



Universitat de Lleida

DEGREE CURRICULUM  
**GRAPHIC EXPRESSION 2**

Academic year 2014-15

## Subject's general information

<b>Subject name</b>	Graphic Expression 2
<b>Code</b>	101404
<b>Semester</b>	2nd semester Continuous Avaluation
<b>Typology</b>	Mandatory
<b>ECTS credits</b>	6
<b>Theoretical credits</b>	0
<b>Practical credits</b>	0
<b>Office and hour of attention</b>	Send an email in order to arrange a date  Office 0.12 CREA building Campus Cappont
<b>Department</b>	Department of computer science and Industrial Engineering
<b>Modality</b>	Presencial
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.
<b>Language</b>	Catalan
<b>Degree</b>	Degree in Architectural Technology
<b>Office and hour of attention</b>	Send an email in order to arrange a date  Office 0.12 CREA building Campus Cappont
<b>E-mail addresses</b>	gperez@diei.udl.cat

Gabriel Pérez Luque

## Subject's extra information

Recommendations

Mainly practical subject in which the study is based in conducting at least all the exercises and practical requested and on the consultation and realisation of more exercises from the recommended bibliography.

## Learning objectives

See section Competences

## Competences

### University of Lleida strategic competencies

- **UdL3 Mastering ICT's**

#### Objectives

- To know the current CAD systems and to learn working in this type of system, combining it appropriately with the traditional systems of graphic expression

### Degree specific competences

- **GEE3. Capacity to apply the spatial representation methods, the development of the sketch, the proportionality, the language and the techniques of graphic representation of the elements and constructive processes**

#### Objectives

- Correctly apply the regulations governing the technical graphic expression (standardized lettering, dimensioning, etc.)
- Correctly apply the concept of scale of drawing, in order to spend from most general to details without loss of rigor in the transmission of information
- To learn the use of the freehand drawing and sketching as a fundamental means of expression in the creative process and in the realization of ideas and forms
- To do sketches of uprisings, both for sites and existing buildings as well as of construction details, which represent the most important and significant elements. They must be understandable and proportionate as well as properly dimensioned and using the appropriate symbology
- To know and to graphically specify the constructive solutions of different elements as well as the details of construction of a building project
- Determine the features and contents of the different planes of a construction project, according to its development planning. To specify both compositional and organizational criteria that must be taken into account for the project planes

### Degree transversal competences

- **EPS5. Capacity of abstraction and of critical, logical and mathematical thinking**

#### Objectives

- Representation of perspectives to facilitate the interpretation of three-dimensional forms and spaces projected and / or designed.

## Subject contents

- **Chapter 1. Introduction. Basic standards.**
  - 1.1. Standardization. Advantages and disadvantages of the standardization technical drawing.
  - 1.2. Reference papers. Dimensions
  - 1.3. Main data in a project plane.
  - 1.4. Folding of project planes and new methods of file.
  - 1.5. Standardized lines.
  - 1.6. Scales of drawing.
  - 1.7. Dimensioning.
- **Chapter 2. The freehand drawing.**
  - 2.1. The sketch.
  - 2.2. The technical dimensioned sketch.
- **Chapter 3. Planes of a construction project**
  - 3.1. Compositional criteria and organizational plans of a project.
  - 3.2. Plans for a building project.
  - 3.3. Plans for a civil engineering project.
  - 3.4. Plans for refurbishment projects.
- **Item 4. Computer software for graphic expression applied to construction.**
  - 4.1. Introduction to CAD systems.
  - 4.2. Technical drawing with AutoCAD.

## Methodology

The classes have both a theoretical component, in which the program items will be followed, and also a practical component in which the exercises will be performed on traditional drawing board, related to corresponding theory in each class.

The work format will be primarily in A3 and A4, especially for Chapter 2. The freehand drawing.

Since the available time is limited, students will have some printed course notes in which they will find all the theoretical concepts covered in class.

Each chapter will be followed by series of exercises that will help the students to further practice the different concepts and techniques explained in class.

## Development plan

Date	Week	Session	9-11 h		11-13 h		PR	Deliverables
13 F	1	1	Gabriel Pérez	T1 Standards/Introduction	Gabriel Pérez	CAD. Theory	PR CAD1/PR 1.1	
20 F	2	2	Gabriel Pérez	T2 The freehand drawing. The sketch.	Gabriel Pérez	CAD. Theory	PR CAD2/PR 1.2	
27F	3	3	Gabriel Pérez	T2 The freehand drawing. The dimensioned sketch.	Gabriel Pérez	PR CAD1/2	PR 2.2	PR1.1, PR1.2
6 Mch	4	4	Gabriel Pérez	CAD. Theory	Gabriel Pérez	PR 2.3 Data collection	PR 2.3	PR2.1, CAD1
13 Mch	5	5	Gabriel Pérez	CAD. Theory	Gabriel Pérez	PR 2.3 Drawing CAD	PR 2.3	PR2.2, CAD2

20 Mch	6	6	Gabriel Pérez I	T3 Planes of a construction project (Dar PR 3.1 !!)	Gabriel Pérez	PR 2.4 Data collection	PR 2.4	PR2.3
27 Mch	7	7	Gabriel Pérez	T3 Planes of a construction project	Gabriel Pérez	PR 2.4 Drawing CAD	PR 2.4	
Easter	8							
10 Ap	9	8	Josep Maria Burgués	CAD. Theory	Josep María Burgués	PR 31 Drawing CAD	PR 3.1	PR2.4
13 Ap	10	9-11 h	Gabriel Pérez	Exam 1				
24 Ap	11	9	Josep María Burgués	CAD. Theory (Donar PR 3.2 !!)	Josep María Burgués	PR 31 Drawing CAD Installations	PR 3.1	
1 May	12			Fiesta Lleida				
8 May	13	10	Josep María Burgués	CAD. Theory	Josep María Burgués	PR 3.2	PR 3.2	PR3.1
15 May	14	11	Josep María Burgués	PR 3.2	Josep María Burgués	PR 3.2	PR 3.2	
22 May	15	12	Josep María Burgués	PR 3.3	Josep María Burgués	PR 3.3	PR 3.3	PR3.2
24 May	16	13	Josep María Burgués	PR 3.3	Josep María Burgués	PR 3.3	PR 3.3	
1 June	17	9-11h	Josep María Burgués	Exam 2				PR 3.3
Mentoring	18							
22 June	19	9-11 h	Josep María Burgués	Recovery exam				

## Evaluation

Monitoring and evaluation will be conducted according to a system of continuous assessment, where the final grade will consist of the sum of the percentages of different evaluation activities.

Assessment activities	%	Dates	O/V (1)	I/G (2)
Exam 1	20	Week 10	O	I
Exam 2	30	Week 17	O	I

Assessment activities	%	Dates	O/V (1)	I/G (2)
PR11	2,5	Week 3	O	I
PR12	2,5	Week 3	O	I
PR21	2,5	Week 4	O	I
PR CAD 1	2,5	Week 4	O	I
PR CAD 2	2,5	Week 5	O	I
PR23	2,5	Week 6	O	I
PR24	2,5	Week 9	O	I
PR31	10	Week 13	O	I
PR32	10	Week 15	O	I
PR33	10	Week 17	O	I

(1) Mandatory / Voluntary

(2) Individual / Group

Recovery:

During the 19th week it can be recover / improve the grade of the subject, following the guidelines of the Academic Degrees Framework of EPS, through a recovery test.

## Bibliography

### Basic Bibliography

- Dibujo a mano alzada para arquitectos / Magali Delgado Yanes i Ernest Redondo Domínguez/ Ed. Parramón.
- Cómo se proyecta una vivienda / J.L. Moia / Ed. GG, 1968.
- Normas Tecnológicas de la Edificación NTE / Ed. Ministerio de Obras Públicas, Transportes y Medio Ambiente
- Arte de proyectar en arquitectura / Ernst Neufert / Ed. GG.
- Colección Tectónica. ATC Ediciones S.L.
- Diccionario visual de la construcción / Ed. Departament de Política Territorial i Obres Públiques de la Generalitat de Catalunya, 2000.
- AutoCAD básico / Sham Tickoo/ Ed. Paraninfo, 2000.

### Complementary Bibliography

- Manual de técnicas gráficas para arquitectos, diseñadores y artistas 1 / Tom Porter i Sue Goodman / Ed. GG, 1984.
- Manual de técnicas gráficas para arquitectos, diseñadores y artistas 2 / Tom Porter i Sue Goodman / Ed. GG, 1984.
- AutoCAD avanzado / Sham Tickoo/ Ed. Paraninfo, 2000.
- Modelado 3D con AutoCAD / John E. Wilson / Ed. Anaya, 2002

- Dibujos y planos de obras / Ed. CEAC, 1986
- Teoría de delineación. Edificios i Obras / Ed. Edebé.
- Tecnología de delineación. Edificios i Obras / Ed. Edebé
- Guía metodológica y práctica para la realización de proyectos / Ignacio Morilla /Ed. Colegio de Ingenieros de Caminos, Canales y Puertos de Madrid, 1996.
- Nuevas Monografías de la construcción / Ed. CEAC

**Interesting Websites**

<http://www.asuni.es>

<http://www.cype.es>

<http://www.buscadorarquitectura.com>

<http://www.nemetscheck.es>

<http://www.constructalia.com>

<http://www.soloarquitectura>