30716 - Architectural Graphic Expression 5

Syllabus Information

Academic Year: 2020/21
Subject: 30716 - Architectural Graphic Expression 5
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 470 - Bachelor's Degree in Architecture Studies
ECTS: 6.0
Year: 2
Semester: Second semester
Subject Type: Basic Education
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, workshops, and group work.

The learning process is based on the explanation of the representation of architectural elements, in two dimensions, three dimensions, and virtual reality, so that later the student in a supervised practice applies them, understands them and will be able to establish their own system of presentation using universal codes to exchange architectural information.

4.2.Learning tasks

This course is organized as follows:
- **Lectures**
- **Workshops**
- **Group work**
- **Autonomous work and study**

The course is structured in lectures of 1 hour, and practical workshop sessions of 3 hours, all along all the weeks of the semester. In the lectures, the necessary contents are explained so that the students can develop their course work.

Students must form small teams for working. They must choose or be provided with a building, relevant for its design, program, author, etc., from which they can obtain sufficient documentation for their representation. The choice of the building

will be discussed with the teacher in the first workshop sessions, to decide its suitability for the exercise.

4.3.Syllabus

This course will address the following topics:

1. Introduction BIM-interoperability.
2. Floors / layers / work units. Screen control / selection. 2D Drawing/ Edit commands
3. Pens / frames / text / dimensions-import / export of drawings/ 3D Navigation
4. Construction elements: wall / slab / roof / pillar / beam / mesh / zones / curtain wall / complex structure
5. Parametric objects: door / window / skylight / staircase / objects
6. Virtual building management/ Printing, plotting and publication
7. Advanced tools
8. Photo rendering / retouching

4.4.Course planning and calendar

The course is developed with two types of activities:

1. Lectures where the philosophy and management of BIM technology is explained, as well as the rendering process.
2. Workshops aimed at the assimilation and management of the theoretical knowledge seen and applied to the course work.

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the College of Higher Engineering and Architecture (EINA) website (https://eina.unizar.es/) and Moodle.

4.5.Bibliography and recommended resources

- Ching, Frank. Manual de dibujo arquitectónico / Francis D. K. Ching ; traducción de Marta Rojals . - 4ª ed. rev. y amp. Barcelona : Gustavo Gili, D.L. 2013
- Ching, Frank. Arquitectura : forma, espacio y orden / Francis D. K. Ching ; [versión castellana de Santiago Castán] . - 3ª ed. rev. y act. Barcelona : Gustavo Gili, D.L. 2010
- Ching, Frank. Dibujo y proyecto / Francis D. K. Ching con Steven P. Juroszek ; [versión castellana, Santiago Castán y Carlos Jiménez Romera] . - 2ª ed. amp. Barcelona : Gustavo Gili, D.L. 2012
- Montes Serrano, Carlos. Representación y análisis formal : lecciones de análisis de formas / Carlos Montes Serrano Valladolid : Universidad de Valladolid, Secretariado de Publicaciones, D.L. 1992
- Cecchi, Roberta. ArchiCAD 10: Guia de Uso / Roberta Cecchi. Edicions Renat, 2007
- Simmons, Thomas M.. Graphisoft ArchiCAD Tutorial Paso a Paso / Thomas M. Simmons. - 1st edition Graphisoft R&D Rt, 2002
- Dunn, Nick. Proyecto y construcción digital en arquitectura / Nick Dunn ; [traducción, Cristóbal Barber Casasnovas] Barcelona : Blume, 2012