><li>- Moneo, R. y Cortés, J. (1982). COMENTARIO SOBRE 20 ARQUITECTOS DEL SIGLO XX. Barcelona. Ed. U. Politecnica Cataluña</li><li>- Mills, Criss B. (2000). DESIGNING WITH MODELS. Nueva York. Ed. John Wiley &amp; Sons</li><li>- Redondo, E. y Delgado, M. (). DIBUJO A MANO ALZADA PARA ARQUITECTOS. Barcelona. Ed. Parramón</li><li>- Uddin, M.S. (2000). DIBUJO AXONOMÉTRICO. México. Ed. McGraw Hill</li><li>- Uddin, M.S. (2000). DIBUJO DE COMPOSICIÓN. México. Ed. McGraw Hill</li><li>- Ching, Francis (1999). DIBUJO Y PROYECTO. México. Ed. G.G. México</li><li>- Cooper, Douglas (1992). DRAWING AND PERCEIVING. Nueva York. Ed. John Wiley &amp; Sons</li><li>- Ching, Francis (1982). MANUAL DE DIBUJO ARQUITECTONICO. México. Ed. G.G. México</li><li>- Porter y Goodman (1983-1984-1985). MANUAL DE TÉCNICAS GRÁFICAS PARA ARQUITECTOS. VOL 1,2,3 Y 4. Barcelona. Ed. G.G.</li><li>- Knoll, W. y Hechinger, M. (1982). MAQUETAS DE ARQUITECTURA: TECNICAS Y CONSTRUCCIÓN. México. Ed. G.G. México</li><li>- Navarro Lizandra, José Luis (2000). MAQUETAS, MODELOS Y MOLDES: MATERIALES Y TÉCNICAS PARA DAR FORMA A LAS IDEAS . Castelló de la Plana. Publicacions de la Universitat Jaume I.</li><li>- Gonzalez, Lorenzo; Bertazzoni, L. (2000). MAQUETAS. LA REPRESENTACIÓN DEL ESPACIO EN EL PROYECTO ARQUITECTÓNICO. México. Ed. G.G. México</li></ul> |
| Complementary |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Recommendations

### Subjects that it is recommended to have taken before

### Subjects that are recommended to be taken simultaneously

Architectural Projects 1/630G01001

Descriptive Geometry/630G01003

### Subjects that continue the syllabus

Architectural Projects 2/630G01006

Analysis on Architectural Form/630G01007

### Other comments

It would be advisable for new students before joining this subject, that previously had completed courses in high school on technical and freehand drawing.

(\*)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.