GRADO EN ARQUITECTURA (PLAN DE ESTUDIOS 147) ***(PROGRAM OF STUDY 147)***

Curso *Year*	Materia *Field*	Código *Code*	Nombre la asignatura *Course name*	Tipo *Type*	Sem. *Term**	C.T. *Theory credits*	C.P. *Practice credits*	ECTS *Total credits*	Modulo *Module*	Materia *Field*
1º *1st*	Expresión Gráfica *Graphic expression*	10675	Análisis de formas Arquitectónicas *Analysis of Architectural Forms*	F. Básica *Basic Training*	Anual *Full-year*	6	6	12	1	M-001
	Expresión Gráfica *Graphic expression*	10676	Dibujo arquitectónico *Architectural Drawing*	F. Básica *Basic Training*	Anual *Full-year*	5	5	10	1	M-001
	Expresión Gráfica *Graphic expression*	10674	Geometría descriptiva *Descriptive Geometry*	F. Básica *Basic Training*	Anual *Full-year*	4,5 *4.5*	4,5 *4.5*	9	1	M-001
	Metodología del Proyecto *Project methodology*	10681	Iniciación al proyecto *Introduction to Architectural Projects*	F. Básica *Basic Training*	B	3	3	6	1	M-004
	Composición Arquitectónica *Architectonical Composition*	10692	Introducción a la Arquitectura *Introduction to Architecture*	Obligatoria *Compulsory*	A	2,25 *2.25*	2,25 *2.25*	4,5 *4.5*	2	M-006
	Construcción *Construction*	10699	Introducción a la Construcción *Introduction to Architectural Construction*	Obligatoria *Compulsory*	A	2,3 *2.3*	2,2 *2.2*	4,5 *4.5*	3	M-009
	Matemáticas *Mathematics*	10678	Matemáticas 1 *Mathematics 1*	F. Básica *Basic Training*	A	3,5 *3.5*	3,5 *3.5*	7	1	M-002
	Matemáticas *Mathematics*	10677	Matemáticas 2 *Mathematics 2*	F. Básica *Basic Training*	B	3,5 *3.5*	3,5 *3.5*	7	1	M-002
Totales *Total*								**60**		
2º *2nd*	Física *Physics*	10680	Física para la Arquitectura 1 *Physics for Architecture 1*	F. Básica *Basic Training*	A	3,5 *3.5*	3,5 *3.5*	7	1	M-003
	Física *Physics*	10679	Física para la Arquitectura 2 *Physics for Architecture 2*	F. Básica *Basic Training*	B	3,5 *3.5*	2,5 *2.5*	6	1	M-003
	Composición Arquitectónica *Architectonical Composition*	10689	Historia de la Arquitectura 1 *History of Architecture 1*	Obligatoria *Compulsory*	B	2,5 *2.5*	2	4,5 *4.5*	2	M-006
	Composición Arquitectónica *Architectonical Composition*	10688	Historia del Arte *History of Art*	Obligatoria *Compulsory*	A	2,5 *2.5*	2	4,5 *4.5*	2	M-006
	Construcción *Construction*	10700	Materiales de construcción *Building Materials*	Obligatoria *Compulsory*	Anual *Full-year*	4,5 *4.5*	4,5 *4.5*	9	3	M-009
	Proyectos Arquitectónicos *Architectural Projects*	10682	Proyectos 1 *Projects 1*	Obligatoria *Compulsory*	Anual *Full-year*	7	7	14	2	M-005
	Urbanismo *Urban Planning*	10693	Urbanística 1 *Urban Planning 1*	Obligatoria *Compulsory*	Anual *Full-year*	4,5 *4.5*	4,5 *4.5*	9	2	M-007
	Optativa *Elective course*			Optativo *Elective*	B			6	5	
Totales *Total*								**60**		
3º *3rd*	Construcción *Construction*	10702	Construcción 1 *Construction 1*	Obligatoria *Compulsory*	Anual *Full-year*	5,5 *5.5*	3,5 *3.5*	9	3	M-009
	Empresa y Profesión *Business and profession*	10706	Economía y Profesión *Economics and profession*	Obligatoria *Compulsory*	A	2,3 *2.3*	2,2 *2.2*	4,5 *4.5*	3	M-011
	Estructuras *Structures*	10709	Estructuras 1 *Structures 1*	Obligatoria *Compulsory*	Anual *Full-year*	5	4	*9*	3	M-012
	Composición Arquitectónica *Architectonical Composition*	10690	Historia de la Arquitectura 2 *Architectural History 2*	Obligatoria *Compulsory*	A	2,5	2	4,5 *4.5*	2	M-006
	Instalaciones *Installations*	10703	Instalaciones Eléctricas *Electrical Installations*	Obligatoria *Compulsory*	B	2,5 *2.5*	2,5 *2.5*	5	3	M-010
	Proyectos Arquitectónicos *Architectural Projects*	10683	Proyectos 2 *Projects 2*	Obligatoria *Compulsory*	Anual *Full-year*	7	7	14	2	M-005
	Composición Arquitectónica *Architectonical Composition*	10691	Teoría de la Arquitectura *Architectural theory*	Obligatoria *Compulsory*	B	2,5 *2.5*	2,5 *2.5*	5	2	M-006
	Urbanismo *Urban Planning*	10694	Urbanística 2 *Urban Design and Planning 2*	Obligatoria *Compulsory*	Anual *Full-year*	4,5 *4.5*	4,5 *4.5*	9	2	M-007
Totales *Total*								**60**		
4º *4th*	Composición Arquitectónica *Architectonical Composition*	10686	Composición *Composition*	Obligatoria *Compulsory*	A	2,5	2	4,5 *4.5*	2	M-006
	Construcción *Construction*	10701	Construcción 2 *Construction 2*	Obligatoria *Compulsory*	Anual *Full-year*	4,5 *4.5*	4,5 *4.5*	9	3	M-009
	Estructuras *Structures*	10707	Estructuras 2 *Structures 2*	Obligatoria *Compulsory*	Anual *Full-year*	5	4	9	3	M-012
	Instalaciones *Installations*	10705	Instalaciones Energéticas *Energy Facilities*	Obligatoria *Compulsory*	B	2,5 *2.5*	2,5 *2.5*	5	3	M-010
	Instalaciones *Installations*	10704	Instalaciones Hidráulicas *Hydraulic Facilities*	Obligatoria *Compulsory*	A	2,5 *2.5*	2,5 *2.5*	5	3	M-010
	Proyectos Arquitectónicos *Architectural Projects*	10684	Proyectos 3 *Projects 3*	Obligatoria *Compulsory*	Anual *Full-year*	7	7	14	2	M-005
	Composición Arquitectónica *Architectonical Composition*	10687	Restauración arquitectónica *Architectural conservation*	Obligatoria *Compulsory*	B	2,25 *2.25*	2,25 *2.25*	4,5 *4.5*	2	M-006
	Urbanismo *Urban Planning*	10695	Urbanística 3 *Urban Planning 3*	Obligatoria *Compulsory*	Anual *Full-year*	4,5	4,5	9	2	M-007
Totales *Total*								**60**		
5º *5th*	Urbanismo *Urban Planning*	10696	Arquitectura legal, Legislación urbanística y Valoraciones *Legal architecture, Urban Planning Law and Appraisals*	Obligatoria *Compulsory*	A	4,5 *4.5*	1,5 *1.5*	6	2	M-007
	Construcción *Construction*	10698	Construcción 3 *Construction 3*	Obligatoria *Compulsory*	A	5	3	8	3	M-009
	Estructuras *Structures*	10708	Estructuras 3 *Structures 3*	Obligatoria *Compulsory*	A	2,5 *2.5*	2	4,5 *4.5*	3	M-012
	Ingeniería del Terreno *Land Engineering*	10710	Mecánica de Suelos y Cimentaciones *Soil Mechanics and Foundations*	Obligatoria *Compulsory*	A	2,5 *2.5*	2	4,5 *4.5*	3	M-013
	Proyectos Arquitectónicos *Architectural Projects*	10685	Proyectos 4 *Projects 4*	Obligatoria *Compulsory*	A	3,5 *3.5*	3,5 *3.5*	7	2	M-005
	Integración de disciplina *Multidisciplinary approach*	10697	Taller integral *Integral Workshop*	Obligatoria *Compulsory*	B	6	6	12	2	M-008
	Optativas ("Intensificaciones") *Elective courses ("Strengthenings")*			Optativo *Elective*	B			18	4	
Totales *Total*								**60**		
6º *6th*	Proyecto fin de Grado *Thesis*	10722	Taller integral final de grado *Integral Workshop for Thesis*	Trab. Fin. Tit *Thesis*	A	15	15	30	6	M-304
Totales *Total*								**30**		
Créditos totales *Total credits*								**330**		

**Term A is equivalent to the first semester, Term B is equivalent to the second semester, and Term A-B (or full-year) refers to a course that lasts for the entire length of the academic year.*

Módulos ***Modules***	**Créditos mínimos** ***Minimum credits***
Módulo 1: Propedéutico *Module 1: Basic Training*	64
Módulo 2: Proyectual *Module 2: Design*	126
Módulo 3: Técnico *Module 3: Technical*	86
Módulo 4: Intensificación *Module 4: Strengthening*	18
Módulo 5: Actividades universitarias *Module 5: University Activities*	6
Módulo 6: Proyecto fin de grado *Module 6: Thesis*	30

Créditos establecidos para obtener la titulación:
Credits needed to graduate:

Formación básica *Basic Training*	64
Obligatorios *Compulsory*	212
Optativos *Elective*	24
Práctica externa *Internship*	0
Proyecto fin de grado *Thesis*	30
TOTAL	**330**

Las asignaturas optativas de 5º curso se agrupan en las llamadas "Intensificaciones" que constan de tres o cuatro asignaturas cada una. Cada alumno elige una de las siguientes Intensificaciones:

- Intensificación en tecnología y confort en edificios y ciudad
- Intensificación en procesos digitales de la imagen arquitectónica y urbana
- Intensificación en estructuras y cimentaciones
- Intensificación en gestión y economía de la edificación
- Intensificación en arquitectura y diseño interior
- Intensificación en conservación, restauración y rehabilitación del patrimonio arquitectónico
- Intensificación en cooperación y desarrollo sostenible
- Intensificación en arquitectura sostenible
- Intensificación en urbanismo
- Intensificación en tecnologías de la edificación
- Intensificación en gestión y coordinación de proyectos
- Intensificación en crítica de la arquitectura

5th year elective courses are grouped in blocks called "Strengthenings" of 3 or 4 elective subjects. Students must choose one of the following Strengthenings:

- *Strengthening in technology and comfort in buildings and cities*
- *Strengthening in digital processes of architectural and urban images*
- *Strengthening in structures and foundations*
- *Strengthening in economy and management of construction*
- *Strengthening in architecture and interior design*
- *Strengthening in conservation, restoration, and rehabilitation of architectural heritage*
- *Strengthening in sustainable development and cooperation*
- *Strengthening in sustainable architecture*
- *Strengthening in urbanism*
- *Strengthening in structure technologies*
- *Strengthening in project management and coordination*
- *Strengthening in architecture criticism*

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
AFO	Analysis of Architectural Forms		10675
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A-B	Obligatory	12 credits = 6 (TA) + 6 (PL)
Director of the Course:			***Department:***
García Codoñer, Ángela			Architectural graphic expression

II. GENERAL DESCRIPTION OF THE SUBJECT:

01. Introductory themes for architectural graphic expression
02. Methodology of the analysis of forms for the analysis and the representation
03. Chiaroscuro as an expression of the object in its context
04. Color
05. Representation techniques applied to architecture
06. Representation of architecture. Models of the city
07. Relationships between the architectural model and the urban context
08. Analysis of exemplary architectures by the graphic medium
09. Elements of analysis of the architectural organism
10. Methodology of analysis
11. The model as a means of architectural expression
12. The computer support

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Introductory themes for architectural graphic expression**
    1. Drawing as a means of knowledge
    2. Drawing as a means of analysis
    3. Drawing as a way of information
    4. Drawing as a design process
    5. Drawing as an objective in itself and as creative mediation
    6. Visual education: Perception and sensitivity. Learn to see
    7. The iconic representation
    8. The model and the levels of representation
    9. Drawing as an expressive means to express intentions
    10. Analogy and formal abstraction
    11. The graphic interpretation
    12. Techniques and procedures for developing graphic language

2. **Methodology of analysis of forms for analysis and representation**
    1. The formal organization of the model and its interpretation
    2. The formal organization of the model for analysis
    3. The representation and levels of analysis
    4. The form, the structure, the articulation and the spatial situation
    5. Configured spaces. Figure-background analysis
    6. Relationships of the forming elements with each other and with the assembly
    7. Techniques, procedures and qualities of graphic instruments

3. **Chiaroscuro as an expression of the object in its context**
    1. Light, shape and space
    2. The chiaroscuro
    3. Shape, material and textures
    4. Illumination of surfaces, changes of plane, etc.
    5. Assessment of the depth of field referred to the light source
    6. Graphic techniques for the expression and representation of chiaroscuro

4. **Color**
    1. Basic Theory
    2. Chromatic Attributes
    3. Generation of colors
    4. Color as a variable to be considered in architectural composition
    5. Color to reinforce spatial intentions: the three-dimensional variable
    6. Chromatic chiaroscuro
    7. Color Bodies, Notation Systems
    8. Contracts and harmonies
    9. Techniques and procedures

5. **Representation techniques applied to architecture**
    1. Dry techniques
    2. The collage
    3. The model
    4. The photograph
    5. Computer support

6. **Representation of architecture. Models of the city**
    1. The model and its context
    2. The scale and proportion
    3. The situation and orientation

4. Point as first attempt
5. Analytic drawing as a means of understanding the model
6. Graphic language: integration of systems, techniques and contents.

7. **Relationships between the architectural model and the urban context**
    1. The urban plan
    2. Morphology of the urban plot, the street, the square
    3. Relations of the different architectures with respect to the urban fabric
    4. The scale
    5. The visual perspective
    6. The urban profile
    7. General relationships between context elements
    8. Urban milestones as relevant elements
    9. Historical architecture as study text and characterization of the city

8. **Analysis of exemplary architectures by the graphic medium**
    1. The architectural organism
    2. Function concept
    3. Fashion concept
    4. Space concept
    5. Formal Categories: Mass, Space and Surface
    6. Variables defining the morphological analysis:

    - Geometric characteristics: relation with elementary solids
    - Dimensional characteristics: size, scale and proportions
    - Spatial characteristics: situation and orientation with respect to different reference planes

9. **Elements of analysis of the architectural organism**
    1. Formal, structural and spatial elements
    2. Elements of linkage to context
    3. Articulating elements of the component parts
    4. Elements of internal-external relationship
    5. Elements of vertical relations

10. **Methodology of analysis**
    1. Architecture and medium. Response of the architectural organism to the conditioners of the context.
    2. Architecture and function. Response of the architectural body to the needs of use.
    3. Architecture and composition. Analysis of systems of formal organization
    4. Architecture and construction. Analysis of the constructive implications in the formal and

material outcome

11. **The model as a means of architectural expression**
    1. The model as a system of formal ideation
    2. The model as a mechanism of analysis and abstraction of the form
    3. The final presentation layout
    4. The model of environment for the reflection of the relations with the place
    5. Techniques, materials and procedures
    6. Techniques of illumination and photographing of the models

12. **The computer support**
    1. The specific application of 3D modeling programs for the analysis of forms, previous concepts.
    2. Two-dimensional computer generated geometry as a basis for the creation of complex three-dimensional models.
    3. Study of light and color as formal variables by the info-graphic medium.
    4. Volumetric analysis of the urban space creating a virtual model, complementary to the previous graphic study.
    5. Modeling of exemplary architecture architectural models, interaction with CAD and raster programs.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
DAR	Architectural Drawing		10676
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A-B	Basic formation	10 credits = 5 (TA) + 5 (PL)
Director of the Course:			***Department:***
Navarro Esteve, Pablo José			Graphic Expression in Architecture

II. GENERAL DESCRIPTION OF THE SUBJECT:

1. Functions, modes and graphical ways of architectural representation
2. Projection concept. Representation systems
3. From the object to its image: Modules, Enviroments and Scales.
4. Interior Representation: Section Concept
5. Architectural Dimensions
6. Digital representation of Architecture
7. Descriptive Representation of Architecture
8. Illustrative Representation of Architecture
9. Comprehensive Representation of Architecture
10. Drawing Recognition: Introduction to Architectural Surveying
11. Representation of the Territory

III. ORGANIZATION OF THE COURSE UNITS:

1. Functions, modes and graphical ways of architectural representation

Objectives of architectural representation.
Instrumental and necessary means for freehand drawing.
Basic knowledge of geometric design.
Basic knowledge of projection systems.
Basic knowledge of standardisation

2. Projection concept. Representation systems

From the object to its image.
The projection for the representation.
Types of projections applicable to architectural representation.
Projection systems.
System of dimensioned planes.
The dihedral system.
The axonometric system.
Conical perspective.
Standardisation of systems.

3. **From the object to its image: Modules, Enviroments and Scales**

Representation of edges and contours. Types of lines, weight and application.
Scales.
The relation between the object and a system.
Economy of the drawing.
Strategies of representation.

4. Interior Representation: Section Concept

Hidden lines. Type, weight and application.
Cuts and sections. Application, location and the name of views.
Section lines. Type, weight and application.
Traces of the section plane. Type, weight and application.
Previous lines to the cutting plane. Type, weight and application.

5. Architectural Dimensions

Project dimensions and recognition of the Project.
Dimension elements.
Ways of measuring dimensions.
Adequation to the geometric description.
Economy.
Hierarchy of dimensions and location in the drawing.

6. Digital Representation of Architecture

Use of vector programs. Bidimensional delineation and three-dimensional modeling.
The graphical editor.
Methods to reference different entities.
Designation modes.
Classification of commands.
Start and finish.
Drawing and editing.
Information and consultation.
State.
Functional organisation of the data.
Reuse of data. Environments.
Non geometrical data.
Plotting.
Introduction to solid data modeling.

7. Descriptive Representation of Architecture

Geometric descriptions.

Architectural scales.
Representation of the building and its surroundings.
Representation of the core building structure.
Representation of carpentry and basic facilities.
Dimensions of interior spaces.
Representation of the detail.

8. Illustrative Representation of Architecture

Graphic resources.
Techniques of representation.

9. Comprehensive Representation of Architecture

The relation between the object and the system.
Unitary representation.
Representation of architectural functions.

10. Drawing Recognition: Introduction to Architectural Survey

Methodology.
Instrumentation used.
Applications.

11. Representation of the Territory

Topographic methods and their architectural application.
Classic topography.
Introduction to photogrammetry.
The concept of map.
Urban maps.
Territory maps.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
DES	Descriptive Geometry		10674
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A-B	Core subject	9 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:		***Department:***	
Albert Ballester, Julio Alberto		Graphic Expression in Architecture	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject is contemplated around spatial visión and descriptive geometry.
Manual and computerised means will be used for the resolution of exercises.

The issues related to the study of surfaces, intersections of themselves and shadows will be treated with computer means, as the programs Autocad and 3DStudio in three dimensions. Thus, students will complement, transversely, in the second semester, the learning acquired in two dimensions in the subject of Architectural Drawing.

III. ORGANIZATION OF THE COURSE UNITS:

1. Concept of projection. Types and properties.
2. Basic concepts about Dihedral System.
3. Fundaments of Orthogonal Axonometric System. Orthogonal axonometric perspective.
4. Fundaments of Oblique Axonometric System. Oblique axonometric perspective.
5. Introduction to the Theory of Shadows. Shadows of elementary surfaces.
6. Introduction to Conical System. Conical perspectives of architectural ensembles.
7. Dimensioning System. Geometrical principles and grammar of the system.
8. Dimensioned System. Roofs, lands and earth moves.
9. Dihedral System. Intersection between planes and lines. Parallelism and perpendicularity.
10. Dihedral System. Movements: plane changes, turns and rotations of the projection plane.
11. Dihedral System. Distances and angles.
12. Surface concept. Generation and clasification.
13. Polyhedral surfaces. Regular and semi-regular polyhedra, and spatial meshes.
14. Radiated surfaces: conical and cylindrical.
15. The sphere and its architectual applications.
16. Surfaces of revolution.

17. Warped surfaces.
18. Intersection of surfaces. Architectural applications.
19. Geometrical sunlight.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IPR	Introduction to Architecturals Projects		10681
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	B	Basic formation	6,0 credits = 3,0 (TA) + 3,0 (PL)
Director of the Course:		***Department:***	
Sentieri Omarrementeria, Carla		Architectural projects	

II. GENERAL DESCRIPTION OF THE SUBJECT:

Introduction to the project is a subject of the Degree in Architecture, Projectual Module, with compulsory status, semestral and given in the first year, semester B, framed in the plurianual materia, also compulsory, Architectural Projects.

The subject Introduction to Project (6 ECTS credits , as defined in the Royal Decree 1125 /2003 of 5 September) kicks off a series of subjects located in the second year (Projects 1) , third (Projects 2) fourth (Projects 3) and fifth (Projects 4) , all of them compulsory and belonging to the projectual module, until the completion of the studies with the Degree's Final Project , coordinated by the Teaching Units or Workshops of the Department of Architectural Projects .

Introduction to project addresses the architectural project from concept, idea and expression and permits, from a set of premises and goals established, organise and develope basic project proposals that meet certain basic requirements and functional, technical, cultural and aesthetic requirements and the relationship with the environment, in the context proposed and from the understanding of the social role of the architect and projectual responsibility.

Along the entire projectual itinerary will be necessary the identification of tools and procedures for the representation and expression of these proposals, as well as the explanation of the basic criteria in which is based an elementary architectural project.

This subject is taught by the Department of Architectural Projects, whose Workshops are responsable of ensuring a structured and complete teaching in the area of knowledge.

In particular, the following topics will be adressed:

The Project in the history, the concept of Project, The activities of the human being, The perception of the space, Architecture and city: types, systems and processes.
The architectural language, The material and technical culture and Architecture and communication.

III. ORGANIZATION OF THE COURSE UNITS:

1. The project in the history.
2. The concept of Project.
3. The activities of the human being.
4. The perception of the space.
5. Architecture and city.
6. Types, systems and processes.
7. The architectural language.
8. The material and technical culture.
9. Architecture and communication.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IAR	Introduction to Architecture		10692
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A	Compulsory	4,5 credits = 2,3 (TA) + 2,3 (PL)
Director of the Course:			***Department:***
Muñoz Cosme, Gaspar			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The course starts with the introduction to the subject presenting the context and the teacher's objectives. As a result of this, it is defined the field, the method and the sources of the subject.

Next, the different historical definitions of architecture are explained, preparing the student for the study of the basic concepts.

It is studied the role of the architect on nowadays society, its responsibilities and its present evolution. The knowledge of certain initial cultural concepts about architecture and architects, from the past to the present, helps the student to connect architectural concepts, its instruments and its means.

The theoretical knowledge is supplemented with practical experiences about architecture.

III. ORGANIZATION OF THE COURSE UNITS :

1. INTRODUCTIONA AND DEFINITIONS
    1. Teaching objectives and context.
    2. Concept, method and sources. Evaluation, notebook and program.
    3. The definition of architecture and the actual value of the architect.
2. ARCHITECTURE AND THE ARCHITECT THROUGHOUT HISTORY
    1. Architecture in history.
    2. Archetypes of architecture.
    3. Architect throughout history
3. ARCHITECTURAL CONCEPTS
    1. Form and function.
    2. Time, space and place.
    3. Order, number, geometry and proportion.
    4. Matter, technique and tectonics.
    5. History, heritage and society.
4. INSTRUMENTS AND MEANS FOR ARCHITECTURE
    1. Idea, conception and creative intelligence.
    2. Project, representation, expression and perception.
5. THE EXPERIENCE OF ARCHITECTURE AND THE SPACE
    1. Experimental field activity about architecture and urban spaces.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
ICO	Introduction to Architectural Construction		10699
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A	Compulsory	4,5 credits = 2,3 (TA) + 2,2 (PL)
Director of the Course:			***Department:***
Benlloch Marco, Javier			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject gives a general introduction of the construction from the previous ground works to the facilities of the building. For this, the subject has the support of library material made by professors of the Department and of the subject.

The fundamental objective that this subject seeks is that students begin to become familiar with the various common construction units in the buildings:

- Foundations
- Reinforced concrete structures, brick walls and steel structures.
- Slabs as constructive elements differentiated in the structures.
- Staircases and other comunication elements
- Envelopes, both hollow and with openings in them
- Roofs
- Facilities

In each teaching unit a practical exercise is prepared, that the students must complete in the classroom, being corrected at the end of the session and in the units previously announced, being graded by the teacher, which is an ongoing evaluation of the progress of the student. Moreover, in the practical work of the group, which allows the student starting to learn how to work in groups, the main objective is the development and formation of the student in basic technical construction vocabulary.

III. ORGANIZATION OF THE COURSE UNITS:

1. 1. INTRODUCTION.
   1.1 Presentation
   1.2 Justification of the presentation.
   1.3 Organisation of itself.

2. 2. CONSTRUCTION SYSTEMS. INTRODUCTION.
   2.1 Introduction.
   2.2 Basic concepts.

2.3 Types of structures.

3. 3. THE PLOT. GROUND PREPARATIONS.
   3.1 The plot.
   3.2 Surveying.
   3.3 Land movements.
   3.4 Vocabulary

4. 4. STRUCTURES BELOW GROUND LEVEL. FOUNDATIONS. RETAINING WALLS.
   4.1 Introduction.
   4.2 The foundations.
   4.3 Land retaining.

5. 5. BUILDING STRUCTURES. BUILDING SYSTEMS WITH WALLS.
   5.1 Building structures..
   5.2 Load-bearing walls.
   5.3 Vaulted structures

6. 6. FRAMED STRUCTURES. OTHER STRUCTURES.
   6.1 Bar framed structures.
   6.2 Reinforced concrete framed structures.
   6.3 Steel framed structures.
   6.4 Mixed steel-concrete structures.
   6.5 Wood structures.
   6.6 Other structures.

7. 7. HORIZONTAL ELEMENTS OF THE STRUCTURE.
   7.1 Requirements and demands.
   7.2 Types of slabs.
   7.3 Selection criteria.

8. 8. VERTICAL COMUNICATION.
   8.1 Stairs.
   8.2 Ramps.
   8.3 Mechanisms.

9. 9. VERTICAL ENVELOPE. BLIND WALLS AND APERTURES.
   9.1 General considerations for its design.
   9.2 Parts of the vertical envelope.
   9.3 Blind walls.
   9.4 Apertures in the envelope: openings.
   9.5 Parapets and railings.
   9.6 Partitions.

10. 10. THE ROOF.
    10.1 The roof. Definition and basic shapes.
    10.2 Clasification and description of the roofs.
    10.3 Requirements that the roofs must fulfill.
    10.4 Solutions and construction details.
    10.5 Construction process.

11. 11. UTILITIES.
    11.1 The concept of utilities. Definition.
    11.2 Serving utilities.
    11.3 Waste utilities.
    11.4 Other utilities.
    11.5 Requirements that the utilities must fulfill.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MAT1	Mathematics 1		10678
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	A	Basic Formation	7 credits = 3,5 (TA) + 3,5 (PL)
Director of the Course:			***Department:***
Bonet Solves, José Antonio			Applied Mathematics

II. GENERAL DESCRIPTION OF THE SUBJECT:

Topics of algebra, calculus and differential equations are presented with the following priority objectives:

1. Improve the capacity of abstraction, analysis, synthesis and critical reasoning: approach of models associated with concrete problems of Physics, Construction, Structures, Economics, etc. and, where possible, obtaining analytical solutions.

2. Improve numerical comprehension and problem solving ability: introduction to the calculation of approximate numerical solutions, presentation of computer tools and methods of solving applied problems.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **INTEGRATION**
    1. Integral indefinite. Calculation of primitives.
    2. Integral defined. Barrow Rule.
    3. Applications: lengths, areas and volumes.
    4. Numerical integration:
        A) Trapezius Method
        B) Simpson's method.

2. **APPROXIMATE CALCULATION OF CERES OF FUNCTIONS**
    1. Graphical study of the roots of a function.
    2. Isolation of the roots of an equation.
    3. Approximation to the root.
        A) Method of bisection.
        B) Newton-Raphson method

3. **DIFFERENTIAL EQUATIONS OF FIRST ORDER**
    1. Linear equations.
    2. Bernouilli equations
    3. Equations of separable variables.
    4. Numerical methods: Euler and Runge-Kutta.
    5. Applications: population growth, radioactive decay, cooling.

4. **DIFFERENTIAL EQUATIONS OF SECOND ORDER**
    1. E.D.O linear of second order.
    2. Equation homogeneous.
    3. General solution of the homogeneous equation.
    4. Particular solution of the complete differential equation of order 2 with constant coefficients.
        A) Method of variation of parameters.
        B) Judicious trial method.
    5. Applications: free, forced and damped oscillations of mechanical systems.
    6. Numerical methods: Discretization

5. **SYSTEMS OF LINEAR EQUATIONS**
    1. Gaussian method. Decomposition LU.
    2. Gauss-Jordan method. Inverse of a matrix.
    3. Iterative methods. Convergence.
        A) Gauss-Jacobi method.
        B) Gauss-Seidel method.

6. **EUCLID'S VECTORAL SPACE**
    1. Vector spaces. Linear Combination. Bases.
    2. Scalar product, norm and angles.
    3. Orthonormal systems.
    4. Gram-Schmidt method and QR factorization.
    5. Linear transformations.

7. **REVIEW OF ANALYTICAL GEOMETRY**
    1. Geometry of the plane: straight lines.
    2. Geometry in space: straight lines and planes.
    3. Flat, spherical and cylindrical polar coordinates.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MAT2	Mathematics 2		10677
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
1º	B	Basic Formation	7 credits = 3,5 (TA) + 3,5 (PL)
Director of the Course:			***Department:***
Peris Manguillot, Alfredo			Applied Mathematics

II. GENERAL DESCRIPTION OF THE SUBJECT:

One of the main contributions of the subject Mathematics II to the profile of the degree of Architecture is to contribute greatly to the acquisition by the student of the ability of synthesis, abstraction and critical sense inherent to any mathematical discipline, in This sense, Mathematics II is fundamental to guide the student to self learning base of the new university teachings.

On the other hand, as a subject belonging to the block of propaedeutic materials serves for the acquisition of basic skills that serve as a basis for the proper use of later subjects.

Among the objectives we want the student to achieve with the study of our subject we highlight the following:

-Able to calculate auto values i auto vectors i to diagonalize square matrices i know some of the applications, in particular the inertia tensor.

-Familiarize with the analytical treatment of the curves and surfaces that more frequently appears in the applications.

-To be able to calculate partial derivatives of functions of different variables and to locate their ends.

- Acquire the fundamental concepts of the different types of integration of functions of different variables (curvilinear, multiple and surface) that will allow you to successfully deal with structural problems, static, dynamics, field theory, heat transfer, material resistance , Fluids, elasticity, electromagnetism, etc. that arise in the different areas related to architecture.

-To be able to apply the acquired theoretical knowledge to the resolution of practical problems.

-To know and apply the numerical methods and the computer implementation in the resolution of architectural problems.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Eigenvalues and eigenvectors. Diagonalization of matrices. Conical and quadric.**
    1. Eigenvalues and eigenvectors of a square matrix.
    2. Diagonalizable matrices. Diagonalization. Examples and applications to the inertia tensor.
    3. Types of conics and quads. Graphic representation.
    4. Reduction of the equation of a conic / quadric.

2. **Functions of several variables. Partial derivatives. Function ends of several variables.**
    1. Functions of several variables: scalar and vector fields.
    2. Partial derivatives. Gradient of a scalar field. Jacobian Matrix.
    3. Calculation of the extremes of a scalar field: critical points, maximum and minimum values.

3. **Double and triple integrals.**
    1. Multiple integrals on rectangles and prisms. Calculation of the multiple integral: iterated integrals.
    2. Double and triple integrals in more general regions.
    3. Change of variables: polar, cylindrical and spherical coordinates.
    4. Applications of multiple integration to the calculation of areas, volumes and mass geometry.

4. **Curvilinear and surface integrals.**
    1. Parameterization of curves.
    2. Curvilinear integrals. Examples and applications.
    3. Green-Riemann's Theorem.
    4. Parametrization of surfaces.
    5. Surface integrals. Examples and applications when calculating surface areas.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
FIS1	Physics for Architecture 1		10680
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	A	Obligatory	7 credits = 3,5 (TA) + 3,5 (PL)
Director of the Course:			***Department:***
Carrión Mondéjar, Juan Carlos			Applied Physic

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject aims to contribute to the skill in the use and rigor in the application by the future architect of the basic physical concepts related to the subjects of Calculus of Structures, Construction and Facilities, mainly.

It is also the objective of the subject that the student relates, through the relevant examples and exercises, those physical foundations with their practical application, so that he feels already involved from the beginning of his studies with aspects of his future professional life.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Static vector flat**
2. **Fluid Mechanics**
3. **Mass geometry**
4. **Efforts in isostatic beams**
5. **Electricity and electromagnetism**

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
FIS2	Physics for Architecture 2		10679
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	B	Obligatory	6 credits = 3,5 (TA) + 2,5 (PL)
Director of the Course:			***Department:***
Llopis Reyna, Ana			Applied Physic

II. GENERAL DESCRIPTION OF THE SUBJECT:

The objectives of the subject are:

-Provide the student of architecture a basic knowledge of the physical properties related to the thermal, acoustic and luminous conditioning of spaces.

- To start the future architect in the evaluation and calculation of the various magnitudes in matter of acoustics, thermal, lighting.

-Provide criteria for the architectural project to bring together the elements necessary to make it internally comfortable

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Acoustics**
    1. The Acoustic Comfort
    2. Study of the Acoustic Field
    3. Physiological Acoustics
    4. Acoustic Field in Enclosed Areas
    5. Acoustic Insulation to Air Noise
    6. Acoustic Isolation to Impact Noise and Vibration
2. **Thermal**
    1. Heat Exchanges
    2. The Hygrothermal Problem
    3. Heat Transmission in Enclosures
    4. Distribution of temperatures in enclosures. Calorific Powers.
    5. Humid Air and Vapor Diffusion
    6. Distribution of Vapor Pressure. Risk of condensation.
3. **Lighting**
    1. Visual Comfort
    2. Photometric Magnitudes. Theory of color

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
HQ1	History of Architecture 1		10689
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	B	Compulsory	4,5 credits = 2,5 (TA) + 2,0 (PL)
Director of the Course:			***Department:***
García Ros, Vicente			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subjects comprise the study of the most prominent buildings and projects from the History of Architecture from the Ancient times to French Revolution; and the most important architects from that period. Also trying to extrapolate from it the understanding of architectonical projects useful nowadays.
The theoretical knowledge is supported with exercises and real experiences from the architecture of the historical center of Valencia.

III. ORGANIZATION OF THE COURSE UNITS :

1. UD1. CLASSICAL ARCHITECTURE
2. UD2. MEDIEVAL ARCHITECTURE
3. UD3. THE BEGINNING OF THE RENAISSANCE
4. UD4. THE GREAT MASTERS OF THE XVI CENTURY: classicists and mannerist
5. UD5. BAROQUE ARCHITECTURE
6. UD6. ARCHITECTURE FROM THE ENLIGHTENMENT

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
HAR	History of Art		10688
Course Year:			***Study Plan:***
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	A	Compulsory	4,5 credits = 2,5 (TA) + 2,0 (PL)
Director of the Course:			***Department:***
Bonet Solves, Victoria Eugenia			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

Throughout the study of artist and the analysis of their art work (characteristics, components and historical and formal evolution) from a theoretical and practical point of view; it is intended that the student acquire a series of some knowledge and skills needed to develop itself as a future architect.

Knowing the history of Fine Arts and Applied Arts will allow the student to understand concepts that will be used on its education process (space, light, volume, perspective, etc.). Also, throughout understanding and knowledge given by the subject, it will develop its artistic sensibility and its capacity for observation that will be helpful to improve its projects as well as to encourage the protection of heritage. On the other hand, the student will acquire a basic knowledge of universal culture and its economical, environmental, social and ideological fundaments; which will help it to a better understanding of the cultural pattern and the social aspect of the architect.

The content program of the subject pretends to adjust itself as well as possible to the objectives and credits of the new study plan. On the other hand, with a new, attractive and different structure, it wants to offer a solid base to understand the concepts from other subjects and reaffirm the role of the architect education in a really important field for its future profession as art culture and image is. In addition to the initial lessons with the diachronic development of the history of art, it is proposed four themes grouped under a common axis based on the study of art works. Essential concept of the subject, throughout their analysis will be studied the evolution of art since Antiquity. The thematic units are: The construction of reality; The individual and its representation; The creation of space and The content of art.

III. ORGANIZATION OF THE COURSE UNITS :

1. As a prologue: About the art work
2. Learning Lesson 1: Introduction to the ancient art
3. Learning Lesson 2: Introduction to the medieval art
4. Learning Lesson 3: Introduction to the modern art
5. Learning Lesson 4: Introduction to the contemporary art

6. Learning Lesson 5: The construction of reality
7. Learning Lesson 6: The individual and its representation
8. Learning Lesson 7: The creation of the space
9. Learning Lesson 8: The content inside art

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MCO	Building Materials		10700
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	A-B	Compulsory	9,0 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:			***Department:***
Soriano Cubells, Mª Juana			Construcciones Arquitectonicas

II. GENERAL DESCRIPTION OF THE SUBJECT:

Study of the behaviour of the architectonical building materials from their origin, raw materials for their production, manufacturing processes, treatments, chemical, physical and mechanical properties, classification, tipology of comercial products and their characteristics, execution, pathologies and current regulations.

III. ORGANIZATION OF THE COURSE UNITS:

1. INTRODUCTION

- The materials in Architecture.
- Their properties and use in architectural construction.

2. NATURAL STONES

- Origin, composition y classification.
- Physical and mechanical properties. Durability.
- Descriptive study of igneousm sedimentary and metamorphic stones.
- Regulations and uses in architectural construction.
- Notions of extraction, transformation and cuting stones. Finishes.

3. GLASS

- Composition, manufacture and properties.
- Commercial tipology of products.
- Uses in architectural construction.

4. CERAMICS

- Composition and manufacture of ceramic materials.
- Clasification of ceramic products. Regulations.
- Characteristics of commercial products. Trials.
- Uses in architectural construction.

5. BINDERS

GYPSUM AND PLASTER
- Composition, manufacture and properties. Trials. Regulations.
- Commercial tipology and uses in architectural construction.

LIME
- Composition and manufacture. Types of limes. Regulations.
- Properties and trials.
- Uses in architectural construction.

CEMENT
- Composition and manufacture. Properties. Trials.
- Types of cements. Regulations.
- Uses in architectural construction.

6. CONGLOMERATES

MORTAR
- Components. Manufacturing. Properties. Trials.
- Classification. Tipology of products.
- Execution. Uses in architectural construction.

CONCRETE
- Components. Manufacturing. Properties. Trials.
- Classification. Tipology of products.
- Execution. Uses in architectural construction.

7. METAL

- Introduction . Chemical, physical and mechanical properties of metals.
- Iron and Steel materials. Obtainment. Properties. Products.
- Steels. Manufacturing. Properties. Treatments. Trials. Regulations.
- Commercial products and uses in architectural construction.
- Non-ferrous metal materials : aluminum , copper, zinc , lead, tin and titanium.
- Properties and uses in architectural construction.

8. WOOD AND CORK

MADERAS

- Composition and macroscopic and microscopic structure.
- Physical and mechanical properties. Trials.
- Classification of wood. Species.
- Singularities : defects and anomalies.
- Causes of biotic and abiotic destruction.
- Commercial Products and woods transformed. Features.
- Uses of wood in architectural construction.

CORK

- Origin, structure and acquisition.
- Physical and mechanical properties.
- Tipology of commercial products and uses.

9. PLASTICS

- Composition. Polymers. Other components.
- Classification of polymers.
- Forming techniques.
- Physical, mechanical and chemical properties. Trials.
- Descriptive study of plastics in construction: properties and uses.

10. PAINTINGS

- Functions of paint coatings: essential and specific.
- Composition: pigments, fillers, binders, solvents and additives.
- Properties of paint coatings. Trials.
- Supports. Types and characteristics. Requirements.
- Classification of paintings: characteristics and applications in architectual construction.

11. BITUMINOUS MATERIALS

- Definitio and origin.
- Types of bituminous materials.
- Composition. Obtainment.
- Properties. Trials.
- Tipology of comercial products and applications in architectural construction.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR1	Projects 1		10682
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	A-B	Compulsory	14,0 credits = 7,0 (TA) + 7,0 (PL)
Director of the Course:			***Department:***
Azulay Tapiero, Marilda			Architectural Projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject Projects 1 (14 ECTS credits , as defined in the Royal Decree 1125 /2003 of 5 September) kicks off a series of subjects located in the third year (Projects 2), fourth (Projects 3) and fifth (Projects 4) , all of them compulsory and belonging to the projectual module, until the completion of the studies with the Degree's Final Project , coordinated by the Teaching Units or Workshops of the Department of Architectural Projects .

Projects 1 addresses the architectural project from concept, idea and expression and permits, from a set of premises and goals established, organise and develope basic project proposals that meet certain basic requirements and functional, technical, cultural and aesthetic requirements and the relationship with the environment, in the context proposed and from the understanding of the social role of the architect and projectual responsibility.

Along the entire projectual itinerary will be necessary the identification of tools and procedures for the representation and expression of these proposals, as well as the explanation of the basic criteria in which is based an elementary architectural project.

This subject is taught by the Department of Architectural Projects, whose Workshops are responsable of ensuring a structured and complete teaching in the area of knowledge.

III. ORGANIZATION OF THE COURSE UNITS:

1. ARCHITECTURAL PROJECT: CONCEPT. IDEA. EXPRESSION.
2. PHYSICAL AND CULTURAL ENVIRONMENT.
3. ACTIVITY AND FUNCTION.
4. SPACE AND SHAPE.
5. MATERIAL AND TECHNIQUE.
6. SYSTEMS. PROCESSES. LANGUAGES.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URB 1	Urban Planning 1		10693
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
2º	A-B	Obligatory	9 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:			***Department:***
Giménez Baldrés, Enrique Joaquín			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

The syllabus is structured in three learning blocks.

The first one related to the general knowledge of the urban discipline and to the identification of the different morphologies of the city and the territory.

The second, to the introduction of the concept of landscape, both urban and territorial, and the third to intervention

Propositive on the different basic scenarios of the contemporary city.

In total seven thematic units that are developed in thirty lessons and seven works

To be integrated into coordinated practical projects. Preferably but not exclusively, the urban and territorial problems of the Valencian Community

And the development of remote analysis capabilities of other realities.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **UT 1 The city and territory**
    1. Urban planning. Definition and focus of your teaching
    2. The city drawn. Urban and territorial cartographies
    3. The morphological analysis. Typology, structure and landscape
    4. Plans, plans and ordinances. The formation of a city idea
2. **UT 2 Basic urban scenarios. Formation, morphologies and landscape**
    1. The inherited city. The transformations of the historical center
    2. The widening of the Valencian Community
    3. The Metropolitan Valencia. The growth of urban peripheries
    4. The city scattered. The formation of the suburban periphery
3. **UT 3 The urban scene. The image of public space in the city**
    1. Elements of public space
    2. Background and figure relationships
    3. The forms of perception and the resources of urban culture
    4. Compositional laws as a tool for analysis and spatial definition
    5. Environmental conditions and other quality factors of the public space

4. **UT 4 Landscape and city. The urban garden and the systems of green spaces**
    1. The evolution of the urban garden
    2. Green spaces as a component of the general structure of free spaces
    3. From the green city to the sustainable development of the city
    4. The urbanistic scales of the landscape project
    5. Plant material
5. **UT5 Urban project in historical plots**
    1. Introduction. The intervention on the existing city
    2. Requirements of the distribution road system
    3. The apple as a morphological unit and the plot as a boundary of the residential building type.
    4. Forms of land colonization of public facilities.
6. **UT6 Urban Project in Urban Outlying Situations**
    1. Introduction. The contemporary plots
    2. The road distribution system and basic public facilities on an isolated plot: The school and the health center.
    3. Composition and integration of residential parts: The tower, the laminar block and the single-family dwelling: forms of grouping.
    4. The urban setting and its forms of expression in the urban project.
7. **UT7 Urban Project in low density situations.**
    1. Introduction. Extensive peripheries.
    2. Requirements of the road distribution system and the single-family parceling.
    3. Distribution and layout of basic equipment.
    4. Forms of grouping and residential single-family types.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
CT1	Construction 1		10702
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	A-B	Obligatory	9 credits = 5,5 (TA) + 3,5 (PL)
Director of the Course:			***Department:***
Mas Tomás, María de los Ángeles			Architectural constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The content of the subject reflects the constructive and detailed design of a building. Application of technological regulations. Recommendations and ranges of validity. Conception, architectural and constructive detail, commissioning processes, quality control. Pathology, repair and maintenance.

Stake out and conception of the foundation. Insulated shoes and basement walls. Elements of foundation starting until reaching the base of the enclosure. Structural systems, supporting walls and frames of porticos. Vertical communication systems. Stairs. Vertical enclosures of factory work seen and lined with continuous and discontinuous elements, according to their constructive typology. Inclined and flat roofs, ventilated and unventilated and within these conventional and inverted.

All the development of this content is done synchronously between theory and practice.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Didactic unit I. The land and the foundations**
    1. Theme 1: Recognition of the terrain
    2. Theme 2: Direct foundations. Pressures on the ground and seats.
    3. Topic 3: Direct foundations. Design and construction.
    4. Topic 4: Reinforced concrete basement and retaining walls.
2. **Didactic unit II: Works of bricks**
    1. Unit 5: Wall systems. Works of bricks.
    2. Unit 6: Calculation of bricks walls.
3. **Didactic unit III: Structural systems**
    1. Unit 7: Structural portico system.
    2. Unit 8: Unidirectional forged reinforced and prestressed concrete.
    3. Unit 9: Design and construction of stairs.
4. **Didactic unit IV: Enclosures**
    1. Unit 10: Concrete enclosures in situ.
    2. Unit 11: External enclosures of factory work. Design and typology.
    3. Unit 12: Gaps in factory building enclosures.
    4. Unit 13: Discontinuous coatings. Stone veneers.
    5. Unit 14: Continuous coatings.
5. **Didactic unit V: Roofs**
    1. Unit 15: Inclined roofs.
    2. Unit 16: Flat roofs without ventilation.

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
ECO	Economics and profession		10706
			Study Plan:
			147 (2010)
Course:	**Semester:**	**Status:**	**Credits:**
3º	A	Obligatory	4,5 credits = 2,3 (TA) + 2,2 (PL)
Director of the Course:			**Department:**
Llorca Ponce, Alicia			Business organization

II. GENERAL DESCRIPTION OF THE SUBJECT:

This subject is about the relationship and the importance that economy has with a profession such as the architectural profession.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Economy**
    1. The economic problem and the economic systems. The scarcity and the allocation of resources.
    2. The market. Elementary analysis of supply and demand.
    3. The different market structures and the determination of the price. The perfect competition, the monopoly, the oligopoly and the monopolistic competition.
    4. The market failures and the sustainable growth.
    5. The macroeconomic variables: the GDP, the inflation, the employment and the economic policy (fiscal and monetary policies).
    6. The real state property market and the construction sector: analysis of supply and demand and main characteristics of both sectors.
2. **Real state direction and management**
    1. The process of development promotion of real state and other real state activities: specifications and main involved agents.
    2. The analysis of the heritage and its results. The eco-financial study of companies.
    3. The taxation in the real state sector: taxes, rates and licenses.
    4. Funding in real state activities: main real state sources and tools.
    5. The economic viability study in real state projects: contents of the viability study and viability and analysis of the costs and incomes of the project.
    6. Real state marketing: introduction to the investigation regarding markets and trade policy in real state activity.

3. **Profession**
    1. Analysis of the professional activity fields of an architect and of the organization of the professional career.
    2. The regulation regarding the professional performance of the architect. Profession's deontology.
    3. Basic aspects of the organization and management of professional offices.
    4. The Professional Colleges' function.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
STR1	Structures 1		10709
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	A-B	Obligatory	9 credits = 5 (TA) + 4 (PL)
Director of the Course:			***Department:***
Martínez Boquera, Arturo			MECHANICS OF CONTINUOUS MEDIA AND THEORY OF STRUCTURES

II. GENERAL DESCRIPTION OF THE SUBJECT:

1.- Structural model.- Geometry. Materials. Vínculos. Acciones.

2.-Static equilibrium. Equations of static equilibrium. Actions and reactions. Study of the staticity of a structure. Static graphic. Calculation of reactions in isostatic structures.

3.-Axial effort of bars. Concept of effort: axil effort. Equation of equilibrium of the slice. Deformation of the bar to axial effort. Calculation of articulated knot structures.

4.-Flexing Efforts. Theory of beams. Concept of bending stress: shear stresses and bending moments. Differential equilibrium equations of the slice. Calculation of stress diagrams. Elastic deformation by flexion. Calculation of deformation of beams.

5.-Axil combined with bending: Porticos. Calculation of stresses and deformations in structured isostatic structures.

6.-Distribution of tensions in elastic regime. Distribution of stresses in sections of bars by axillary stress, by bending moments, by shear stress and torsor moment. Vector tension. Tension tensioner. Main tensions. Mohr circle. Deformation vector. Tensor of deformations. Main deformations. Generalized Hooke's Law. Equations of Lamé.

7.- Distribution of voltages in plastic regime. Plastic calculation. Elastoplastic analysis of the section: plastic moment, neutral axis, plastic resistant module and coefficient of form.

8.-Introduction to sizing bars. Characteristic resistance of materials. Last Limit State. Partial safety coefficients. Service Limit State. Allowable deformations. Introduction to the dimensioning of bars of wood, steel and concrete.

9.-Elastic instability of bars. Buckling. Formulation of Euler. Critical load. Effective length of buckling. Critical stress. Introduction to buckling calculation.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **1.-Structural Model.- Geometry.Materials.Vínculos.Acciones.**
2. **2.-Static equilibrium.**
3. **3.-Axial effort of bars.**
4. **4.-Bending Efforts. Theory of beams.**

5. 5.-Axil combined with bending: Porticos.

6. 6.-Distribution of tensions in elastic regime.

7. 7.- Distribution of voltages in plastic regime.

8. 8.-Introduction to bar sizing.

9. 9.-Elastic instability of bars. Buckling

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
HQ2	Architectural History 2		10690
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	A	Compulsory	4,5 credits = 2,5 (TA) + 2,0 (PL)
Director of the Course:			***Department:***
Palomares Figueres, Maria Teresa			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject "History of Architecture 2" expects to provide the student with the principles of evolution of the history of modern architecture.

The beginning of the subject is established on the Industrial Revolution and the social and technical changes and its effects on the current followed by history of architecture until the end of the XX century.

III. ORGANIZATION OF THE COURSE UNITS :

1. ENGLISH PICTURESQUENESS
2. INDUSTRIAL REVOLUTION: CITY, ARCHITECTURE AND TECHNOLOGY
3. F. SCHINKEL (1781-1841) AND THE GERMAN ROMANTICISM
4. END OF THE CENTURY: BETWEEN HANDICRAFT, INDUSTRY AND INNOVATION
5. MODERNITY WITHOUT VANGUARDISM
6. FRANK LLOYD WRIGHT (1869-1959)
7. HISTORICAL VANGUARDS
8. LUDWIG MIES VAN DER ROHE (1886-1969)
9. SHAPES UNDER THE LIGHT: LE CORBUSIER (1887-1966)
10. ESTRUCTURE OF MODERN ARCHITECTURE
11. GLOBALIZATION OF THE MODERN MOVEMENT
12. ALVAR AALTO AND THE ARCHITECTURE FROM THE NORDIC COUNTRIES
13. THE CRISIS OF MODERNITY AND THE ACTUAL ALTERNATIVES

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IEL	Electrical installations		10703
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	B	Obligatory	5,0 credits = 2,5 (TA) + 2,5 (PL)
Director of the Course:			***Department:***
Blanca Giménez, Vicente			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

- Knowledge of the intrinsic operation of the facilities.
- Planning in the Architectural Project and in the work.
- Execution and set-up techniques.
- Optimization of the control and maintenance of the facilities.
- Environmental assessment and the need to apply energy efficiency

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **ENERGY AND THE ENVIRONMENT**
    1. Systems of generation, transport and distribution of electrical energy
    2. Transformation centers

2. **LINKING FACILITIES**
    1. Rush. General protection box. General feeding line. Individual derivation.

3. **INTERIOR OR RECEIVING FACILITIES**
    1. Distribution chart. Degree of electrification. Organization of circuits. Drivers. Composition. Protective tubes. Installation systems. Splice and junction boxes. Switches. Sockets. Receivers.

4. **LOW VOLTAGE MEASUREMENT EQUIPMENT**
    1. Measuring apparatus. Constitutive elements. Classification. Symbolic representation. Connecting the devices.

5. **ENERGY CONSUMPTION**
    1. Generalities. Types of tariffs. Binomial structure. Time discrimination. Night system. Complement of reactive energy. Management of electric energy consumption in intelligent buildings. Regulation of electrical checks and regularity of supply.

6. **COMPLEMENTARY FACILITIES IN BUILDINGS**
    1. Typology of premises with special characteristics. Premises of public concurrence. Own sources of energy. Premises with risk of fire and explosion. Locals moist and very low temperature.
    2. Grounding network
    3. Protection against lightning
    4. Fire protection
    5. Electromechanical vertical transport systems
    6. Telecommunication systems

7. **INTELLIGENT BUILDINGS**
    1. Management of electrical consumption. Comfort. Communication. Security.

8. **LIGHTING**
    1. The perceptive and informative process
    2. Basic forms of light manifestation
    3. The lighting-architectural design.
    4. Lighting calculation methods
    5. Sources of light
    6. Luminaires
    7. Natural light and architecture

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR2	Projects 2		10683
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	A-B	Obligatory	14 credits = 7,0 (TA) + 7,0 (PL)
Director of the Course:			***Department:***
Alapont Ramón, José Luis			Architectural projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

Projects 2 is a subject of the Degree in Architecture, Project Module, compulsory, annual and located in the third year, A and B quarters, framed in the multi-year, also mandatory, Architectural Projects.

Projects 2 (of 14 ECTS credits, as defined in Royal Decree 1125/2003, of 5 September) continue a series of signatures located in the second (Projects 1), fourth (Projects 3) and fifth (Projects 4), compulsory and belonging to the Project Module, until the completion of the studies with the Final Project of Degree, coordinated by the Teaching Units or Workshops of the Department of Architectural Projects.

Approaches the architectural project from its concept, idea and expression and allows, based on premises and definition of objectives, organize and develop basic project proposals that meet certain functional and technical requirements, requirements, cultural, aesthetic, and relationship with the environment , In the proposed context and from the understanding of the social function of the architect and his project responsibility.

Throughout the project tour, it will be necessary to determine the tools and procedures for the representation and expression of these proposals, as well as the presentation of the basic criteria on which a basic architectural project is based.

This subject is taught by the Department of Architectural Projects, whose workshops are responsible for ensuring a structured and complete teaching in the area of knowledge.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **ARCHITECTURAL PROJECT: CONCEPT. IDEA. EXPRESSION.**
2. **PHYSICAL MEDIUM AND CULTURAL ENVIRONMENT**
3. **ACTIVITY AND FUNCTION**
4. **SPACE AND FORM**
5. **SUBJECT AND TECHNIQUE**
6. **SYSTEMS. PROCESSES. IDIOMS.**

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TAR	Architectural theory		10691
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	B	Compulsory	5,0 credits = 2,5 (TA) + 2,5 (PL)
Director of the Course:			***Department:***
Poyatos Sebastian, Javier			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject deals with the study of the Theory of Architecture from Classical Antiquity to our days, with a special attention on the XX century and the present. It searches for a theoretical basis useful on the architecture of the XXI century based on the multiple perspectives that history shows.

The most important theoretical texts are analyzed, inside its cultural context, for a better understanding of architecture in different times and to extract different concepts for contemporary discussion.

III. ORGANIZATION OF THE COURSE UNITS :

1. ANTIQUITY
2. RENNAISSANCE
3. ENLIGHTENMENT
4. ROMANTICISM
5. INNOVATORS OF MODERNITY
6. MODERNITY AND ITS MASTERS
7. CONTEMPORANEITY

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URB 2	Urban design and planning 2		10694
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
3º	A-B	Obligatory	9 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:			***Department:***
Alonso De-Armiño-Pérez, Luís			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

The approach that guides UR 2 aims to show its operational nature, within the logic of the project as a synthesis process. This approach, progressively consolidated as an "urban project" in European culture, identifies the project as a specific discourse within the field of urbanism.

The general theme of the course revolves around the transformation into residential areas. This field corresponds, in terms of magnitude, with what has been called in recent times the intermediate scale of urbanism, midway between the broader territorial discourse and the narrower focus associated with urban design and the project Of urbanization.

The training in this thematic area is concreted in the realization of one or several projects, the content of which will be adjusted to the traditional content of urban projects: use and study of canonical models, selection of residential typologies and subdivision, determination of geometric parameters (Volumes, traces, dimensions ...), definition of the system of public spaces and, finally, approximation to the administrative parameters that give legal feasibility to the project. The course is completed with a series of lessons and / or exposition of topics, which include the application of principles and ideas that are part of the cultural richness of the subject.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **TA1. THE URBAN PROJECT**
2. **TA2. RESIDENTIAL UNITS IN THE MODERN CITY**
3. **TA3. ROAD TRACKING**
4. **TA4. URBAN EQUIPMENT**
5. **TA6. BUILDING AND URBAN FLOOR**
6. **TS1. ANALYSIS OF PROJECT REFERENCES. STUDY OF CASES**

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
COM	Composition		10686
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A	Obligatory	4,5 credits = 2, 5 (TA) + 2 (PL)
Director of the Course:			***Department:***
Songel Gonzalez, Juan María			ARCHITECTURAL COMPOSITION

II. GENERAL DESCRIPTION OF THE SUBJECT:

The Composition subject makes available to the student a methodology to approach critical analysis and architectural creation. Its objectives are to stimulate the critical capacity by deepening the knowledge of the architecture of the s. XX, providing the student with instruments of transversal analysis, and creative synthesis for the project. Thus, it structures its thematic units in two sections: the first on compositional methods and architectural options and the second on the different dimensions or parameters of architecture: place, function, geometry, structure, form, space, path, light and materiality. Each one of them is analyzed chronologically and transversally, influencing in its evolution. The objective is to train the students to delve into the design mechanisms that are hidden behind the will of the creator. The subject is assimilated to a process of cognitive research that extracts methodologies, theories, forms, techniques and solutions of history, extemporizes them respecting their original context and inserts them into a specific disciplinary plane of the creative act.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Historical Composition Methods
2. Composition as method
3. Cultural Context and Architectural Trends
4. The concept of place
5. The function
6. Geometry
7. Structure as a means of formal expression
8. The form. Mechanisms of ideation of form
9. Space
10. The space-time relationship. The tour
11. Natural light as a mechanism of creation
12. Materiality and perception

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
CT2	Construction 2		10701
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Obligatory	9 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:			***Department:***
Fran Bretones, José Mª			Architectural constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The teaching structure of the subject is organized in order that the students acquire the specific theoretical knowledge and practical skills necessary to safely and professionally approach the constructive design of architectural projects.

In this direction, the subject is constituted by four didactic units and four practical blocks curricularly interrelated. The chronological order in which the entire teaching will be taught may vary with respect to the one referenced in this guide, if reasons of internal organization of the faculty or of academic convenience make it advisable.

The teaching units document the industrial and technological construction systems of façades, roofing, interior compartmentation, roofing and technical floors and, finally, exterior carpentry systems.

Three of the four practical blocks focus on the application and justification of the Basic Documents of the Technical Building Code on the construction systems studied in the didactic units, with special emphasis on the acoustic and energetic behavior of the thermal envelope. The fourth practical block studies and analyzes the safety and health provisions in building construction.

According to the interest and dedication of the students, the subject will propose complementary teaching activities, of voluntary realization, whose evaluation will result in an improvement of the individual final grade of each student.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **DIDACTIC UNIT 1.- INDUSTRIALIZED FACADE CLOSURES**
    1. 1. LIGHT CLOSURES WITH METAL AND WOOD PANELS.
    2. 2. CURRENT WALL TECHNOLOGY.
    3. 3. CURRENT WALL CONSTRUCTION SYSTEMS.
    4. 4. PREFABRICATED CONCRETE PANELS FOR FACADES.
2. **DIDACTIC UNIT 2.- EXTERIOR CARPENTRY**
    1. 1. INTRODUCTION AND CLASSIFICATION.
    2. 2. MATERIALS.
    3. 3. START-UP.
    4. 4. GLASS..
3. **DIDACTIC UNIT 3.- INDUSTRIALIZED COVERS**
    1. 1. INTRODUCTION TO INDUSTRIALIZED COVERS.
    2. 2. ECOLOGICAL COVERS AND COVERS ALJIBE.
    3. 3. METAL COVERS, DECK, SANDWICH. LUCERNARIOS.
4. **DIDACTIC UNIT 4.- INDUSTRIALIZED CONSTRUCTION OF INTERIORS.**
    1. 1. INDUSTRIALIZED INTERIOR COMPARTMENTAL SYSTEMS.
    2. 2. ADVANCED SYSTEMS OF TECHNICAL FLOORS.
    3. 3. ADVANCED SYSTEMS OF FALSE TECHNICAL CEILINGS.
    4. 4. INTERIOR FLOOR CONSTRUCTION PAVEMENTS.
    5. 5. CONTINUOUS POLYMERIC PAVEMENTS
5. **PRACTICAL BLOCK 1.- THE ACOUSTIC ENVIRONMENT AND APPLICATION OF C.T.E. TO THE INDUSTRIALIZED FACADES.**
6. **PRACTICAL BLOCK 2.- ENERGY EFFICIENCY OF THE THERMAL ENVELOPE.**
7. **PRACTICAL BLOCK 3.- APPLICATION OF C.T.E. TO THE INDUSTRIALIZED COVERS.**
8. **PRACTICAL BLOCK 4.- SAFETY AND HEALTH IN THE CONSTRUCTION.**

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
STR2	Structures 2		10707
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Obligatory	9 credits = 5 (TA) + 4 (PL)
Director of the Course:			***Department:***
Basset Salom, Luisa			MECHANICS OF CONTINUOUS MEDIA AND THEORY OF STRUCTURES

II. GENERAL DESCRIPTION OF THE SUBJECT:

The theoretical content will be structured based on the following topics:

1. Actions in the building. Regulations (CTE DBSE-AE, NCSE)
2. Structural security
3. Energy methods
4. Calculation of isostatic and hyperstatic structures
5. Approximate methods and predefined criteria
6. Modeling structures through computer programs
7. Design of structural elements and systems

The theoretical knowledge will be applied by performing a practical academic work consisting of the development of the project of a single concrete structure, divided into a maximum of 4 parts throughout the course or in the development of a maximum of 4 independent practices between yes.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Actions in Building

2. Structural security

3. Energy methods

4. Calculation of isostatic and hyperstatic structures

5. Approximate methods and predefined criteria

6. Modeling of the structure through computer programs

7. Design of structural elements and systems

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IEN	Energy Facilities		10705
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	B	Obligatory	5,0 credits = 2,5 (TA) + 2,5 (PL)
Director of the Course:			***Department:***
Vicente Valiente, Vicente De			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject tries to teach the student to: conceive, design, integrate and execute the basic facilities of their buildings.

Specifically, it is intended, with the program that is taught, that the student is able, by itself, to insert the facilities in their buildings so that they do not create dysfunctions and achieve the desired comfort. The facilities that are studied in this subject are: normative and notions of thermal, calculation of transmittances, thermal balance, design and calculation of heating and air conditioning installations.

Each installation is analyzed in three areas: first, the generality of the installation and typologies; Secondly an approach to the knowledge of the basic devices of the installation and thirdly it addresses the design and dimensioning.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. ENVIRONMENTAL PREEXISTENCES. PHYSICS OF THE ENVIRONMENT. THE HYDROTHERMAL COMFORT

2. PSYCHOMETRY

3. THERMAL TRANSMISSION. CALCULATION OF THE THERMAL TRANSMISSION COEFFICIENT. APPLICATION REGULATIONS.

4. HYGROTHIC CONDITIONING FACILITIES IN BUILDINGS. APPLICATION REGULATIONS. SITEMAS OF HEATING.

5. DESIGN AND CALCULATION OF HEATING INSTALLATIONS FOR HOT WATER. RADIANT FLOOR AND OTHER HEATING SYSTEMS. EXECUTION AND MAINTENANCE

6. THE THERMODYNAMIC MACHINE. TYPES OF CLIMATIZATION SYSTEMS. INDIVIDUAL AND CENTRALIZED SYSTEMS.

7. DESIGN AND CALCULATION OF THERMAL CONDITIONING INSTALLATIONS IN SUMMER LOAD.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IHI	Hydraulic Facilities		10704
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A	Obligatory	5,0 credits = 2,5 (TA) + 2,5 (PL)
Director of the Course:			***Department:***
Vicente Valiente, Vicente De			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject tries to teach the student to: conceive, design, integrate and execute the basic facilities of their buildings.

Specifically, it is intended, with the program that is taught, that the student is able, by itself, to insert the facilities in their buildings so that they do not create dysfunctions and achieve the desired comfort. The facilities and regulations that are studied in this subject are: plumbing, hot water, sanitation, ventilation and fire protection.

Each installation is analyzed in three areas: first, the generality of the installation and typologies; Secondly an approach to the knowledge of the basic devices of the installation and thirdly it addresses the design and dimensioning.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction to Hydraulic Installations

2. Sanitation facilities

3. Water Supply Facilities

4. Hot Water Installations (ACS)

5. Fuel Gas Supply Facilities

6. Fire protection facilities

7. Ventilation systems.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR3	Projects 3		10684
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Obligatory	14 credits = 7,0 (TA) + 7,0 (PL)
Director of the Course:			***Department:***
Gallud Martínez, Antonio			Architectural projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

Projects 3 is a subject of the Degree in Architecture, Project Module, compulsory, annual and located in the fourth year, A and B quarters, framed in the multi-year, also mandatory, Architectural Projects.

Projects 3 (of 14 ECTS credits, as defined in Royal Decree 1125/2003, of 5 September) continue a series of signatures located in the second (Projects 1), third (Projects 2) and fifth (Projects 4), compulsory and belonging to the Project Module, until the completion of the studies with the Final Project of Degree, coordinated by the Teaching Units or Workshops of the Department of Architectural Projects.

Approaches the architectural project from its concept, idea, expression and materialization and allows, from premises and definition of objectives, to organize and develop project proposals that meet certain functional and technical requirements, requirements, cultural, social, aesthetic, and relationship With the medium, in the proposed context and from the understanding of the social function of the architect and his project responsibility.

Throughout the project tour will be necessary the determination of the tools and procedures for the representation and expression of such proposals, as well as the presentation of the criteria on which an architectural project is based. This subject is taught by the Department of Architectural Projects, whose workshops are responsible for ensuring a structured and complete teaching in the area of knowledge.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **ARCHITECTURAL PROJECT: CONCEPT. IDEA. EXPRESSION.**
2. **PHYSICAL MEDIUM AND CULTURAL ENVIRONMENT**
3. **ACTIVITY AND FUNCTION**
4. **SPACE AND FORM**
5. **SUBJECT AND TECHNIQUE**
6. **SYSTEMS. PROCESSES. IDIOMS.**

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
RES	Architectural Conservation		10687
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	B	Obligatory	4,5 credits = 2, 25 (TA) + 2,25 (PL)
Director of the Course:			***Department:***
Balaguer Dezcallar, Mª Josefa			ARCHITECTURAL COMPOSITION

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject of Architectural Restoration has as main objective to train the student to devise and develop a project of conservation, restoration or rehabilitation of the built heritage, as well as to train him to study the values of historical building, to evaluate its state of conservation in order to Their protection, conservation or restoration; As well as for the analysis and criticism of any intervention in it. The student will understand the historical and current theories of restoration and the methodological knowledge for its application in the analysis of interventions and in the adoption of criteria for the restoration project. The student will solve questions related to the previous studies on the heritage and its application to the project. For this purpose the subject has two theoretical parts, one destined to the history of restoration theories and another destined to endow with a methodology of analysis and intervention linked to the practice. Both must train the student for analysis, criticism and creativity.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction
1. Vocabulary and basic concepts

2. History of restoration: the foundations of contemporary theory
1. The formation of the patrimonial culture until the XVIII century
2. The beginnings of the restoration in Italy and the archaeological restoration
3. The beginnings of the restoration in France and the restoration in style of Viollet-le-Duc
4. The Basics of Conservation in England: John Ruskin and William Morris
5. The first developments in Italy: Beltrami, Boito, Giovannoni and Annoni
6. Restoration in Central Europe: Riegl's theory and the activity of his followers
7. Italy: from postwar to the present

3. Restoration in Spain and the Valencian Community
1. The first developments in Spain: the restorative school and the conservative school
2. The current restoration in Spain
3. The current restoration in Valencia

4. El Knowledge of the historic building. Methodology and presentation of cases
1. The knowledge of the historic building
2. Metric-descriptive survey
3. Materials study and construction techniques

4. Degradation of materials
5. Structural problems
6. Stratigraphic analysis

5. Criteria for architectural restoration. From theory to practice: case presentation
1. The restoration project: criteria and techniques
2. Compatibility as a restoration concept
3. The authenticity of the historic building
4. Readability and relationship between new and old
5. Minimal intervention

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URB 3	Urban Planning 3		10695
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Obligatory	9 credits = 4,5 (TA) + 4,5 (PL)
Director of the Course:			***Department:***
Insausti Machinandiarena, Pilar			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject is structured by the following didactic units:

BLOCK 1: THE TERRITORIAL SCALE.
UD.1 The Territorial Model:
1.1 The identity of the territory and the elements of the landscape.
1.2 Peri-urban and agro-urban. Forms of settlement and environmental criteria.
1.3 Recycling of territory and landscape. The challenges of sustainability.

UD.2 Territorial and urban planning:
2.1 The instruments of spatial planning and landscape.
2.2 Strategic planning.
2.3 Environmental regulatory processes.

BLOCK 2: THE URBAN SCALE.
UD.3 The city model:
3.1 The attributes of the urban form.
3.2 The urban landscape. The public scene and the networks of green spaces.
3.3 Sustainable development and urban environment.

UD.4 The urban project:
4.1 Proposals for regeneration and urban renewal.
4.2 Partial growth interventions or incomplete urban areas.
4.3 Interventions on public space: urbanization and landscaping projects.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. The Territorial Model
   1. The identity of the territory and the elements of the landscape.
   2. Peri-urban and agro-urban. Forms of settlement and environmental criteria.
   3. The recycling of territory and landscape. The challenges of sustainability.

2. Territorial and urban planning
   1. The instruments of spatial planning and landscape.
   2. Strategic planning.
   3. Environmental regulatory processes.

3. The city model
   1. The attributes of the urban form.
   2. The urban landscape. The public scene and the networks of green spaces.
   3. Sustainable development and urban environment.

4. The urban project
   1. Proposals for regeneration and urban renewal.
   2. Partial growth interventions or incomplete urban areas.
   3. Interventions on public space: urbanization and landscaping projects.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
AL	Legal Architecture, Urban Planning Law and Appraisals		10696
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A	Obligatory	6 credits = 4,5 (TA) + 1,5 (PL)
Director of the Course:			***Department:***
Ferrando Corell, José Vicente			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject supposes the link with the legal conditions that regulate the professional exercise and has a multiple purpose:

1. to offer the student the legal framework within which the professional practice of the architect is carried out

2. the study of real estate valuation methods for the purpose of calculating market value, cadastral or urban value and

3. the study of the different types of urban plans, their contents for the purpose of writing by the architect and their corresponding approval, as well as the management processes conducive to obtaining the building permit

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Legal Architecture
   1. Introduction
   2. Ownership and Possession
   3. The Horizontal Property
   4. The Easements
   5. Recruitment
   6. Public Housing Inspection and Protection
   7. The Organization and Professional Status
   8. Professional Responsibility

2. Urban Planning Legislation
   1. Legal framework of urbanism. Land tenure regime
   2. Techniques of urban planning legislation for planning
   3. Urban and territorial planning system. The green infrastructure
   4. Concepts for the drafting of the General Structural Plan
   5. Elements for Writing Development Planning
   6. General Plan development planning instruments
   7. Planning process. Strategic Environmental Assessment
   8. Urban management and basic concepts of equidistribution
   9. Drafting of documents and projects required by urban management
   10. Building Inspection
   11. Uses and arpovechamientos in non-buildable land. The Rural Areas
   12. Duty to build, preserve and rehabilitate

3. Real Estate Appraisals
   1. Introduction to the Theory of the Value of Real Estate
   2. Market-based Comparison Method
   3. Method of Capitalization of Returns
   4. Method of Calculating Value as Waste
   5. Cost of Construction Method
   6. Cadastral valuation
   7. Urban Appraisal

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
CT2	Construction 3		10698
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A	Obligatory	8 credits = 5 (TA) + 3 (PL)
Director of the Course:			***Department:***
Fran Bretones, José Mª			Architectural constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject of Construction III is a monographic course of structural concrete. This is the case since the creation of the E.T.S. Of Architecture of Valencia and this is one of the most characteristic features of the same, imitated by other centers in the last years.

Given the accelerated growth of technical and scientific knowledge, spectacular in the field of concrete constructions, treatment as a monographic course is the most effective to optimize the limited time available, to avoid the always problematic coordination between subjects and for Facilitating student learning.

The program is structured in two Didactic Units, which are the following:

1. Materials, durability, execution and quality control.

2. Verification of Limit States. Structural elements, design, dimensioning and pathology.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Materials, Durability, Execution and Quality Control**
    1. Basic components of concrete
    2. Dosing of the concrete
    3. Deformability of concrete
    4. Mechanical Properties of Concrete
    5. Tests of hardened concrete
    6. Armors
    7. Durability
    8. Quality control
2. **Verification of Limit States. Structural elements, Project, dimensioning and pathology**
    1. Basis of calculation
    2. E.L.U. Against normal stress
    3. E.L.U. Of instability
    4. E.L.U. Shear force
    5. E.L.U. Of effort
    6. E.L.U. Torsion
    7. E.L.U. Of punching
    8. E.L.U. Of adhesion, anchorage and splices
    9. E.L.S cracking
    10. E.L.S. Of deformation
    11. Walls
    12. Surface foundations
    13. Constructive organization of structural elements
    14. Pathology of reinforced concrete constructions.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
STR3	Structures 3		10708
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A	Obligatory	4,5 credits = 2, 5 (TA) + 2 (PL)
Director of the Course:			***Department:***
Pardo Ros, José Luís			MECHANICS OF CONTINUOUS MEDIA AND THEORY OF STRUCTURES

II. GENERAL DESCRIPTION OF THE SUBJECT:

Study of the metal structures for building developed according to the following sections:

1- Material. Normative. Essays. Type and grade. Commercial products

2- Actions and their combinations

3- Porches / Knots. Typology of knots. Rigidity of joints

4- Porticos. Typology: of several floors with slabs. Imperfections, bracing and translationality

5 - Porticos. Typology: industrial ship. Imperfections in windbreak

6- Bars: supports. Classes of sections. Buckling, simple compression and flexocompression. Bases

7- Bars: beams. Flexion

8- Knots. Non-prestressed and prestressed screws

9- Knots. Welding

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Material. Normative. Essays. Type and grade. Commercial products

2. Actions and their combinations

3. Porches / Knots. Typology of knots. Rigidity of joints

4. Porticos. Typology: of several floors with floors

5. Porticos. Typology: industrial ship. Imperfections in windbreak

6. Bars: supports. Classes of sections. Buckling, simple compression and flexocompression. Bases

7. Bars: Beams. Flexion

8. Knots. Non-prestressed and prestressed screws

9. Knots. Welding

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
MSU	Soils Mechanics and Foundations		10710
			Study Plan:
			147 (2010)
Course:	**Semester:**	**Status:**	**Credits:**
5º	A	Obligatory	4,5 credits = 2,5 (TA) + 2 (PL)
Director of the Course:			**Department:**
Carrión Carmona, Miguel Ángel			LAND ENGINEERING

II. GENERAL DESCRIPTION OF THE SUBJECT:

The main objective of the subject is to provide the student with the basic elements to be able to interpret the soil response to the activities of the architecture and to understand the recommendations of the technical codes. It tries to complement the knowledge acquired in other areas such as construction or calculation of structures. The student must be able to design a foundation with a few minimum conditions.

UNIT I: ELEMENTARY SOIL PROPERTIES AND CLASSIFICATION

UNIT II: THE SOIL AS A CONTINUOUS MEDIUM: FLOW, DEFORMATION AND RESISTANCE

UNIT III: APPLICATIONS OF SOIL MECHANICS: SURFACE AND DEEP FOUNDATIONS. GROUND RECOGNITION.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. UNIT I: ELEMENTARY PROPERTIES OF SOILS AND CLASSIFICATION
2. UNIT II: THE SOIL AS A CONTINUOUS MEDIUM: FLOW, DEFORMATION AND RESISTANCE
3. UNIT III: APPLICATIONS OF SOIL MECHANICS: SURFACE AND DEEP FOUNDATIONS. GROUND RECOGNITION.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR4	Projects 4		10685
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A	Obligatory	7 credits = 3,5 (TA) + 3,5 (PL)
Director of the Course:			***Department:***
Gómez Alfonso, Carlos José			Architectural Projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

Projects 4 is a subject of the Degree in Architecture, Project Module, compulsory, semester and located in the fifth year, semester A, framed in the multi-year, also mandatory, Architectural Projects.

Projects 4 (7 ECTS credits, as defined in Royal Decree 1125/2003, of 5 September) continue a series of signatures located in the second (Projects 1), third (Projects 2), fourth (Projects 3), compulsory and belonging to the Project Module, until the completion of the studies with the Final Project of Degree, coordinated by the Teaching Units or Workshops of the Department of Architectural Projects.

It approaches the architectural project from its concept, idea and expression and allows, from premises and definition of objectives, to organize and develop project proposals that satisfy certain functional and technical requirements, requirements, cultural, aesthetic and related to the environment, In the proposed context and from the understanding of the social function of the architect and his project responsibility.

Throughout the project tour will be necessary the determination of the tools and procedures for the representation and expression of such proposals, as well as the presentation of the basic criteria on which an architectural project is based.

This subject is taught by the Department of Architectural Projects, whose workshops are responsible for ensuring a structured and complete teaching in the area of knowledge.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **ARCHITECTURAL PROJECT: CONCEPT. IDEA. EXPRESSION.**
2. **PHYSICAL MEDIUM AND CULTURAL ENVIRONMENT**
3. **ACTIVITY AND FUNCTION**
4. **SPACE AND FORM**
5. **SUBJECT AND TECHNIQUE**
6. **SYSTEMS. PROCESSES. IDIOMS.**

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I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TIN	Integral Workshop		10697
			Study Plan:
			147 (2010)
Course:	***Semester:***	***Status:***	***Credits:***
5º	B	Obligatory	12 credits = 6 (TA) + 6 (PL)
Director of the Course:			***Department:***
Lillo Navarro, Manuel			Architectural projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

Taller Integral is a subject of the Degree in Architecture, Project Module, compulsory, semester and located in the fifth year, semester B. The subject is organized from the interdepartmental transversality (Projects, Construction, Structures, mainly), so Understands as a program linked to the curricular development of different subjects: Architectural Projects, Construction, Structures and Facilities.

The Taller Integral (12 ECTS credits) course consists of 8 project credits, 2 credits of structures, 1 of construction and 1 of Installations, followed by a series of signatures located in the second (Projects 1), third (Projects 2), fourth (Projects 3), and fifth semester B (Integral Workshop) of obligatory character and belonging to the Project Module.

It approaches the architectural project from its concept, idea and expression and allows, from premises and definition of objectives, to organize and develop project proposals that satisfy certain functional and technical requirements, requirements, cultural, aesthetic and related to the environment, In the proposed context and from the understanding of the social function of the architect and his project responsibility.

Specifically, the Integral Workshop approaches the architectural project in a coordinated way between the conception and the material development of the same. In its development will be counted from the beginning with the technologies as an integral part of the conception of the project.

The subject is taught in coordinated workshops integrated by a body of professors belonging to the different fields that comprise the integral conception of the architectural project, belonging to the different departments of architectural projects, structures and construction.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. PHASE 1. Context. Concept, Idea and Expression

2. PHASE 2. Spatial and Functional Organization

3. PHASE 3. Architectural, Material and Constructive Synthesis