BACHELOR

ARCHITECTURE FUNDAMENTALS
SYLLABUS (2014)

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

ESCOLA TÈCNICA SUPERIOR D'ARQUITECTURA

CONTENTS

SUMMARY TABLE

	1st Semester	2nd Semester
1 60 ECTS	Analysis of architectural forms 12 ECTS	
	Architectural drawing 9 ECTS	
	Descriptive geometry 9 ECTS	
	Mathematics 1 9 ECTS	
	Introduction to architecture 4,5 ECTS	Architectural projects 1 (design studio) 5 ECTS
	Introduction to construction 4,5 ECTS	Physics for architecture 7 ECTS
2 60 ECTS	Mathematics 2 6 ECTS	Economy and management 6 ECTS
	Graphic expression in architecture 6 ECTS	
	Architectural projects 2 (design studio) 15 ECTS	
	Urbanism 1 9 ECTS	
	History of art 4,5 ECTS	History of architecture 1 4,5 ECTS
	Materials science 9 ECTS	
3 60 ECTS	Architectural projects 3 (design studio) 15 ECTS	
	Urbanism 2 9 ECTS	
	History of arquitecture 2 6 ECTS	
	Construction 1 9 ECTS	
	Structural design 1 9 ECTS	
	Physics for environmental conditioning 6 ECTS	Electric and lightning installations 6 ECTS
4 60 ECTS	Architectural projects 4 (design studio) 15 ECTS	
	Urbanism 3 9 ECTS	
	Theory of architecture 4,5 ECTS	Architectural composition 4,5 ECTS
	Construction 2 9 ECTS	
	Structural design 2 9 ECTS	
	Hydraulic installations 4'5 ECTS	Hygrothermal conditioning installations 4'5 ECTS
5 60 ECTS	Architectural projects 5 (design studio) 15 ECTS	
	Architectural restoration 4,5 ECTS	Architectural and urban regulations 7,5 ECTS
	Construction 3 9 ECTS	
	Structural design 3 4,5 ECTS	Soil Mechanics and foundations 4,5 ECTS
	Elective G1 (to choose from list p. 5&6) 4,5 ECTS	Elective G2 (to choose from list p. 5&6) 4,5 ECTS
		Diploma project 6 ECTS

Preparation Module | Design Module | Technical Module | Electives Module | Final Degree Module

PROGRAM

	1st Course	Credits	Semester
13373	Analysis of architectural forms	12	Annual
13374	Architectural drawing	9	Annual
13372	Descriptive geometry	9	Annual
13376	Mathematics 1	9	Annual
13385	Introduction to architecture	4,5	1st
13396	Introduction to construction	4,5	1st
13378	Physics for architecture	7	2nd
13380	Architectural projects 1 (design studio)	5	2nd
	2nd Course		
13381	Architectural projects 2 (design studio)	15	Annual
13392	Urbanism 1	9	Annual
13397	Materials science	9	Annual
13377	Mathematics 2	6	1st
13375	Graphic expression in architecture	6	1st
13386	History of art	4,5	1st
13387	History of architecture 1	4,5	2nd
13404	Economy and management	6	2nd
	3rd Course		
13382	Architectural projects 3 (design studio)	15	Annual
13393	Urbanism 2	9	Annual
13398	Construction 1	9	Annual
13405	Structural design 1	9	Annual
13388	History of architecture 2	6	1st
13379	Physics for the environmental conditioning	6	1st
13401	Electric and lightning installations	6	2nd
	4th Course		
13383	Architectural projects 4 (design studio)	15	Annual
13394	Urbanism 3	9	Annual
13399	Construction 2	9	Annual
13406	Structural design 2	9	Annual
13389	Theory of architecture	4,5	1st
13402	Hydraulic installations	4,5	1st
13390	Architectural composition	4,5	2nd
13403	Hygrothermal conditioning installations	4,5	2nd

Preparation Module
Design Module
Technical Module
Electives Module
Final Degree Module

	5th Course	Credits	Semester
13384	Architectural projects 5 (design studio)	15	Annual
13400	Construction 3	9	Annual
13391	Architectural restoration	4,5	1st
13407	Structural design 3	4,5	1st
13395	Architectural and urban regulations	7,5	2nd
13408	Soil mechanics and foundations	4,5	2nd
Check elective courses	Elective G1 (to choose from list pages 5 and 6)	4,5	1st
Check elective courses	Elective G2 (to choose from list pages 5 and 6)	4,5	2nd
13409	Diploma project	6	2nd

Preparation Module
Design Module
Technical Module
Electives Module
Final Degree Module

ELECTIVE COURSES

	Applied Mathematics	Credits	Semester
13343	Mathematical technics for data analysis in architecture	4,5	1st
13344	Mathematical urbanism	4,5	2nd
	Applied Physics		
13345	Acoustics for architecture and urbanism	4,5	1st
13346	Bioclimatic criteria for architectural design	4,5	2nd
13347	Building dynamic actions: design strategies	4,5	2nd
	Architectural Graphic Expression		
13348	Graphic survey of architectural heritage	4,5	1st
13349	Visual shaping and computer processing in architecture	4,5	2nd
13350	Graphic technics for the generation of complex forms	4,5	1st
	Architectural Projects		
13351	Architecture, city and landscape design. Sustainable habitat	4,5	1st
13352	Materialisation of architectural design	4,5	2nd
13353	Criticism and design strategies	4,5	1st
	Architectural composition		
13354	Historic valencian architecture	4,5	1st
13355	Composition of atmospheres	4,5	2nd
13356	Wefts and profiles in visual culture	4,5	1st
	Landscape and Urbanism		
13357	Urban planning, territory and landscape workshop	4,5	1st
13358	Sustainable urbanism	4,5	2nd
13359	Informatics for urbanism and land planning	4,5	1st
	Construction		
13360	Advanced building materials	4,5	1st
13361	Construction technology and energy efficiency	4,5	2nd
13362	Pathology and intervention techniques in architectural heritage	4,5	1st
	Structural Design		
13363	Advanced structural analysis and design	4,5	1st
13364	Structures workshop	4,5	2nd
13365	Pathologies and structural rehabilitation	4,5	2nd
	Installations		
13366	Renewable energies in buildings	4,5	1st
13367	Security and protection systems	4,5	2nd
13368	Urban installations design	4,5	1st

Preparation Module
Design Module
Technical Module
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	Economy and Management	Credits	Semester
13369	Economic viability and funding of projects	4,5	1st
13370	Measurements, valuations and projects evaluation	4,5	2nd
13371	Sustainable development and environmental economy	4,5	1st
	Applied Linguistics		
13337	Techinical valencian for architecture C1	4,5	*
13338	Technical valencian for architecture C2	4,5	*
13339	English for architecture B1	4,5	*
13340	English for architecture B2	4,5	*
13341	French for architecture 1	4,5	*
13342	French for architecture 2	4,5	*

*Applied Linguistics elective courses can be attended in any of the 5 academic years of the Bachelor Program

Preparation Module
Design Module
Technical Module
Electives Module
Final Degree Module

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COURSE DESCRIPTIVE TABLES OF 1st ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
AFO	Analysis of Architectural Form		13373
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
1	A-B	Basic training	12 credits = 6 (TA) + 6 (PL)
Course Director:			**Department:**
Llopis Verdú, Jorge			Architectural graphic expression

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject of Analysis of architectural forms is based on the acquisition of a graphic language to analyse and express the complex phenomena of form generation and architectural spaces. Drawing allows to represent, analyse, interpret, devise and express the configuration of the architectural organism and the laws that make it possible. The expression is adapted to each stage of the ideation process and uses the systems and techniques of representation which are gradually perfected and codified by collective experience, which includes not only the traditional graphic media but also the architectural model as well as computer tools.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction to the Analysis of Architectural Forms
2. Methodology of the analysis of architectural forms by the graphic medium
3. Graphic techniques applied to the formal analysis of Architecture
4. Elements of analysis of the architectural organism: Methodology of analysis
5. Complementary techniques of formal analysis: The mock-up and computer techniques
6. Analysis of exemplary architectures by the graphic medium

I. GENERAL INFORMATION:			
Acronym:	**Course:**		**Code:**
DAR	Architectural Design		13374
			Syllabus:
			178 (2015)
Academic year:	**Semester:**	**Nature:**	**Credits:**
1st	A-B	Basic training	9 credits = 4'5 (TA) + 4'5 (PL)
Coordinator:			**Department:**
Grande Grande, Francisco Antonio			Architectural graphic expression

II. GENERAL OVERVIEW OF THE SUBJECT:

Theoretical knowledge, physical and intellectual skills for the understanding and use of graphic language as a means to represent and expressively communicate the architectural space; the understanding and application of the graphic representation as a form of analysis and recognition of the architectural reality, and as a tool in the processes of architectural devising.

1. Functions, modalities and graphic means of architectural representation.
2. The projection concept. Representation systems.
3. Types of scales: Physical, Relational, Conceptual.
4. Interior representation: Sections and types of sections.
5. Architectural dimensioning
6. Digital representation of architecture.
7. Descriptive representation of architecture.
8. Illustrative representation of architecture.
9. Comprehensive representation of architecture.
10. Territory representation
11. Survey drawing: Introduction to architectural graphic survey

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. Functions, modalities and graphic means of architectural representation.
2. The projection concept. Representation systems.
3. Types of scales: Physical, Relational, Conceptual.
4. Interior representation: Sections and types of sections.
5. Architectural dimensioning
6. Digital representation of architecture.
7. Descriptive representation of architecture.
8. Illustrative representation of architecture.
9. Comprehensive representation of architecture.
10. Territory representation
11. Survey drawing: Introduction to architectural graphic survey

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
DES	Descriptive Geometry		13372
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
1	A-B	Basic training	9 credits = 4'5 (TA) + 4'5 (PL)
Course Director:		***Department:***	
Higón Calvet, José Luís		Architectural graphic expression	

II. GENERAL DESCRIPTION OF THE SUBJECT:

1. Concept of projection. Types and properties.
2. Generalities of the Dihedral System.
3. Fundamentals of the Orthogonal Axonometric System. Orthogonal Axonometric Perspectives.
4. Basics of the Oblique Axonometric System. Oblique Axonometric Perspectives
5. Introduction to Shadow Theory. Shadows of elemental surfaces.
6. Introduction to the Conical System. Conical perspectives of architectural ensembles.
7. Dimensioned system. Geometric principles and grammar of the System.
8. Dimensioned system. Covers, lands and earthworks.
9. Dihedral system. Intersection between planes and lines. Parallelism and perpendicularity.
10. Dihedral system. Movements: plane changes, twists and turns.
11. Dihedral system. Distances and angles.
12. Surface concept. Generation and classification.
13. Polyhedral surfaces. Regular polyhedra, semi-regular and spatial meshes.
14. Radial surfaces: conical and cylindrical.
15. The sphere and its architectural applications.
16. Surfaces of revolution.
17. Surfaced surfaces.
18. Intersection of surfaces. Architectural applications.
19. Geometric solar drying.

For the purposes of the resolution of exercises, both manual and computerised means will be used. The subjects related to the study of surfaces, intersections of the same and shadows will be tackled with software such as Autocad and 3dStudio in three dimensions. Thus, students will complement, in a transversal way, in the second semester, the acquired learning in two dimensions in the subject of Architectural Drawing.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Concept of projection. Types and properties.
2. Generalities of the Dihedral System.
3. Fundamentals of the Orthogonal Axonometric System. Orthogonal Axonometric Perspectives.
4. Basics of the Oblique Axonometric System. Oblique Axonometric Perspectives
5. Introduction to Shadow Theory. Shadows of elemental surfaces.
6. Introduction to the Conical System. Conical perspectives of architectural ensembles.
7. Dimensioned system. Geometric principles and grammar of the System.
8. Dimensioned system. Covers, lands and earthworks.
9. Dihedral system. Intersection between planes and lines. Parallelism and perpendicularity.

10. Dihedral system. Movements: plane changes, twists and turns.
11. Dihedral system. Distances and angles.
12. Surface concept. Generation and classification.
13. Polyhedral surfaces. Regular polyhedra, semi-regular and spatial meshes.
14. Radial surfaces: conical and cylindrical.
15. The sphere and its architectural applications.
16. Surfaces of revolution.
17. Surfaced surfaces.
18. Intersection of surfaces. Architectural applications.
19. Geometric solar drying.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
FIS	Physics for Architecture		13378
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
1	B	Compulsory	7 credits = 4 (TA) + 3 (PL)
Course Director:		***Department:***	
Carrión Mondéjar, Juan Carlos		Applied Physic	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject aims to contribute mainly to the improvement in the use and thoroughness in the application by the future architect of the basic physical concepts related to the subjects of Calculus of Structures, Construction and Facilities, mainly. The subject also aims that students relate, through the relevant examples and exercises, these physical foundations with their practical application, so that they already feel involved since the beginning of their studies with aspects of their future professional life. To this end, the subject has been structured in the following thematic units:

Theme 1.- Static vector

Topic 2.- Fluid Mechanics

Topic 3.- Mass geometry

Topic 4.- Efforts in isostatic beams

Topic 5.- Electricity and Electromagnetism

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Static Vector
2. Mass geometry
3. Efforts in isostatic beams
4. Basic Concepts of Electricity and Electromagnetism

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
IAR	Introduction to Architecture		13385
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
1st	A	Compulsory	4.5 credits = 2.5 (TA) + 2 (PL)
Coordinator:			***Department:***
Aranda Navarro, Fernando			Architectural Composition

II. GENERAL OVERVIEW OF THE SUBJECT:

The syllabus starts with the introduction of the discipline by presenting the context and the teaching objectives. As a result, its field, method and sources are defined. Then it delves into he different historical definitions of architecture, thus preparing the analysis of its key topical concepts. The current social role of architects, their competences and their recent evolution are studied. Possessing some knowledge about architecture and architects, up to the present, allows referencing the key concepts of architecture, its instruments and its means. The theoretical knowledge is accompanied and complemented by practical activities that consist of the "in situ" experience of architecture through guided visits to destinations of general interest for the work of new students.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. UT.1 THE ARCHITECT
2. UT.2 ARCHITECTURE
3. UT.3 ORDER AND CHAOS
4. UT.4 SPACE AND MOVEMENT
5. UT.5 SHAPE AND ENERGY
6. UT.6 FUNCTION AND USE
7. UT.7 EXPERIENCE IN ARCHITECTURE

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
ICO	Introduction to Construction		13396
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
1	A	Compulsory	4,5 credits = 2,5 (TA) + 2 (PL)
Course Director:		**Department:**	
Gil Salvador, María Luisa		Architectural constructions	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject provides a general introduction of construction from the previous works of conditioning of the land to the facilities of the building. To this end, it has the support of bibliographical material developed by professors of the department and of the subject.

The main objectives of the subject are that students begins to familiarise themselves with the different and common constructive units in the building process:

- Foundation.
- Structures of reinforced concrete, factory and steel.
- Forged as constructive elements differentiated in the structures.
- Stairs and other means of communication.
- Enclosures; openings and openings in enclosures.
- Covers
- Facilities.

During practical lectures students will develop the academic work in groups, which will be presented periodically and delivered at the end of the course. An individual test with the contents seen to date will be set out every three or four weeks

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. 1. Introduction
2. The constructive systems. Introduction
3. The plot. Conditioning of the land
4. Underground structures. The foundation. Containment walls
5. Buildings structures. Construction systems with walls
6. Porticated structures. Other structures
7. Horizontal elements of the structure
8. Vertical communication
9. Vertical closure. Blind cloths and openings
10. Cover
11. Facilities

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
MAT1	Mathematics 1		13376
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
1st	A-B	Basic training	9.0 credits = 4.5 (TA) + 4.5 (PL)
Coordinator:			***Department:***
Person in charge pending			Applied mathematics

II. GENERAL OVERVIEW OF THE SUBJECT:

Algebra, calculus and differential equations are presented with the following key objectives:

1. Improving the abstraction, analysis, synthesis and critical reasoning ability: approach to models associated to specific problems related to Physics, Construction, Structures, Economy, etc. and obtaining analytical solutions, as the case may be.

2. Improving the numerical understanding and the ability to solve problems: introduction to the calculation of approximate numerical solutions, introduction to computer tools and applied problem solving methods.

The topics to be analysed are as follows: Differential and integral calculus. Differential equations. Vector and matrix analysis. Euclidean space.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. Approximate calculation of function zeros

1. Graphic study of the roots of a function
2. Isolation of the roots of a function
3. Approximation to the root. Numerical methods

2. Integration

1. Indefinite integrals. Primitives calculation.
2. Definite integrals. Barrow's rule
3. Applications: areas and volumes
4. Numerical integration

3. First order differential equations

1. Linear equations
2. Bernouilli equations
3. Separable variables equations
4. Applications

4. Second order differential equations

1. Second order ordinary linear differential equations with constant coefficients
2. Second order homogeneous linear differential equations. General solution
3. Particular solution of the complete second order differential equation
4. Applications

5. Matrices, vectors and linear equations systems.

1. Gaussian method

2. Matrix inverse. Gauss-Jordan method

6. Euclidean vector space

1. Vector subspaces. Bases
2. Scalar product, standard and angles
3. Orthogonality. Gram-Schmidt method

7. Linear applications

1. Linear applications**.** Matrix of a linear application
2. Nucleus and image of a linear application

8. Diagonalisation

1. Values and eigenvectors
2. Diagonalisable matrices
3. Diagonalisation of symmetric matrices
4. Conic

I. GENERAL INFORMATION:			
Acronym:	**Course:**		**Code:**
PR1	Architectural Projects 1 (Design Studio)		13380
			Syllabus:
			178 (2015)
Academic year:	**Semester:**	**Nature:**	**Credits:**
1st	B	Compulsory	5 credits = 2.5 (TA) + 2.5 (PL)
Coordinator:		**Department:**	
Lacalle García, Carlos		ARCHITECTURAL PROJECTS	

II. GENERAL OVERVIEW OF THE SUBJECT:

The subject addresses the architectural project from its concept, idea and expression and enables, from a few assumptions and definition of objectives, to organise and develop project proposals that meet certain functional, technical, cultural, aesthetic, and relational requirements with the environment, in the context suggested and from the understanding of the architect's social role and project responsibility.

It will be necessary to determine the tools and procedures for the representation and expression of said proposals throughout the design process, 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. The following topics will be specifically addressed: The project in history, the project concept, the activities of mankind, the perception of space, architecture and the city: types, systems and processes

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. Concept, idea and expression
2. Physical and cultural environment
3. Activity and function
4. Space and shape
5. Materials and technique

2 COURSE DESCRIPTIVE TABLES OF 2nd ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
EGA	Graphic Expression in Architecture		13375
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
2	A	Basic training	6 credits = 3 (TA) + 3 (PL)
Course Director:		***Department:***	
Sender Contell, Marina		Architectural graphic expression	

II. GENERAL DESCRIPTION OF THE SUBJECT:

This subject enables students to represent and carry out the architecture graphical analysis based on the knowledge received in the graphic subjects taken on the first year, applying this knowledge in a coordinated way from manual techniques and the tools provided by computer graphics. Its purpose is for students to apply, in a practical case, all the knowledge acquired in the three core subjects of the first year, specifically improving the skills in the management of 2D and 3D computer graphic tools and interrelating theoretical knowledge and graphic skills that allow students to develop strategies to present projects in successive courses.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Idea. Project analysis and its representation.
2. Advanced 2D representation. 2D geometries as the starting point to 3D
3. 3D modelling and rendering.
4. Inserting the model into your environment.
5. Basic principles of visual perception. Graphic speech.
6. Layout and presentation of the architecture project.
7. Personal expression, graphic style and project.

I. GENERAL INFORMATION:			
Acronym:	**Course:**		**Code:**
EGE	Economy and Business Management		13404
			Syllabus:
			178 (2015)
Academic year:	**Semester:**	**Nature:**	**Credits:**
2nd	B	Compulsory	6 credits = 3 (TA) + 3 (PL)
Coordinator:			**Department:**
Llorca Ponce, Alicia			BUSINESS MANAGEMENT

II. GENERAL OVERVIEW OF THE SUBJECT:

This subject develops skills in the field of Economics and Business Management related to the architect's professional activity. The subject is divided into two basic modules. The first module deals with issues such as the economic system, the functioning of markets, market failures, the foundations of economic policies and sustainable development. It also analyses the characteristics of the real estate and construction sector. The second module of the subject focuses on business management: the development of real estate management skills, the real estate promotion process, economic-financial analysis, financing, taxation, marketing and viability in the real estate industry. Aspects related to the architect's professional activity such as professional processing and the role of professional associations will also be addressed.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. Economy

1. Topic 1. Economic problems and systems. Scarcity and allocation of resources
2. Topic 2. The market. Basic analysis of supply and demand
3. Topic 3. The different market structures and pricing. Perfect competition, monopoly, oligopoly and monopolistic competition
4. Topic 4. Market failures and sustainable growth
5. Topic 5. Macroeconomic variables: GDP, inflation, employment
6. Topic 6. The economic policy
7. Topic 7. The real estate market and the construction sector

2. Real Estate Management

1. Topic 8. The property development process and other real estate activities
2. Topic 9. Property, the results and the economic-financial study of the company
3. Topic 10. Company financing: main sources and financing instruments. Implementation to real estate operations
4. Topic 11. Business taxation. Implementation to real estate operations
5. Topic 12. Analysis of real estate markets. Real estate marketing
6. Topic 13. Economic feasibility study of real estate projects: contents of the feasibility study and analysis of project income and costs

3. Profession

1. Topic 14. Structure of the profession, organisation of professional associations and professional conduct
2. Topic 15. Basic aspects of office organisation. Management and professional processing procedures

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
HAR	History of art		13386
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
2nd	A	Compulsory	4.5 credits = 2.5 (TA) + 2.0 (PL)
Coordinator:		***Department:***	
Bonet Solves, Victoria Eugenia		ARCHITECTURAL COMPOSITION	

II. GENERAL OVERVIEW OF THE SUBJECT:

The subject aims for students to acquire a number of competences and necessary skills through the study of artists and the analysis of works of art (their characteristics, components and historical and formal evolution), both from theory and practice, to be able to develop their work as architects.

Learning about the history of fine arts and applied arts will allow them to understand concepts that will be put into practice during their training (space, light, volume, perspective, etc.). Similarly, based on the understanding and knowledge of this subject, they will develop their artistic sensibility and their observation skills to improve the results of their projects and to promote the protection of heritage. On the other hand, they will gain basic knowledge of universal culture and its economic, environmental, social or ideological foundations that will help them to better understand the relationship between cultural patterns and the social role of professionals.

The content of the syllabus of the subject aims to adjust in a more coherent way to the credits and objectives of the new plan. On the other hand, it aims to offer a solid foundation on which to base the knowledge of other subjects with a different, innovative and attractive structure, and to reinforce the role of the architects' training in such an important field for their future professional career, such as their artistic and images culture. In addition to initial topics with the traditional diachronic development of the history of art, four major topics are included, which are presented around the cornerstone of the study of the work of art, an essential part of the discipline, which enables us to analyse and study the evolution since ancient history. The large subject groups are: The construction of reality; individuals and their representation; the creation of space and the content of art.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. Abut the work of art
2. Introduction to Ancient Art
3. Introduction to Medieval Art
4. Introduction to Modern Art
5. Introduction to Contemporary Art
6. The construction of reality
7. Individuals and their representation
8. The creation of space
9. The content in Art

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
HQ1	History of Architecture 1		13387
			Study Plan: 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
2	B	Compulsory	4,5 credits = 2,5 (TA) + 2,0 (PL)
Course Director:		***Department:***	
García Ros, Vicente		Architectonical Composition	

II. GENERAL DESCRIPTION OF THE SUBJECT:

History of western architecture from the classical world to Versailles. Study of the most significant works and architects, traditional constructive uses, drawing lessons of architectural project which are useful in the modern world

III. ORGANIZATION OF THE COURSE UNITS :

1. Classical Architecture
2. Medieval Architecture
3. Renaissance Architecture
4. Baroque Architecture

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MAT2	Mathematics 2		13377
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
2	A	Basic Training	6 credits = 3 (TA) + 3 (PL)
Course Director:		***Department:***	
Peris Manguillot, Alfredo		Applied Mathematics	

II. GENERAL DESCRIPTION OF THE SUBJECT:

One of the main contributions of Mathematics II to the profile of the degree in Architecture is to enhance the acquisition by the student of the synthesis, abstraction and critical eye skills inherent to any mathematical discipline. In this sense, Mathematics II is essential to guide students through self-learning based on new university teaching strategies.

On the other hand, as a subject belonging to the block of propaedeutic materials, it helps acquire basic skills that serve as basis for building on subjects taken later in the degree.

Among the objectives, the student is expected to achieve the following through this subject:

- The ability to calculate auto values and auto vectors and to diagonalise square matrices and know some of the applications, in particular the inertia tensor.
- Be familiar with the analytical treatment of the curves and surfaces that appear more frequently in the applications.
- To be able to calculate partial derivatives of functions of different variables and to locate their ends.
- To acquire the main concepts of the different types of integration of functions of different variables (curvilinear, multiple and surface) that will allow them 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 be able to apply the numerical methods and the computer implementation in the resolution of architectural problems.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Functions of variable variables. Extremes calculation. Cones and quadrics.
2. Multiple integration. Applications to the calculation of flat areas, volumes and geometry of masses
3. Surface and surface integrals. 3D surface applications

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
MCO	Materials Science		13397
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
2nd	A-B	Compulsory	9.0 credits = 4.5 (TA) + 4.5 (PL)
Coordinator:		***Department:***	
Soriano Cubells, Mª Juana		ARCHITECTURAL CONSTRUCTIONS	

II. GENERAL OVERVIEW OF THE SUBJECT:

The study of the behaviour of architectural construction materials from their origin, raw materials for their production, manufacturing processes, treatments, chemical, physical and mechanical properties, classification, commercial type of products and their characteristics, uses, implementation, most frequent pathology and current regulations.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. NATURAL STONE MATERIALS
2. GLASS 3. CERAMIC
4. CONGLOMERATING MATERIALS. PLASTER, LIME AND CEMENT.
5. CONGLOMERATED MATERIALS. MORTARS AND CONCRETE.
6. METALLIC MATERIALS
7. WOODS
8. PLASTIC MATERIALS
9. PAINTS
10. BITUMINOUS MATERIALS

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR2	Architectural Projects 2 (Design Studio)		13381 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
2	A-B	Compulsory	15 credits = 7,5 (TA) + 7,5 (PL)
Course Director:		***Department:***	
Sentieri Omarrementeria, Carla		Architectural projects	

II. GENERAL DESCRIPTION OF THE SUBJECT:

It approaches the architectural project from its concept, idea and expression and allows, from premises and definition of objectives, to organise and develop project proposals that satisfy certain functional, technical, cultural, aesthetic and environment related requirements, in the context suggested and from the understanding of the social function of architects and the responsibility of their projects.

It will be necessary to determine the tools and procedures for the representation and implementation of such proposals throughout the project, 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.

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
URB1	Urban 1		13392
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
2nd	A-B	Compulsory	9.0 credits = 4.6 (TA) + 4.4 (PL)
Coordinator:		***Department:***	
Colomer Sendra, Vicente		Urban Planning	

II. GENERAL OVERVIEW OF THE SUBJECT:

The syllabus is divided into three learning blocks.
The first is related to the general knowledge of the urban discipline and to the identification of the different city and territorial morphologies.
The second, to the introduction of the concept of landscape, both in its urban and territorial branch, and the third to the proactive intervention on the different basic scenarios of a modern city.
A total of seven thematic units that are developed in thirty lectures and seven assignments which must be integrated into coordinated practical projects. On a preferential basis -while not exclusively- the urban and territorial problems of the Valencian Community will be addressed and the development of remote analysis capabilities of other realities.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. **UT 1 The city and the territory**
    1. 1.1 Urban planning. Definition and learning approach
    2. 1.2 Drawing the city. Urban and territorial cartographies
    3. 1.3 Morphological analysis. Type, structure and landscape
    4. 1.4 Maps, plans and by-laws. The creation of the city concept.
2. **UT 2 Basic urban scenarios. Creation, morphologies and landscape**
    1. 2.1 Inheriting the city. The transformations of the historic centre
    2. 2.2 The urban expansion of the Valencian Community
    3. 2.3 The metropolitan Valencia. The growth of urban fringe areas
    4. 2.4 The dispersion of the city. The creation of the suburban fringe
3. **UT 3 The urban scene. The image of public areas in the city**
    1. 3.1 The elements of public areas
    2. 3.2 Background and figure relationships
    3. 3.3 The perceptions and resources of urban culture
    4. 3.4 The compositional laws as a tool for analysis and spatial definition
    5. 3.5 Environmental conditions and other quality factors of public areas
4. **UT 4 Landscape and the city. The urban garden and green space systems**
    1. 4.1 The evolution of the urban garden

2. 4.2 Green spaces as an element of the general structure of open spaces
3. 4.3 From the green city to the sustainable development of the city
4. 4.4 The urban planning scales of the landscape project
5. 4.5 The plant material

5. **UT5 Urban project in historical schemes**
    1. 5.1.-Introduction The intervention on the existing city
    2. 5.2 Requirements of the road distribution system
    3. 5.3 The block as a morphological unit and the plot as residential building type demarcation.
    4. 5.4 Forms of land settlement of public facilities.
6. **UT6 Urban Project in urban fringe situations**
    1. 6.1.-Introduction Contemporary schemes
    2. 6.2 The road distribution system and the basic public facilities in an isolated plot: Schools and health centres.
    3. 6.3 Composition and integration of residential parts: Towers, laminar blocks and single-family homes: forms of grouping.
    4. 6.4 The urban setting and its forms of expression in the urban planning project.
7. **UT6 The Urban Project in low density situations**
    1. 7.1.-Introduction Extensive urban fringe areas.
    2. 7.2 Requirements of the road distribution system and single-family homes.
    3. 7.3 Distribution and layout of basic equipment.
    4. 7.4 Grouping and single-family residential homes.

3

COURSE DESCRIPTIVE TABLES OF 3rd ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
CT1	Construction 1		13398 **Study Plan:** 178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
3	A-B	Compulsory	9 credits = 5,5 (TA) + 3,5 (PL)
Course Director:		**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. The implementation 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. Foundation elements until reaching the base of the enclosure. Structural systems, supporting walls and portico frames. 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.

This content is developed simultaneously in terms of theory and practice.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Didactic unit I. Land and 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. Brick work**
    1. Unit 5: Wall systems. Brick work.
    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: On site concrete enclosures.
    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.

I. GENERAL INFORMATION:			
Acronym:	**Course:**		**Code:**
FIS2	Physics for Environmental Conditioning		13379
			Syllabus:
			178 (2015)
Academic year:	**Semester:**	**Nature:**	**Credits:**
3rd	A	Basic training	6.0 credits = 3.1 (TA) + 2.9 (PL)
Coordinator:			**Department:**
Llopis Reyna, Ana			APPLIED PHYSICS

II. GENERAL OVERVIEW OF THE SUBJECT:

The objectives of the subject are the following:
Providing architecture students with a basic knowledge of the physical phenomena related to the thermal, acoustic and light conditioning of spaces.
Introducing the future architect in the assessment and calculation of the various magnitudes in terms of acoustics, thermal and lighting aspects.
Providing criteria for the architectural project to gather the necessary elements to become internally comfortable. The syllabus is divided into three teaching units:
Acoustics:
The acoustic comfort. Study of the acoustic field. Physiological acoustics Acoustic field in enclosed spaces. Acoustic insulation against air and impact noise.
Thermal:
Hygrothermal comfort. Heat exchanges. Heat transmission in enclosures. Thermal balances. Thermal inertia. Humid air and vapour diffusion in enclosures. Study and correction of condensation risk.
Illumination:
Visual comfort. Photometric magnitudes.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. **Acoustics**
    1. The acoustic comfort
    2. Study of the acoustic field
    3. Physiological acoustics
    4. Acoustic field in enclosed spaces
    5. Acoustic insulation against air noise
    6. Acoustic insulation against impact and vibration noise
2. **Thermal**
    1. Heat exchanges
    2. The hygrothermal problem
    3. Heat transmission in enclosures
    4. Temperature distribution in enclosures Heat capacity.
    5. Humid air and vapour diffusion
    6. Steam pressure distribution Risk of condensation
3. **Illumination**
    1. Visual comfort
    2. Photometric magnitudes Colour theory

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
HQ2	History of architecture 2		13388
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
3rd	A	Compulsory	6 credits = 3 (TA) + 3 (PL)
Coordinator:		***Department:***	
Palomares Figueres, Maria Teresa		ARCHITECTURAL COMPOSITION	

II. GENERAL OVERVIEW OF THE SUBJECT:

THE SUBJECT FOCUSES IN A PERIOD BETWEEN THE BEGINNINGS OF THE INDUSTRIAL REVOLUTION AND THE CONTEMPORARY DECADES. THE PROGRAMME IS DEVELOPED IN CHRONOLOGICAL ORDER THROUGH A SUCCESSION OF TOPICS FOCUSED ON THE UNDERSTANDING AND CRITICAL ANALYSIS OF DIFFERENT ARCHITECTURAL TYPES THAT CHARACTERISED MODERNITY

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. ENGLISH PICTURESQUISM
2. THE INDUSTRIAL REVOLUTION: THE CITY, ARCHITECTURE AND TECHNIQUE
3. F. SCHINKEL (1781-1841) AND GERMAN ROMANTICISM
4. THE END OF THE CENTURY: BETWEEN CRAFTSMANSHIP, INDUSTRY AND INNOVATION
5. MODERNITY WITHOUT AVANT-GARDE
6. FRANK LLOYD WRIGHT (1869-1959)
7. THE HISTORICAL AVANT-GARDES
8. LUDWIG MIES VAN DER ROHE (1886-1969)
9. FORMS UNDER THE LIGHT: LE CORBUSIER (1887-1966)
10. THE EXPRESSION OF THE MODERN STRUCTURE
11. THE INTERNATIONALISATION OF THE MODERN MOVEMENT
12. ALVAR AALTO AND THE ARCHITECTURE OF NORDIC COUNTRIES
13. THE CRISIS OF MODERNITY AND ALTERNATIVES PRESENT ALTERNATIVES
14. PRESENT ALTERNATIVES

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
IEL	Electric and Lightning Installations		13401
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
3rd	B	Compulsory	6 credits = 3 (TA) + 3 (PL)
Coordinator:		***Department:***	
Blanca Giménez, Vicente		ARCHITECTURAL CONSTRUCTIONS	

II. GENERAL OVERVIEW OF THE SUBJECT:

Providing architecture students with a basic knowledge of the physical phenomena related to the electric, thermal, acoustic and light conditioning of spaces as well as the protection systems.
Introducing students in the assessment and calculation of the various magnitudes in the abovementioned fields.
Providing criteria to gather the necessary elements to make the architectural project totally comfortable. Assessing environmental sustainability criteria so that the energy contributions claimed by the building are friendly to the environment and the territory in which the building is located.
Using the building in a compatible manner with the existing energy sources.

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. SYSTEMS FOR THE GENERATION, TRANSPORTATION AND DISTRIBUTION OF ELECTRIC ENERGY

2. LOW VOLTAGE NETWORKS

3. ENERGY CONSUMPTION

4. COMPLEMENTARY FACILITIES IN BUILDINGS

5. LIGHT, SIZING AND VISION

6. LIGHTING CALCULATION METHODS

7. LIGHT SOURCES

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
PR3	Architectural Projects 3 (Design Studio)		13382 ***Syllabus:*** 178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
3rd	A-B	Compulsory	15 credits = 7.5 (TA) + 7.5 (PL)
Coordinator:			***Department:***
Alapont Ramón, José Luis			ARCHITECTURAL PROJECTS

II. GENERAL OVERVIEW OF THE SUBJECT:

The subject addresses the architectural project from its concept, idea and expression and enables, from a few assumptions and definition of objectives, to organise and develop project proposals that meet certain functional, technical, cultural, aesthetic, and relational requirements with the environment, in the context suggested and from the understanding of the architect's social role and project responsibility.

It will be necessary to determine the tools and procedures for the representation and expression of said proposals throughout the design process, 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 BASIC UNITS:

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

I. GENERAL INFORMATION:			
Acronym:	***Course:***		***Code:***
STR 1	Structural Design 1		13405
			Syllabus:
			178 (2015)
Academic year:	***Semester:***	***Nature:***	***Credits:***
3rd	A-B	Compulsory	9 credits = 5 (TA) + 4 (PL)
Coordinator:			***Department:***
Martínez Boquera, Arturo			CONTINUUM MECHANICS AND THEORY OF STRUCTURES

II. GENERAL OVERVIEW OF THE SUBJECT:

1.-Structural model. - Geometry. Materials. Bonds. Actions.

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

3. Axial bar effort. Concept of effort: axial effort. Balance equation of the section. Deformation of the bar to axial force. Calculation of structures of articulated joints.

4.-Bending efforts. Beam theory. Bending stress concept: shear stress and bending moments. Differential balance equation of the section. Calculation of stress diagrams Elastic deformation by bending. Calculation of beam deformation.

5.-Axil combined with bending: Porches. Stress and deformation calculation in framed isostatic structures.

6.- Stress distribution in elastic regime. Stress distribution in bar sections by axial force, by bending moments, by shear stress and torque. Stress vector. Stress tensor. Main stress points. Mohr's circle. Deformation factor. Deformations tensor. Main deformations. Generalised Hooke's Law. Lamé equations.

7.- Stress distribution in plastic regime. Plastic calculation. Elastoplastic analysis of the section: plastic moment, neutral axis, plastic resistant module and shape coefficient.

8.-Introduction to bar dimensioning. Characteristic resistance of materials. Ultimate Limit State. Partial safety value. Service Limit State. Permissible deformations. Introduction to wooden, steel and concrete bars sizing.

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

III. SELECTION AND STRUCTURING OF THE BASIC UNITS:

1. 1.-**Structural model.** - Geometry. Materials. Bonds. Actions.
2. 2.-Static equilibrium.
1. Static equilibrium equations. Actions and reactions. Study of the staticity of a structure. Graphic static.
3. 3. Axial bar effort.
1. Concept of effort: axial effort. Balance equation of the section. Deformation of the bar to axial force. Calculation of
2. Calculation of structures of articulated joints.

4. 4.-Bending efforts. Beam theory.

1. Bending stress concept: shear stress and bending moments. Differential balance equation of the
2. Calculation of stress diagrams
3. Elastic deformation by bending. Calculation of beam deformation.

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

1. Stress and deformation calculation in framed isostatic structures.

6. 6.- Stress distribution in elastic regime.

1. Stress distribution in bar sections by axial force, by bending moments, by shear stress and torque.
2. Stress vector. Stress tensor. Main stress points. Mohr's circle. Deformation factor. Deformations tensor.
3. Main deformations.
4. Generalised Hooke's Law. Lamé equations.

7. 7.- Stress distribution in plastic regime.

1. Plastic calculation. Elastoplastic analysis of the section: plastic moment, neutral axis, plastic resistant module and shape coefficient.
2. Application to flexed reinforced concrete sections **8. 8.-Introduction to bar dimensioning.**

1. Characteristic resistance of materials. Ultimate Limit State. Partial safety value. 2. Service Limit State. Permissible deformations.

9. 9.-Elastic instability of bars. Buckling

1. Euler's formula. Critical load. Effective buckling length. Critical stress. Introduction to buckling calculation

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
URB 2	Urbanism 2		13393
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
3	A-B	Obligatory	9 credits = 4,6 (TA) + 4,4 (PL)
Course Director:		**Department:**	
Alonso De-Armiño-Pérez, Luís		Urban Planning	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The purpose of UR2 is to address the "Analysis and Design of Integrated Residential Sectors". The approach that guides the subject 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 urban planning. Therefore, it is focused on the urban project, its internal logic, and its history.

The general theme of the course revolves around the analytical study and the residential areas' project. This field corresponds, in terms of scope, with what has been recently called the intermediate scale of urbanism, which is halfway between the broader territorial discourse and the narrower focus associated with urban design and the urban planning project.

The training in this thematic area is specified by the development of a project in consecutive phases or, possibly, several projects, whose content will be adjusted to the traditional content of urban projects: use and study of canonical models, implementation of the definition of the basic geometrical parameters of the buildings (volumes, traces, dimensions...), definition of the system of public spaces and, finally, approximation to the administrative parameters that provide a legal framework for the project. The course is completed with a series of lectures and/or presentations of topics, which include the implementation of principles and ideas that are part of the cultural wealth of the subject.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. 1. TA1. THE URBAN PROJECT- ANALYSIS AND PROJECT OF INTEGRATED RESIDENTIAL AREAS
2. 2. TA2. ROAD TRACKING AND EQUIPMENT-MODEL OF STRUCTURE
3. 3. TA3. BUILDING AND URBAN LAND
4. 4. TS1. ANALYSIS OF PROJECT REFERENCES. CASES STUDIES

4

COURSE DESCRIPTIVE TABLES OF 4th ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
COM	Architectural Composition		13390
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
4º	B	Compulsory	4,5 credits = 2,5 (TA) + 2 (PL)
Course Director:		**Department:**	
Vegas López-Manzanares, Fernando		ARCHITECTONICAL COMPOSITION	

II. GENERAL DESCRIPTION OF THE SUBJECT:

Architectural Composition provides students with a methodology to approach the critical analysis and architectural creation. Its objectives are to stimulate critical capacity by deepening the knowledge of the architecture of the 20th century, providing the student with transversal analysis tools and the ability to perform a creative synthesis for the project. Therefore it structures its thematic units in two sections: the first section is based on the compositional methods and architectural options and the second one on the different dimensions of architecture: place, function, geometry, structure, shape, space, route, light and materiality.
Each of them is analyzed in a chronological and transversal manner, influencing its development. The objective is to train students to delve into the project mechanisms that lie behind the will of the creator. The subject also includes a process of cognitive research that extracts methodologies, theories, forms, techniques and solutions related to history, uses them respecting their original context and inserts them in a specific disciplinary plane typical of the creative act.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Historical composition methods
2. Composition as a method
3. Cultural context and architectural trends
4. The concept of place
5. Function
6. Geometry
7. The structure as a means of formal expression
8. Form. Mechanisms of ideation of the form
9. Space
10. The space-time relationship. The route
11. Natural light as a mechanism of creation
12. Materiality and perception

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
CT2	Construction 2		13399
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Compulsory	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:

Construction II is an annual subject of the fourth year of the Architect Degree. It is the last dedicated subject of architectural construction. Even though in the fifth year they have Construction III, the subject is oriented to the study of concrete structures.

The main objective of Construction II is to make the students to achieve the necessary specific theoretical knowledge and skill practice to deal with security resolutions and constructive design of any architectural project. Therefore, the intention is to contribute to the future architects giving them indispensable tools to be competent to build from the most initial phases of the project.

According to the department of Architectural Constructions the teaching of Construction II its complemented by Construction I. Both subjects study the elements and the construction systems involved in architecture but, while Construction I gets more focused on the more common processes and techniques, Construction II gives constructive solutions more advance technologically, industrially and more specific.

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.**

PRACTICAL BLOCK 4.- SAFETY AND HEALTH IN THE CONSTRUCTION

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IAH	Hygrothermal Conditioning		13403
			Study Plan:
			178 (2015
Course:	***Semester:***	***Status:***	***Credits:***
4º	B	Compulsory	4,5 credits = 2,3 (TA) + 2,2 (PL)
Director of the Course:		***Department:***	
Vicente Valiente, Vicente De		Architectural constructions	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject teaches students to: conceive, design, integrate and execute the basic facilities of their buildings.
Specifically, it is intended that students are able, by themselves, to insert 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 insulation, calculation of transmittances, thermal balance, design and calculation of heating and air conditioning installations.

Each installation is analysed in three areas: first, it delves into the general aspects of the installation and typologies; secondly, it provides an approach to the knowledge of the basic devices of the installation and, thirdly, it addresses the design and sizing

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. HEATING SYATEMS.
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 AIR CONDITIONING SYSTEMS. INDIVIDUAL SYSTEMS AND CENTRALISED SYSTEMS.
7. DESIGN AND CALCULATION OF THERMAL CONDITIONING INSTALLATIONS IN SUMMER.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IHI	Hydraulic Installations		13402
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A	Compulsory	4,5 credits = 2,3 (TA) + 2,2 (PL)
Director of the Course:		***Department:***	
Montero Delgado, Luís Miguel		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:***
PR4	Architectural Projects 4 (Design Studio)		13383 ***Study Plan:*** 178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
4º	A-B	Compulsory	15 credits = 7,5 (TA) + 7,5 (PL)
Director of the Course:			***Department:***
Gallud Martínez, Antonio			Architectural projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

It approaches the architectural project from its concept, idea and expression and allows, from premises and definition of objectives, to organise and develop project proposals that satisfy certain functional, technical, cultural, aesthetic and environment related requirements, in the context suggested and from the understanding of the social function of architects and the responsibility of their projects.

It will be necessary to determine the tools and procedures for the representation and implementation of such proposals throughout the project, 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.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
ST2	Structural Design II		13406
			Curriculum:
			178 (2015)
Curriculum year:	***Semester:***	***Status:***	***ECTS:***
4º	A+B	Compulsory	9 credits = 5,0 (TA) + 3,0 (PA) + 1,0 (PI)
Coordinator:			***Department:***
Luisa Basset Salom			Continuum Mechanics and Theory of Structures

II. GENERAL DESCRIPTION OF THE COURSE:

The course of Structures II is part of the second term of the Architect Degree. It has the responsibility of analysing structures in coordination with structural design, quality control and building structures pathologies.

The analysis of structures consolidates the knowledge of the Strength of Materials and the Theory of Beams taught in Structures I. It studies the safety of the structure and all its elements against the ultimate and service limit states called, as a consequence, respectively, of the different actions and the possible damages that it may suffer during life.

The student has to achieve necessary knowledge to evaluate an alternative design of the structure, estimate their forces and relevant types of load cases, pre-schedule necessary sections, apply different calculation methods depending on the situation, obtain the stress of the structural elements and movements of the structure as a whole, and finalise with minimal notions of constructive details of the structural elements.

III. ORGANIZATION OF THE COURSE UNITS :

1. BASES OF STRUCTURAL DESIGN:
    - 1.1. Characteristics of the project and evaluation of alternatives
    - 1.2. Actions. Materials
    - 1.3. Structural safety

2. FUNDAMENTALS OF STRUCTURAL ANALYSIS:
    - 2.1. Elements that define calculations: Geometry, Kinematic and Behaviour. Underlying classifications
    - 2.2. Fundamental hypothesis of the work. Real and simplified models. Complex structures

3. STRUCTURAL DIVERSITY:
    - 3.1. Static and kinematic grades of indeterminacy. Underlying relations
    - 3.2. Strength and movement threshold. Appropriate metrology of calculation

4. ISOSTATIC STRUCTURES:
    - 4.1. Isostatic calculations. Equilibrium of nodes and bars
    - 4.2. Evaluation of results and pre-schedule of elements
    - 4.3. Kinematic calculations of isostatic structures
    - 4.4. Kinematic configuration
    - 4.5. Evaluation of results. Re-schedule

5. HYPERSTATIC STRUCTURES:

5.1. Basic needs for calculations. Equilibrium, compatibility and behaviour

5.2. Approximate pre-schedule of elements

6. ENERGY METHODS:

6.1. Work and Energy concepts

6.2. Work of the external forces, elastic work and additional work

6.3. Deformation energy

6.4. Principle of Energy Conservation. Structural applications

7. VIRTUAL WORKS:

7.1. Virtual work concept

7.2. Principle of the virtual forces and the flexibility method

7.3. Principle of the virtual movement and the rigid method

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
TAR	Theory of Architecture		13389
			Study Plan:
			178 (2015)
Course:	**Semester:**	**Status:**	**Credits:**
4º	A	Compulsory	4,5 credits = 2 (TA) + 2,5 (PL)
Director of the Course:			**Department:**
Poyatos Sebastian, Javier			Architectonical Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The agenda includes the study of the Theory of Architecture from classical antiquity to the present day, with special focus on the 20th century and the present, seeking a theoretical foundation useful for 21st century architecture based on the multiple perspectives that history provides.
The most relevant theoretical texts, in their cultural context, are analysed for a better understanding of the architectural style of each period and to extract concepts for modern consideration purposes.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. THE CLASSICAL THEORY
1. Vitruvio
2. Alberti
3. Palladio

2. THE ILLUSTRATION
1. Boullée and Ledoux
2. Durand

3. ROMANTICISM
1. Viollet-le-Duc
2. Ruskin

4. THE PIONEERS OF MODERNITY
1. Loos
2. The Deutscher Werkbund
3. Futurism, De Stijl, Constructivism

5. THE MODERNITY AND THEIR TEACHERS
1. Wright
2. Gropius and Mies

3. Le Corbusier
4. Aalto

6. CONTEMPORANITY
1. First Crisis of Modernity: Team X and Postwar Italy
2. Kahn, Venturi, Rossi and postmodernity
3. Deconstructivism and Minimalism: Eisenman and Pawson
4. New Sensoriality: Pallasmaa and Zumthor. Balance for today and tomorrow

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URB 3	Urbanism		13394
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
4	A-B	Compulsory	9 credits = 4,6 (TA) + 4,4 (PL)
Course Director:		***Department:***	
Insausti Machinandiarena, Pilar		Urban Planning	

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 areas. Forms of settlement and environmental criteria.
1.3 Territory and landscape recycling. 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: urban planning 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. Territory and landscape recycling. 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: urban planning and landscaping projects.

5

DESCRIPTIVE TABLES OF MANDATORY COURSES OF 5th ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
AL	Architectural and urban Regulations		13395 ***Study Plan:*** 178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	b	Compulsory	7,5 credits = 3,8 (TA) + 3,7 (PL)
Director of the Course:		***Department:***	
Segura Gomis, Luís		Urban Planning	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject is the link with the legal conditions that regulate the profession and serves a multiple purpose:

1. to offer students 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 of processes for the achievement of the building permit

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Architecture Law
   1. Legal framework
   2. Royalties and their regulation
   3. Limited Royalties and their Civil Regulation
   4. Limited Royalties and their Administrative Regulation
   5. Horizontal Property
   6. The Contracting of Work
   7. Public Administration in the control and promotion of housing
   8. Other Civil and Administrative Regulations Concerning Professional Performance

2. Land Planning Legislation
   1. Legal framework of urban planning. Land tenure regime
   2. Urban planning techniques. 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 Preparation of Development Planning
   6. General Plan. Development of 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 usability of 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 Capitalisation 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:***
CT3	Construction 3		13400
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5	A-B	Compulsory	9 credits = 5 (TA) + 4 (PL)
Course Director:		***Department:***	
Pereperez Ventura, Bernardo		Architectural constructions	

II. GENERAL DESCRIPTION OF THE SUBJECT:

Construction III is a monographic course on structural concrete. This is the case since the creation of the E.T.S. of Architecture of Valencia, beings one of the most characteristic features of the same, imitated by other centres in recent years.

Given the accelerated growth of technical and scientific knowledge, rather impressive in the field of concrete constructions, teaching the subject as a monographic course is the most effective way to optimise the limited time available, to facilitate the coordination between subjects and enhancing student learning.

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

1. Materials, durability, implementation 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 concrete
    3. Deformability of concrete
    4. Mechanical Properties of Concrete
    5. Tests of hardened concrete
    6. Armours
    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 organisation of structural elements
    14. Pathology of reinforced concrete constructions.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MSU	Soil Mechanics and Foundations		13408
			Study Plan: 178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	B	Compulsory	4,5 credits = 2,25 (TA) + 2,25 (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's response to the activities related to 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. Students must be able to design a foundation with a few minimum conditions.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

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.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PR5	Architectural Projects 5 (Design Studio)		13384 ***Study Plan:*** 178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A-B	Compulsory	15 credits = 7,5 (TA) + 7,5 (PL)
Director of the Course:			***Department:***
Gómez Alfonso, Carlos José			Architectural projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

Projects 5 is the fourth Architectural Projects Department core course which the Architecture student studies. It is an annual course and it takes place during the ninth and tenth semesters of the Architecture Studies.

The teaching of the Architectural Projects Department core subjects is coordinated by its Talleres: Taller 1, Taller 2, Taller 3, Taller H, Taller 5, Taller A and Taller 4. These are in charge of assuring a structured and complete teaching in the knowledge area.

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 requirements such as function, technique, culture, aesthetic and environment relationship, 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.

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 Restoration		11391
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	A	Compulsory	4,5 credits = 2,5 (TA) + 2 (PL)
Director of the Course:			***Department:***
Mileto, Camilla			Architectural Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

The main objective of Architectural Preservation is to train students to devise and develop a conservation, restoration or rehabilitation project of the architectural heritage, as well as to train them to study the value of historical buildings, to assess their state of conservation for their protection, conservation or restoration; as well as the analysis and criticism of any intervention in the same. The students will understand the historical and current restoration theories and the methodological knowledge for its implementation in the analysis of interventions and in the adoption of criteria for the restoration project. The students will solve heritage related questions on previous studies and its implementation in the project. For this purpose, the subject has two theoretical parts, one destined to the history of restoration theories and another which aims to provide a methodology of analysis and intervention linked to practice. Both shall train the student in analysis, criticism and creativity skills.

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 creation of the heritage culture until the 18th century
2. The beginnings of restoration in Italy and archaeological restoration
3. The beginnings of restoration in France and the restoration in the Viollet-le-Duc style
4. The Basics of Preservation 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 post-war 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
6. Protection and lack of protection of historic centers

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
STR3	Structural Design 3		13407 **Study Plan:** 178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5º	A	Compulsary	4,5 credits = 2, 5 (TA) + 2 (PL)
Course Director:			**Department:**
Pardo Ros, José Luís			MECHANICS OF CONTINUOUS MEDIA AND THEORY OF STRUCTURES

II. GENERAL DESCRIPTION OF THE SUBJECT:

Study of 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: multi-floor with slabs. Imperfections, bracing and translationality

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

6- Bars: supports. Types 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. Regulations. Essays. Type and grade. Commercial products

2. Actions and their combinations

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

4. Porticos. Typology: multi-floor

5. Porticos. Typology: industrial warehouse. 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:***
TFG	Bachelor's Degree Final Project		13409
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	B	Compulsory	6 créditos = 3 (TA) + 3 (PL)
Director of the Course:			***Department:***
Sentieri Omarrementería, Carla			

II. GENERAL DESCRIPTION OF THE SUBJECT:

The Bachelor's Degree Final Project in Fundamentals of Architecture (hereinafter TFG) is the final work of the degree. It consists on the preparation, presentation and defense before a university court of an original academic work done individually and related to any of the disciplines studied during the degree.

To do this, the student must carry out a work or original project in which there remain technical knowledge, skills and competences acquired in the length of studies of the degree and, in particular, the competences associated with this matter.

With an assignment of 6 ECTS, the TFG is a work that has to be developed with autonomy by the student under the supervision of an academic tutor, or two co-tutors. So, being the method strictly tutorial, there is no specific teaching of this subject.

At the time of selecting subject and tutor, students can choose between two modalities:
A. Public Auction. The student who chooses this method has a list of works of each departments. The student will have to select in the Ebrón computer application those in which he is interested and order them according to his preference. The works will be assigned in order of registration. All this process will be carried out during the first semester, so that in the second semester the student has already assigned the work and the tutor.
B. By agreement. The student who chooses this method must make contact to a professor of the degree, propose a work theme and request him to be his tutor. If the professor accepts, all data will be entered into the computer system. Obviously the subject can not be any of the offered for the public auction.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

5

DESCRIPTIVE TABLES OF ELECTIVE COURSES OF 5th ACADEMIC YEAR

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TMAD	Mathematical techniques for data analysis in architecture		13343 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:		***Department:***	
Calvo Roselló, Vicenta		Applied Mathematics	

II. GENERAL DESCRIPTION OF THE SUBJECT:

We live in a data-driven world, and decision-making, an important part of the job of an architect, depends, in the majority of cases, on a correct interpretation and presentation of this data. In this subject the following mathematical resources are provided in order to facilitate tasks which use or require statistical techniques:

Probability distribution. Statistical inference. Application in architecture.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

Unit 1: Notions of descriptive statistics and probability
Unit 2: Random variables
Unit 3: Probability distribution
Unit 4: Introduction to statistical inference. Confidence intervals. Hypothesis tests
Unit 5: Application to quality to control in Architecture
Unit 6: Computer data processing with Mathematica

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URMA	The urbanism of mathematics		13344 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Trujillo Guillen, Macarena			Applied Mathematics

II. GENERAL DESCRIPTION OF THE SUBJECT:

The Architecture degree includes the study of both social and exact sciences without defining, to any precise degree, their compatibility. No subject can be studied in isolation in a degree. This would make little sense.

This subject is based on the link and relation between these two types of sciences and in particular between Mathematics and Urban Planning.

This course seeks to clearly set out the compatibility between these disciplines and highlight the ways in which they are complimentary, they are essential to each other and the way they are developed. Ultimately we are looking to improve the understanding of each one by way of knowledge of the other. By offering a mix of two classic disciplines from the architecture degree, we seek to explain, and that the students themselves discover, the common thread which justifies this, that the two disciplines are essential and have important connections.

Our society increasingly requires knowledge based on relations which are made clear by a multi-discipline approach which understands the close links between knowledge areas which are companions within the general scope of knowledge of the profession.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. General introduction
2. Concepts
   1. Geometry vs Representation
   2. Analysis vs change
   3. Algebra vs Structure
   4. Statistics vs Data
3. Dichotomies
   1. Social vs Exact
   2. Agreement vs Result
   3. Ideology vs Methodology
   4. Realism vs Abstraction
   5. Change vs Permanence

Diagonal learning

1. Superimpositions
2. Relationships
3. Intersections
4. Conclusion

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
ACAU	Architectural and urban acoustics		13345
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			**Department:**
Llopis Reyna, Ana			Applied Physics

II. GENERAL DESCRIPTION OF THE SUBJECT:

In recent years public demand for acoustic comfort has led to the inclusion of subjects related to the study of noise, both on the inside and outside of buildings as part of the study plans for Architecture and Engineering courses. Architectural acoustics is the aspect of acoustics whose aim is the achievement of suitable acoustic comfort in diverse living spaces. This comfort implies protection from undesirable sounds (CT-HR Spanish Technical Building Code in its HR section "noise protection") and at the same time, the acoustic design and conditioning of spaces in order that the activities they are designed and built for may be carried out correctly.
In accordance with which, the content of this subject together with aspects studied in the core subject of Physics for conditioning of environments, seeks to cover the following:
Knowledge of techniques for the analysis of auditoria.
Intervention techniques associated with environmental and urban acoustics.
Design and calculation of sound insulation and conditioning of spaces in the development of a project.

Techniques for lab testing materials and building solutions and on site tests.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Acoustic conditioning
2. Urban acoustics
3. Acoustic insulation

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
CBDA	Bioclimatic Criteria in Architectural Design		13346
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Carrión Mondéjar, Juan Carlos			Applied Physics

II. GENERAL DESCRIPTION OF THE SUBJECT:

Objetives: Knowledge of and ability to apply techniques associated with bioclimatic architecture in the building process.
Chapter 1: Design guidelines in bioclimatic, sustainable and sanitary architecture.
Chapter 2: Sunlight and Solar Radiation
Chapter 3: Heat transfer. CTE-DB-HE
Chapter 4: Lighting
Chapter 5: Architectural types, climate and modes of living
Chapter 6: Preliminary dimensioning of sanitary hot water installations

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Design guidelines in bioclimatic, sustainable and sanitary architecture
2. Sunlight and Solar Radiation
3. Heat transfer
4. Lighting
5. Architectural types, climate and modes of living
6. Preliminary dimensioning of sanitary hot water installations

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
ADEE	Dynamic actions in building. Design strategies		13347
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
García Blanquer, José Vicente			Applied Physics

II. GENERAL DESCRIPTION OF THE SUBJECT:

According to current trends in education, the student and soon-to-be young professional tends to consider anti-seismic design as an eminently mathematical process of modelling and analysis, and tends to rely excessively on the results of computer-based calculations. Frequently forgotten, is the creative aspect which should prevail in Architecture, or not enough importance is given to the conception of the most reliable and efficient system for resistance against the stress induced by dynamic actions in general, and seismic actions in particular. Added to this is the scarce use of new anti-seismic techniques of insulation and shock absorption.

This subject develops the conceptual aspect of anti-seismic systems and highlights the structural criteria and constructive detail, giving the student the ability to divine the seismic behaviour of a structure, criteria for selecting the most efficient and economical structural system and the expertise necessary to combine and satisfy functional and structural architectural requirements.

An added objective is that of identifying the most relevant directives for the consideration of an anti-seismic strategy in the project of structures which make up part of a new build.

The previous considerations may be summarised as follows:
- The conceptual aspect of the structuration of anti-seismic buildings must prevail over mathematical formulae and numeric analysis.
- The intuitive perception of the seismic behaviour of buildings is fundamental in order to be able to conceive a structure capable of resisting the stress imposed by violent earth movements.
-Knowledge and the viability of use of techniques and innovative tools that go beyond the strict application of the Standards in use.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1.Behaviour of structures faced with dynamic actions
2. Conceptual anti-seismic design of buildings
3. Anti-seismic strategies in constructions of new floors and historic buildings
4. Application of the Spanish and European regulations to the planning of anti-seismic structures
5. Innovative shock absorption and insulation systems against dynamic actions
6. Anti-seismic protection of non-structural elements
7. Wind action on singular structures

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
AGPE	Graphical surveying of built heritage		13348
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Capilla Tamborero, Esther			Graphic Expression in Architecture

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject develops the concepts, criteria and objectives set out in the Relief Map (Rome 2000) and the preparatory Document for the same (Naples, 1999), and its own definition of Graphical Survey:"(...) the research actions and operations put into practice in order to determine the significant characteristics – morphological, dimensional, figurative and technological- of a built structure or an urban architectural group, in order to assess and research it, with the aim of constructing a simplified three-dimensional model, through which we are able to analyse the building. In this way, facilitating the interpretation of the phases of its transformation and diverse aspects as regards its most representative themes. (...)"
The aims are those set out in the Relief Map. Amongst which we would highlight that of " Reconstruction based on a complex research process (from a planimetric, historical-critical, archivist, bibliographic, technical and technological point of view), the criteria, procedures and the rhythm to which the various stages of building were carried out over time " (Relief Map, Rome 2000).
The following didactic units are programmed:
1.The History of Architectural Surveys
2. The relation between historical architecture and geometric patterns
3.The mission of a graphical survey
4. Survey methods and measurement systems
5. Direct or traditional measurement in relation to current measurement systems.
6. Graphical survey as a "reading" of the building
7. Graphical surveying of built heritage
8. The survey project
BASIC BIBLIOGRAPHY:
-RELIEF MAP.Rome.2000
- Almagro Gorbea,A;Levantamiento Arquitectónico.Ed.Universidad de Granada.Granada 2004
- Jiménez Martín,A.;Pinto Puerto, F;Levantamiento y Análisis de Edificios;Tradición y Futuro.Ed.Universidad de Sevilla.Sevilla 2003
- Docci,M. y Maestri,D.;Manuale di rilevamento architettonico e urbano. Ed.Laterza.Roma,1994

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1.The History of Architectural Surveys
2. The relation between historical architecture and geometric patterns
3.The mission of a graphical survey
4. Survey methods and measurement systems
5. Direct or traditional measurement in relation to current measurement systems.
6. Graphical survey as a "reading" of the building
7. Graphical surveying of built heritage
8. The survey project

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
FVA	Architectural Visualization and Computer Processing		13349
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	B	Elective	4,5 créditos = 2,25 (TA) + 2,25 (PL)
Director of the Course:			***Department:***
Santonja Llabata, Alfredo			Graphic Expression in Architecture

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject´s aim is to teach the common methods in professional offices for the development of projects and virtual images, as well as the computer applications that are used for it.

There are three aspects to focus on: the modeling through different programs, such as BIM; the subsequent rendering involving the application of materials on surfaces.; and finally, the last phase of postproduction in which Photo retouching achieves the desired virtual recreation of the architectural model.

In order to achieve this process, the course consists in a group and an individual model, with a weightof 30 and 60% respectively in the final grade, plus a remaining 10% dedicated to adjacent aspects tothe course.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

Review of geometric modeling techniques and parametric design.

Techniques of visual simulation of materials

Techniques of visual simulation of lighting.

Representation through the rendering of architectural models

Postproduction. Digital Image Processing

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TGGF	Graphic Skills for Complex Form Generation		13350
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:		***Department:***	
Molina Siles, Pedro Javier		Graphic Expression in Architecture	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The GRAPHIC SKILLS FOR COMPLEX FORM GENERATION SUBJECT aims to train the student in computer 3D modelling techniques for complex parametric geometries, and also the printing of these using 3D printers. The subject will enable the student to carry out parametric designs in any facet within the scope of the profession and to visually programme different constructive systems later to be applied to any reference in the drawing . In order to carry out this training, state of the art digital tools will be used, such as RHINOCEROS 3D and GRASSHOPPER (algorithmic graphic editor closely integrated in Rhinoceros and in its modelling tools) and 3D printers.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Parametric design and its representation
   1. Origins and evolution of parametric design
   2. Parametric design in different disciplines: algorithmic art, music, literature, fashion, generative logos, architecture and product design
2. 3D modelling using RHINOCEROS 3D and GRASSHOPPER digital tools.
   1. Rhinoceros: 1. Advanced modelling techniques. 2. Creation of curves. 3. Generation and continuity of surfaces 4. Advanced techniques for surfaces : flow by surface, curve and contour
   2. Grasshopper: 1. Parameters. 2. Components: Maths, Sets, Vector, Curve, Surface, Mesh, Intersect, Transform and Display
3. Use of the VRAY motor render for Rhinoceros
   1. Application and materials
   2. Lighting and Vray cameras
   3. Vray rendering
4. Introduction to the generation of models using 3D printers
   1. Laser cutters
   2. Powder compaction 3D printer
   3. RepRap (Prusa)
5. Construction of real models using 3D printers
   1. creation of GENERATION pieces (Grasshopper plug-in)
   2. Cutting and assembly

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
PACP	Architectural, city and landscape Project. Sustainable habitat		13351
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director			**Department:**
Moreno Seguí, Juan María			Architectural Projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject is framed by a set of skills and knowledge related to the architectural project and at each or some of the scales at which this is developed.
The general aim of the subject is to delve deeply into the knowledge of the discipline of the project paying special attention to aspects concerned with sustainability and shaping the sensibility in one of those in particular:
The poetry of light

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. The relationship between architecture and light (A - L) in the project
2. A look at the history of contributions to the A-L sphere from different cultures
3. The skylight
4. A – L perceptions
5. Search and analysis of A - L mechanisms

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
MAPA	Architectural Project Implementation		13352
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Mas Llorens, Vicente			Architectural Projects

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject seeks to introduce the student to the material properties of reinforced concrete as seen in the project and constructive stage of the building. The students will plan and construct a model of a building in white concrete.
The pieces must comply with certain given conditions of scale (1/100), volume (maximum 1m3) and weight (100kg).
The material appears in the project from its conception. Its condition as a fluid, its resistance and its density determine the shape. The material requires the design of the mould for the pieces. Its outward appearance, its assembly, its behaviour during the pouring and its disassembly are all considered.
We work with a material that is poured into a mould, designed to imprint on the piece the shape that has been imagined ; so what we see now is the result of work which is largely unseen.
Working with just one material requires meticulous and careful work on the texture in order to provide the piece with scale and expression. This results in a wide variety of high quality formal solutions, which mean that the students feel proud of their first constructed work.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Theoretical and technical basis
2. Planning
3. Research and project
4. Testing results.

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
CEP	Project Criticism and Strategies		13353
			Study Plan:
			178 (2015)
Course:	**Semester:**	**Status:**	**Credits:**
5º	B	Elective	4,5 créditos = 2,25 (TA) + 2,25 (PL)
Director of the Course:			**Department:**
García Martínez, Mónica			ARCHITECTURAL PROJECTS

II. GENERAL DESCRIPTION OF THE SUBJECT:

The fundamental pedagogical objective of the course is, from the practice of the project, to questioning the relation between Art and Architecture, its insertion in the urban reality and the impact in the social space.

It is therefore essential to choose a non-abstract context of the city as a research laboratory. Limits will also be established in such a way that the work delves into characteristic fragment of the urban reality.

Another key issue is the need to re-learn what things are by taking direct samples of reality and gathering urban stories about the site. This resembles to archeology, a sort of archeology of the present.

Finally, the real project, intervention or temporary construction will be approached. It will arise precisely from the previous knowledge and commitment up to a concrete urban context.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

CRITICAL POSITIONING. RELATIONS BETWEEN ART AND ARCHITECTURE FROM MODERN TRADITION TO CONTEMPORARY MOMENT.

STRATEGIES IN THE PRODUCTION OF CONTEMPORARY ARTISTS AND ARCHITECTS IN THE PUBLIC SPACE.

CONSTRUCTION OF THOUGHT. REAL INTERVENTION IN THE PUBLIC SPACE.

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
ARHV	Historical Valencian Architecture		13354
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			**Department:**
García Ros, Vicente			Architectural Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

Historical Valencian Architecture from Romanisation up until the C19th. A study of architects, periods, trends and buildings.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. ARCHITECTURAL TRACES OF ROMANISATION
2. PRIMITIVE CHRISTIAN AND THE VISIGOD PERIOD
3. THE MUSLIM INHERITANCE
4. LATE MIDDLE AGES AND VALENCIA'S GOLDEN AGE
5. VALENCIAN RENNAISSANCE ARCHITECTURE
6. VALENCIAN BARROQUE ARCHITECTURE
7. VALENCIAN ACADEMICIST ARCHITECTURE
8. VALENCIAN ECLECTICISM

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
COAT	Atmospheres Composition		13355
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:		***Department:***	
Guimaraens Igual, Guillermo		Architectural Composition	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject seeks to increase the student's awareness of the creative activity of architecture from the point of view of conceptual development and, in particular, knowledge of the inhabitant. At the same time, we will deal with parameters which are not frequently tackled during the project process. Our aim is to not only broaden the creative horizons of the student, but also to foster the connection of the architecture student with a whole spectrum of professional fields, which are sometimes elusive to them, and within which the architect may open up a new path , with the support of one of the principal specialities of their field: creativity. We refer here to fields such as music, cinema, literature, design, landscape ... The subject does not only deal with these fields from a theoretical point of view, but also, when practical application arises, it reveals how all of these things come together in the generation of architectural atmospheres.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. On atmospheres: perceptive notions of certainty and delirium
2. On the inhabitant who will take ownership of the atmosphere
3. On space as a living experience, physical reality concept and memory
4. On the satisfying of needs
5. On the movement of one and another
6. On nature which wants to be architecture
7. On adored , hated or ignored objects
8. On light in which the forms are bathed
9. On the taste which impregnates the atmosphere
10. On sound sonority
11. On atmospheric melodies
12. On dressing the space
13. On drawing the atmosphere

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TPCV	Wefts and profiles in visual culture		13356 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Bonet Solves, Victoria Eugenia			Architectural Composition

II. GENERAL DESCRIPTION OF THE SUBJECT:

Today's society is submerged in a visual reality which means that interesting experiences with clear cultural content are reflected in very diverse ways through different disciplines. Not only does this allow us to weave fruitful relationships between different areas of study and professions, but it also leads to the analysis of these fields from new perspectives, which are adapted to a new way of generating knowledge and creativity. Architecture, design, urban planning, art, photography, cinema, digital multimedia, advertising, internet as a visual platform, social networks, television, fashion, software design, amongst others, come together in this fresh new cultural framework and display profiles which are open and intrinsically adapted to a new society.

The subject, with its discourse adapted to today's visual world, seeks to demonstrate to the architecture student that the discipline for which they are training may be studied by way of "threads" which weave an ever more creative cloth, new ways of reflection and analysis of architecture which propose new ways of looking at it. Amongst the themes that will be studied, we will examine the complex and diverse ways of looking at visual culture, architecture and domestic interiors in paintings and the cinema, the construction of " reality" in diverse representation media, like photography and links between literature and the visual arts

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. 'Look at the birdie'. Introduction to visual culture
2. 'Come and see the flat'. Architecture and interior design in two dimensions
3. 'Mirror, mirror on the wall'. Framing reality and fiction
4. 'Once upon a time there was a painting'. Visual connections in art

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TPUT	Workshop on urban planning, territory and landscape		13357
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Alonso Salvador, Matilde			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

This subject looks at practical experimentation in the area of urban planning, territory and landscape, as established in the study programme. It is set up as a workshop, focussing on the carrying out of a practical project assignment in small groups of students, under the guidance of the subject teacher(s).

The workshop sessions start with a number of introductory classes which will facilitate the project phase. Processes of working in a team will be fostered in the workshop; the critical discussion will be through the basis of debate and the ordered pooling of ideas and objectives, which will be transformed into the project strategy. The constant sharing of different stages of the work will be carried out through the development of structural frameworks and the detailed formalisation of the project.

One or several visits related to the work area will be considered, and also , eventually, to other significant urban works related to the topic of the workshop.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Territorial and Urban analysis. Potentialities and critical aspects
2. Introduction to the topic. Current related issues
3. Project reference study
4. Development of action strategy. Viability and implementation

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
URSO	Sustainable Urban Planning		13358
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2-25 (PL)
Course Dirctor:			***Department:***
Calvo Roselló, Vicenta			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

The course seeks to develop and instil aptitudes and knowledge in the students as regards the following:

Knowledge related to the current transformation of urban territory with special attention paid to problems related to land and urban sustainability.

Knowledge of the principles contained in the criteria, instruments and experiences concerned in the improvement of sustainability as applied to urban planning, environment and landscape.

Capacity for the creation of intervention proposals and projects in urban areas and their surroundings from the perspective of sustainable urban planning, by way of:

- Analysis and diagnosis of quality and levels of sustainability in a work context.
- Development of proposals to different scales, from land development to urban development, in which different social, environmental, economic and cultural aspects come together to make up the substance of sustainability.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Transformation of urban land
   1. Environmental and landscape elements in urban systems
   2. Growth processes and structural urban elements
   3. Public space as a way of reorganising urban transformation.
2. Sustainability criteria applied to urban planning.
   1. Basic concepts of land and urban sustainability.
   2. Sustainability and mobility.
   3. Environmental resources and Green infrastructure
   4. Processes of regeneration and urban expansion.
   5. Sustainability criteria and indicators
3. Intervention instruments.
   1. Land and local planning.
   2. Urban projects of strategical value.
   3. Public programmes of intervention in the city.

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
AIUO	Software for urban and spatial planning		13366 **Study Plan:** 178 (2015)
Course:	**Semester:**	**Status:**	**Credits:**
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			**Department:**
Giménez Baldrés, Enrique Joaquín			Urbanism

II. GENERAL DESCRIPTION OF THE SUBJECT:

In recent years, the field of cartography and the graphical representation of the land and its cities has experienced a significant transformation through digital technology and the internet. The existence of graphical data storage banks (aerial photographs, thematic cartography, etc.) and alphanumeric data (information about land use, risks, etc.) provided by both public and private bodies, offers an important source of information for the carrying out of both professional work and research.

For the specific profile of the Architect, the recourse to tools which enable analysis and decision-making associated with the land where building work is to be carried out, make the provision of this optional subject necessary. The application of knowledge of different Territorial Information Systems (TIS) offered on the Net, with special reference to those of the Valencian Community, and their management through Geographical Information Systems (GIS), make this subject “eminently practical”, and provide a useful and state-of-the-art skill for Urban Planning and Architecture professionals.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction to cartography
    1. The world, the city and mapped territory
    2. The art and technique of cartography through the ages
    3. Nature and content of plans and maps
2. Scales, map precision and cartographic representation
    1. Sizes, scales and the precision of the human eye.
    2. Spatial reference systems. UTM projection.
    3. Representation of relief
    4. Cartographical generalisation
3. Cartographical repositories. Spatial data infrastructures.
    1. Spatial data infrastructures. INSPIRE Directive.
    2. Cartographical repositories. Metadata and the nature of its data.
    3. Geoportals and cartographical services. Land registry, TIS, SDI
4. Introduction to Geographical Information Systems
    1. What is GIS and what is it used for? Differences with CAD software.
    2. Basic operating environment with Arcgis desktop software
    3. Elaboration of thematic mapping and graphic output
5. Analysis of land suitability
    1. Definition of suitability, capacity and vulnerability
    2. Associated and general assessment of selected variables. Suitability matrix.
    3. Representation of results and critical analysis of methods
6. Multi-criteria analysis of urban and territorial themes.
    1. Definition of criteria. Factors and limiting factors.
    2. Common topological geo-processes in multi-criteria analysis.
    3. Representation of results and critical analysis of methods
7. Analysis with three-dimensional cartography
    1. Shadow maps, gradients, positioning
    2. Visibility analysis
    3. 3D modelling

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
DAAE	Advanced materials		13360
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Soriano Cubells, Mª Juana			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

Study of new materials for architectural construction. Fundamentals. Classification as regards different criteria of interest, raw materials and manufacturing techniques constitution, commercial formats , properties, uses, installation conditions, maintenance and durability. Regulation.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. INTRODUCTION TO ADVANCED MATERIALS
2. DESCRIPTIVE STUDY OF ADVANCED MATERIALS
    1. NEW NATURAL STONE AND CERAMIC PRODUCTS. TREATMENTS
    2. LATEST GENERATION GLASS
    3. MORTAR AND CONCRETE WIT NEW ATTRIBUTES
    4. NEW METALLIC PRODUCTS. ALLOYS.
    5. NATURAL AND ALTERED WOOD PRODUCTS
    6. PLASTIC MATERIALS. NEW POLYMERS.
    7. TEXTILES AND MEBRANES
    8. PAINT COATINGS. NEW TREATMENTS.
3. EFFICIENT, SUSTAINABLE AND RECYCLABLE MATERIALS.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TCEF	Building technology and energy efficiency		13361
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Canovés Valiente, Jacinto José			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject is comprised of two teaching units and another two practical blocks, which are interrelated as regards the curriculum.
The teaching units are dedicated to new builds and intervention on existing buildings. In each unit materials and constructive systems are studied which must be applied in order to reach maximum energy efficiency in the enclosure of façades and dividing walls, in roofing and the floor in contact with the terrain.
The two practical blocks focus on the application of the theoretical knowledge taught in relation to new builds and existing buildings.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Energy efficiency in façades.
    1. Exterior thermal insulation systems.
    2. Interior thermal insulation systems.
    3. Ventilated façades.
2. Energy efficiency in roofing.
    1. Green roofs.
    2. Roof reservoir tanks.
3. Practical blocks
    1. Phase A. Passive roof conditioning.
    2. Phase B. Passive conditioning of façades.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PTIP	Pathologies and intervention techniques in heritage		13362 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course director:			***Department:***
Llinares Millán, Jaime			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

This educational ideas behind this course arise from the analysis of the content of the Study Programme of the Architecture Degree at the Universidad Politécnica de Valencia. A Programme, which, from our point of view, lacks some practical training for the student in the area of Intervention techniques in Architectural Heritage .

In this sense, we can appreciate the existence of an excellent response from some departments in the School which, due to their nature, structure and content, compliment the content proposed here.

However, as is always the case, the real challenge for the teacher, is to find the best way to transmit knowledge. This is true in any field, but even more so in this case. This is due to the fact that teaching, in the case of the art of constructing and maintaining buildings, must take into consideration not only pragmatism and positive self-experience, but also the legacy of history.

In all of this, we take nothing away from the disciplines related to Architectural Construction, recognising the scientific nature of construction. Therein lies the reason for the existence of this subject: the study of the application of several different technologies applied to intervention in architectural heritage, given that this optional subject is firmly based on construction technology.

Applied science and technology, will be the basic pillars on which the students' learning will be based; without forgetting art, humanism and history -these are taken as fundamental references and principles-, which must infuse the eventual graduates in the carrying out of their future profession as an Architect.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction. Ethics and Architectural Heritage
2. Study and diagnosis
3. Identification of damage. Damage trees
4. Analysis. Lab and field tests
5. Intervention and specific treatment of damage. Seminars
6. Project management. The interdisciplinary discipline
7. Epilogue. Technical visits
8. Development of an intervention project.

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
DAAE	Advanced structural design and analysis		13363 **Study Plan:** 178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:		**Department:**	
Fenollosa Forner, Ernesto Jesús		Continuum Mechanics and Theory Of Structures	

II. GENERAL DESCRIPTION OF THE SUBJECT:

The aim of the subject is to provide the student with the information, guidelines, processes, tools and guidance necessary to enable them to tackle structural design, modelling, analysis and dimensioning and help them the form the foundation of their Final Degree Project .
Moreover, the work carried out in this subject is put forward as the base for continuing the development of those students who are interested in structural design and calculation and wish to present their Final Degree Project in this field.
Advanced structural analysis computer programmes are used as tools, based on numerical methods for finite elements.
The subject teaching sessions include the following areas:
1. Study of structural solutions for paradigmatic buildings, carried out by prestigious architects and engineers.
2. Development of structural models. Design and calculation tools. Critical review of results provided by the structural analysis programme .
3. Dimensioning, using specific tables and computer programmes, of singular structural elements.
4. Drawing up of graphical documents which make up the structural project: plans and construction details.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Basic concepts of structural calculation
2. Advances methods of analysis of structures and foundations
3. Development of structural models. Design and calculation tools
4. Application of the method finite elements
    1. Design and calculation of objects subject to bending
    2. Design and calculation of objects subject to flexo-compression
    3. Design and calculation of composite structures
5. Production of a structural project

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
TAES	Workshop on building structural systems and foundations		13364
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5º	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Gallardo Llopis, David			Continuum Mechanics and Theory of Structures

II. GENERAL DESCRIPTION OF THE SUBJECT:

The workshop on structures is a subject, which takes on the architectural project from the concept, idea and expression stage and enables the student , by way of some premises and definition of objectives, to organise and develop proposed projects which satisfy determinate functional, technical, cultural, aesthetic, and environmental demands and requirements in the proposed context, and from the understanding of the social function of the architect and their responsibility to the project.

Specifically, Workshop I on structures looks at the architectural project in a coordinated way between the conception and the material development of the project.

In its development it will count, from the beginning, on the available technologies as an integral part of the conception and putting into practice of the structural project.

Therefore, basic notions of calculation programmes are taught, which allow the student to model and analyse the different alternatives available in order to carry out the proposed structural project.

The objective is to give the student the ability to devise, design, model, analyse and test a structural project in a sufficiently complete way , and thus, they will be able to return to this knowledge for future academic and professional projects

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. INTRODUCTION
2. COMPUTER STRUCTURAL ANALYSIS IN BUILDING
3. PROJECT FOR THE REALISATION OF A STRUCTURE

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PARE	Pathologies and intervention techniques in heritage		13365 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Curse Director:		***Department:***	
Basset Salom, Luisa		Continuum Mechanics and Theory of Structures	

II. GENERAL DESCRIPTION OF THE SUBJECT:

In this subject the causes, diagnostic methods and rehabilitation of structural pathologies in buildings are explained.

In particular the study of existing buildings and also of pathologies in and rehabilitation of Masonry, Concrete, Wood, Steel and Foundations.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction. Existing buildings
2. Pathology and rehabilitation of masonry
3. Pathology and rehabilitation of steel
4. Pathology and rehabilitation of concrete
5. Pathology and rehabilitation of wood
6. Pathology and rehabilitation of foundations

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
ENRE	Renewable energies in building		13366
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Langa Sanchis, Jaime José			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

A run through the principal renewable energy technologies that may be implemented in an architectural project.
The student will study their basic concepts, rationale and limitations, learning their correct use in the carrying out of an architectural project.
Study will include clean energies originating from biomass, thermal solar power, photovoltaic solar power, wind and geothermic energy

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. THE PRESENT STATE OF ENERGY. PRODUCTION AND DISTRIBUTION.
2. BIOMASS
3. THERMAL SOLAR POWER
4. WIND POWER
5. PHOTOVOLTAIC
6. GEOTHERMIC
7. IMPLEMENTATION OF SYSTEMS IN BUILDINGS. TRANSVERSAL TECHNOLOGIES. POSIBILITY OF INSTALLATION.
8. TECHNICAL-ECONOMIC VIABILITY OF THE PROJECT.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
SSPR	Safety and protection systems		13367 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Martínez Antón, Alicia			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The subject complements knowledge connected with installations already acquired by the students in previous years, working specifically on the following objectives related to safety in buildings:
Description of the basic concepts of safety and protection systems in built spaces and installations.

Interpretation of the concept of prevention as a basis for the correct implementation of safety and protection systems.

Analysis of all implicit risks in architectural spaces, to be resolved using existing regulations , new technologies and new prevention materials, possible safety and operational problems, both intrinsic and extrinsic.

Assessment of the following aspects: general risks in installations and built spaces, electrical protection, atmospheric discharge protection systems, protection against intruders, fire protection.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Basic concepts and the fundamentals of the area of safety and protection of buildings, installations and the environment.
Governing regulations
2. Application of the Technical Building Code in the area of protection and safety.
3. Protection and safety in electrical installations.
4. Protection and safety relative to other installations.
5. Corrective and functional maintenance of the installations.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
PRIU	Urban conditioning and services project		13368 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th		Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Langa Sanchis, Jaime José			Architectural Constructions

II. GENERAL DESCRIPTION OF THE SUBJECT:

The study of the main technologies connected with the network of installations carried out in a city. The studies are carried out within the dynamics of the development of an entire urban project (memorandum, plans, measurements, budget, specification of conditions, complimentary technical annexes).

The student will learn the basic concepts of urban network design, its dimensioning, fundamentals and limitations, and its correct implementation in a urbanization project.

We will analyse networks for drinking water, urban sanitation in detail and also look at the remaining networks and services currently present in an urban setting (electrical grid, public lighting networks, telecommunications networks, gas, fibre optics, etc).

The concept of SMART GRIDS will be introduced. Cold-Hot distribution.

Energy saving. Energy efficiency. District Heating.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. DRINKING WATER NETWORKS. URBAN PROVISION
2. SANITATION NETWORKS. URBAN DRAIN NETWORKS.
3. MATERIALS FOR URBAN DEVELOPMENT AND INSTALLATIONS
4. ELECTRIC DISTRIBUTION GRIDS TRANSFORMERS.
5. PUBLIC LIGHTING NETWORK.
6.ENERGY EFFICIENCY. DISTRICT HEATING.

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
VEFP	Economic viability and project financing		13369 ***Study Plan:*** 178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	A	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			***Department:***
Llorca Ponce, Alicia			Business Organisation

II. GENERAL DESCRIPTION OF THE SUBJECT:

The objective of this subject is to analyse the project from its economic perspective. As part of the subject, the student will learn about and be able to perceive the complexity of the property and/or urban development process. The viability study of a project is an excellent instrument of planning and control and is essential for taking decisions on investment and production. The majority of property developments and architectural projects carry out viability studies, as they are an essential requirement for gaining financing. This subject looks at three aspects: Commercial viability, economic viability and financing a project.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction to the economic viability of projects.
   1. The economic-financial viability study: definition, objectives and content
   2. The property development process: activities and agents involved
2. Commercial viability study
   1. The content of market research in the property sector
   2. Market research conclusions and project definition
3. Economic-financial viability
   1. Time planning
   2. Economic planning: assessment of income and costs of a development
   3. Financial planning and cash-flow
   4. Profitability analysis
   5.Risk assessment and sensitivity study
4. Project financing
   1. Traditional sources of finance in the property sector
   2. Other sources of finance for projects

I. GENERAL DATA:			
Acronym:	**Subject:**		**Code:**
APVP	Measurements, budgets and Project assessment		13370
			Study Plan:
			178 (2015)
Year:	**Semester:**	**Status:**	**Credits:**
5th	B	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:			**Department:**
Sendra Mengual, Luís Miguel			Business Organisation

II. GENERAL DESCRIPTION OF THE SUBJECT:

In today's world, the assessment of the work carried out by the architect and the professional activity involved goes beyond merely the architectural project. The influence of the economic situation on our sector affects our professional activity. Knowledge of the whole spectrum of factors, which revolve around this activity, is essential and this is what we seek to foster in our students.
The subject includes the following:
- Turn-key operations: definition and models
- Market Analysis. Application of income update and comparison assessment methods.
- Process planning
- Drawing up of budget
- Regulation and licensing, levies and taxes
- Investment and analysis and asset optimisation.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1.-Identification of the process
2.-Analysis of location
3.-Analysis of environment
4.-Market study
5.-Analysis of process
6.-Process memorandum
7.- Qualities memorandum: Measurements
8.-Process budget
9.-Indirect costs analysis and commercialisation
10.-Financial costs
11.-Project assessment
12.-Conclusions

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
DSEM	Sustainable development and environmental economics		13371
			Study Plan:
			178 (2015)
Year:	***Semester:***	***Status:***	***Credits:***
5th	a	Elective	4.5credits = 2.25 (TA) + 2.25 (PL)
Course Director:		***Department:***	
Llorca Ponce, Alicia		Business Organisation	

II. GENERAL DESCRIPTION OF THE SUBJECT:

This subject provides the student with the necessary analytical tools to enable them to attain a deep understanding of the sustainable development paradigm, and its implications on the way we perceive and confront the processes of development and growth. Amongst which, of course, are those related to processes of intervention on land, be it at a regional, urban or even neighbourhood level.

The achievement of these objectives will imply the student's introduction to tools and knowledge related to the environmental economy and the management of environmental problems.

Lastly, we look at the foundations on which a sustainable urban model is based, by way of its three pillars: social, economic and environmental sustainability. Throughout the course, we will apply the tools acquired to the case studies and models of land and urban sustainability, which tackle questions such as urban regeneration and mobility, amongst others.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. Introduction
    1. Economic growth, environment and sustainable development
    2. Economic system, functioning of markets and effects on the environment
2. Environmental economy and natural resources
    1. Market errors and state intervention. The social and private cost
    2. Introduction to monetary assessment of the environment
3. Environmental economy and natural resources
    1. Social and cultural sustainability
    2. Economic sustainability
    3. Environmental sustainability
4. Environmental economy and natural resources
    1. Urban regeneration
    2. Mobility
    3. Social and labour inclusion, others...

I. GENERAL DATA:			
Acronym:	***Subject:***		***Code:***
IAA	English Applied to Architecture		13340
			Study Plan:
			178 (2015)
Course:	***Semester:***	***Status:***	***Credits:***
5º	AB	Elective	4,5 créditos = 2,25 (TA) + 2,25 (PL)
Director of the Course:			***Department:***
Andreu Andrés, Mª Angeles			APPLIED LINGUISTICS

II. GENERAL DESCRIPTION OF THE SUBJECT:

Within the Common European Framework of Reference for Languages this subject has been designed with the aim of guiding the student to achieve the level B2, Intermediate-high level that brings together the five communication skills: oral comprehension, reading comprehension, interaction and oral expression, and written expression. From an initial minimum level of General English Intermediate (B1), the subject offers the possibility of achieving, with the effort and responsibility of its students, a level of competence valued by both companies and universities around the world. It develops in an environment where individual and team work play a significant role both academically and professionally.

By its optional nature in the degree of Architecture, the subject combines the English language of general character with the most specific of the field of Architecture, through a progressive approach to its terminology and discourse. It is developed in two partswith 90 hours of classroom attendance, distributed in classroom and multimedia laboratory practices.

III. SELECTION AND STRUCTURING OF THE MAIN UNITS:

1. **Useful Linguistic Tools**
    1. Review Phonetic Symbols, Pronunciation Practice, Stress, Intonation, Awareness of Accents
    2. Use of Dictionaries and the Internet
2. **Integration of Skills through a Variety of Topics**
    1. Communication
    2. Environment
    3. Transport and Urban Planning
    4. Architecture
    5. Literature
    6. Art
3. **Becoming an Architect**
    1. Plans, Dimensions, Shapes, Materials, Structures
    2. Position, Location, Architectural Elements and their Function, Building Typologies
    3. Description, Green Architecture, Landscaping, Urbanism
    4. Note-taking, Critical thinking, Interviews, oral Presentations
    5. Architects and their Projects
4. **Language Structure**
    1. Articles and Modifiers
    2. Verb Tenses Review, Verb Patterns, Passive, Modal Verbs, Conditionals
    3. Relative Clauses
    4. Linking Words
    5. Reported Speech, Indirect Questions, Inversions
    6. Prepositions, Phrasal Verbs, Spatial Prepositions and Expressions
    7. Idioms
5. **Reading Strategies**
    1. Skimming and Scanning
    2. Use of Context and Previous Knowledge
    3. Word Building
    4. Punctuation
    5. Complex Noun Compounds
6. **Audio and Multimedia Practices related to General Content of the Course**