

**1. General information****Course:** ARTWORK I**Type:** BASIC**Degree:** 315 - UNDERGRADUATE DEGREE IN BUILDING ENGINEERING**Center:** 308 - SCHOOL POLYTECHNIC OF CUENCA**Year:** 2**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 59311**ECTS credits:** 6**Academic year:** 2019-20**Group(s):** 30**Duration:** First semester**Second language:** Spanish**English Friendly:** Y**Bilingual:** N**Lecturer:** VICTOR JOSE PEREZ ANDREU - Group(s): 30

Building/Office	Department	Phone number	Email	Office hours
Escuela Politécnica de Cuenca/Despacho 1.11	INGENIERÍA CIVIL Y DE LA EDIFICACIÓN	4810	victor.perez@uclm.es	Según publicación al inicio del semestre

2. Pre-Requisites

Recommended to have passed the first year courses.

3. Justification in the curriculum, relation to other subjects and to the profession**RELATIONSHIP WITH THE PROFESSION**

The object of the subject is the learning of architectural technical drawing, being a fundamental means of communication between the different agents involved in the building processes. The subject corresponds to the learning of the technical graphic language that allows to communicate and document, in an efficient way, the spatial, geometric, dimensional and functional characteristics of the architectural and constructive elements that make up the buildings. The ability to interpret and generate architectural technical drawings is essential in the training and professional practice of building engineers.

The subject trains the student to take geometric, dimensional and material data of architectural constructions for documentation. To do this, "in situ" surveys of buildings are made by drawing a freehand sketch, using photography and measuring methods. With the information obtained, the corresponding architectural models are defined and the drawings, plans and necessary information are obtained.

RELATIONSHIP WITH OTHER SUBJECTS OF THE STUDY PLAN

The learning of the subject requires the ability of visualization and spatial representation that develops in the subject in the first year.

Drawing I provides the student with the necessary skills to express and document the studies and geometrical, spatial and dimensional analysis of buildings, which are necessary for the learning of later subjects in the curriculum. This subject completes the basic training of the subject Graphic Expression, foreseen in the plan, and is complemented in a specific way with the learning of Drawing II, Topography, Technical Projects and Advanced Drawing, during later courses.

4. Degree competences achieved in this course**Course competences**

Code	Description
G01	Ability for analysis and synthesis
G03	Ability to manage information
G04	Problem resolution
G05	Decision making
G07	Teamwork
G12	Autonomous learning
G19	Motivation for quality
G22	Correct oral and written communication

5. Objectives or Learning Outcomes**Course learning outcomes****Description**

Know and know how to use the direct graphic techniques or autographs used in the productions of the graphic representation of architectural application.

Know and know how to use the different modes of presentation that characterize each of the graphical languages of architectural application.

Additional outcomes

Use basic tools for the documentation and measurement of the dimensions of buildings and building elements.

Train in the use of integrated information technology in BIM contexts for the production and management of digital information models and architectural graphic documentation.

6. Units / Contents

Unit 1: DRAWING AND ARCHITECTURAL MODELING**Unit 1.1** Graphic documentation of the building processes.**Unit 1.2** Architectural representation by manual means and autographs**Unit 1.3** Digital architectural modeling**Unit 1.4** Drawing scaled plans: elements, variables and normalization**Unit 2: GRAPHIC DOCUMENTATION OF EXISTING BUILDINGS****Unit 2.1** Study, representation and techniques for existing buildings documentation**Unit 2.2** Freehand architectural drawing: techniques and purposes**Unit 2.3** 3D and BIM architectural building heritage modeling**Unit 2.4** Information management: interoperability, drawings, plans and architectural models presentation**Unit 3: ARCHITECTURAL DOCUMENTATION WORKSHOP****Unit 3.1** Data collection of existing building**Unit 3.2** Realization of BIM architectural model**Unit 3.3** Configuration and layout of technical drawings of an architectural model**Unit 3.4** Architectural presentation of existing building**7. Activities, Units/Modules and Methodology**

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	R	Description
Class Attendance (theory) [ON-SITE]	Lectures	G01 G03 G22	0.32	8	N	-	-	
Class Attendance (practical) [ON-SITE]	Problem solving and exercises	G01 G03 G04 G05	0.64	16	N	-	-	
Progress test [ON-SITE]	Guided or supervised work	G01 G03 G04 G05 G07 G12 G19 G22	0.96	24	Y	N	N	
Progress test [ON-SITE]	Assessment tests	G01 G03 G04 G05 G07 G12 G19 G22	0.32	8	Y	N	Y	
Individual tutoring sessions [ON-SITE]	Guided or supervised work	G01 G03 G04 G05 G07 G12 G19 G22	0.12	3	N	-	-	
Project or Topic Presentations [ON-SITE]	Individual presentation of projects and reports	G01 G03 G07 G19 G22	0.04	1	Y	N	Y	
Study and Exam Preparation [OFF-SITE]	Other Methodologies	G01 G03 G12 G19 G22	1	25	N	-	-	
Writing of reports or projects [OFF-SITE]	Self-study	G01 G03 G04 G05 G07 G12 G19 G22	2.6	65	Y	Y	Y	
Total:			6	150				
Total credits of in-class work: 2.4			Total class time hours: 60					
Total credits of out of class work: 3.6			Total hours of out of class work: 90					

As: Assessable training activity

Com: Training activity of compulsory overcoming

R: Rescheduling training activity

8. Evaluation criteria and Grading System

Evaluation System	Grading System		Description
	Face-to-Face	Self-Study Student	
Test	20.00%	0.00%	
Test	20.00%	0.00%	
Oral presentations assessment	10.00%	0.00%	
Projects	50.00%	0.00%	
Total:	100.00%	0.00%	

9. Assignments, course calendar and important dates

Not related to the syllabus/contents	
Hours	hours
Unit 1 (de 3): DRAWING AND ARCHITECTURAL MODELING	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Problem solving and exercises]	4
Progress test [PRESENCIAL][Guided or supervised work]	8
Progress test [PRESENCIAL][Assessment tests]	4
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	1
Study and Exam Preparation [AUTÓNOMA][Other Methodologies]	8
Writing of reports or projects [AUTÓNOMA][Self-study]	22
Teaching period: 5 weeks	
Unit 2 (de 3): GRAPHIC DOCUMENTATION OF EXISTING BUILDINGS	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	4

Class Attendance (practical) [PRESENCIAL][Problem solving and exercises]	4
Progress test [PRESENCIAL][Guided or supervised work]	8
Progress test [PRESENCIAL][Assessment tests]	4
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	1
Study and Exam Preparation [AUTÓNOMA][Other Methodologies]	8
Writing of reports or projects [AUTÓNOMA][Self-study]	22
Teaching period: 5 weeks	
Unit 3 (de 3): ARCHITECTURAL DOCUMENTATION WORKSHOP	
Activities	Hours
Class Attendance (practical) [PRESENCIAL][Problem solving and exercises]	8
Progress test [PRESENCIAL][Guided or supervised work]	8
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	1
Project or Topic Presentations [PRESENCIAL][Individual presentation of projects and reports]	1
Study and Exam Preparation [AUTÓNOMA][Other Methodologies]	9
Writing of reports or projects [AUTÓNOMA][Self-study]	21
Teaching period: 5 weeks	
Global activity	
Activities	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	8
Class Attendance (practical) [PRESENCIAL][Problem solving and exercises]	16
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	3
Study and Exam Preparation [AUTÓNOMA][Other Methodologies]	25
Progress test [PRESENCIAL][Guided or supervised work]	24
Progress test [PRESENCIAL][Assessment tests]	8
Writing of reports or projects [AUTÓNOMA][Self-study]	65
Project or Topic Presentations [PRESENCIAL][Individual presentation of projects and reports]	1
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Asociación Española de Normalización y Certificación	Dibujo técnico	Asociación Española de Normalización y Certific		84-8143-380-2	2004	
Ching, Francis D.K.	Manual de dibujo arquitectónico	Gustavo Gili		978-84-252-2021-0	2008	
Chitham, Robert	La arquitectura histórica acotada y dibujada	Gustavo Gili		968-6085-58-0	1982	
Delgado, Magalí	Dibujo a mano alzada para arquitectos	Parramón		978-84-342-2549-7	2007	
Llorens Corraliza, Santiago	Iniciación al croquis arquitectónico	UPM		84-600-7252-5	1995	
Molero Vera, Josep	AutoCAD 2010 : curso de iniciación	Infobook's		978-84-96897-64-9	2009	
Sainz Avia, Jorge	El dibujo de arquitectura : teoría e historia de un lenguaje	Reverté		978-84-291-2106-3	2009	
Sanders, Ken	El Arquitecto digital : guía para utilizar (con sentido com	Eunsa		84-313-1616-0	1998	
	AUTODESK REVIT ARCHITECTURE FUNDAMENTALS	ASCENT		978-1-58503-803-9	2013	