

**FA+UD**

FACULDADE DE ARQUITETURA

+ URBANISMO E DESIGN

ULISBOA

**U LISBOA**

UNIVERSIDADE  
DE LISBOA

# INTEGRATED MASTER'S IN ARCHI TECTURE **FA+UD**

PUBLIC HIGHER EDUCATION



## INTEGRATED MASTER'S IN ARCHITECTURE

**TIMETABLE** ☀ DAYTIME/  
🌙 EVENING CLASSES

**OFFICIAL DURATION (1st + 2nd CYCLES)**

Years 5

Semesters 10

Weeks of study p/year 34

ECTS credits 300



The Master's Degree in Architecture awarded by the FA aims to equip students with a range of skills, above all in the field of design, that will enable them to recognise, interrogate and experiment with complex and integrated architectural concepts, facts and knowledge throughout the learning process.

During this process, students will engage with human creations that clearly reflect scientific, humanist and artistic forms of thinking and expression associated with natural and artificial territories and known as human living space.

This training enables them to develop a profound knowledge of the academic discipline of architecture, design work and professional practice, providing a base for the development of original applications, in many cases in a research context.

The Master's degree is awarded to those who demonstrate the following: the capacity to understand and resolve problems in new and unfamiliar situations in broad multidisciplinary contexts associated with architecture and urbanism; the ability to integrate knowledge, deal with complex questions and develop solutions or make judgements in situations where information is limited or incomplete, including reflections on the ethical and social implications and responsibilities resulting from and influencing the said solutions and judgement; the ability to communicate their conclusions and underlying knowledge and arguments clearly and unambiguously to specialists and non-specialists; mastery of the skills that will ensure essentially self-directed or independent lifelong learning for the future.



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## THE SCHOOL

The Faculty of Architecture (FA) offers courses leading to the award of the Bachelor's, Master's and PhD degrees in Architecture, Urbanism and Design. It also offers non-degree courses which provide further training for professionals who wish to extend their knowledge. This broad training offer makes the FA the largest and most diversified school in the country in its specialist areas, with an intake of approximately 3,000 students. It is also the school with the largest number of foreign students, who come from Europe as well as other continents where the FA has exchange agreements. In addition, it is the oldest school in Portugal, with a history dating back to the 16th. century.

The main feature of this Faculty is the training offered through design studio project work in the 1st and 2nd cycles, in which the knowledge acquired in all subject areas is applied to the design of a broad range of possible objects, from small-scale to territorial. However, the aim of the FA is to train a wider range of professionals to work as consultants, researchers and public sector staff in areas associated with the built environment, culture and industry.

It is, without doubt, these combined objectives which have ensured that over 95% of its graduates find employment within a year of completing their courses.

The FA is currently investing in training professionals who can work in Portuguese society and help increase its potential for innovation, competitiveness and exports. For this reason, special emphasis is placed on the development of final projects and dissertations produced in collaboration with public and private entities, encouraging entrepreneurialism and creating future opportunities for students. Training in the 3rd cycle is directed towards advanced research in the three subject areas of the FA within the framework of the CIAUD, a research centre classified as Excellent by the Portuguese Foundation for Science and Technology. A service provider centre, technology transfer office and business incubator have recently been created. As a modern school which aims to combine tradition and innovation, the FA is a leading institution providing professional training for architects, urban planners and designers, and recognised in the field of specialist interdisciplinary research.

## WHO IS THIS COURSE DESIGNED FOR?

The course is designed for people aiming to work in the field of designing and planning built space and its relation to human life.

### AWARD OF THE MASTER'S DEGREE

After the Master's Final Project or Dissertation has been approved, graduates of the Master's Degree in Architecture acquire the professional status of architect and are eligible to work as independent professionals or in industry, business, teaching, research or for central, regional and local administrations. They also have the right to membership of the *Ordem dos Arquitectos* (Association of Portuguese Architects).

### PROFESSIONAL OPPORTUNITIES

Architects trained to design, rehabilitate and remodel buildings, groups of buildings, public and urban space, landscapes and territory. Their work covers specific functions ranging from housing to public and private services, and cultural, educational, health, sports and industrial facilities.

Given the challenges of the present-day world, we prepare professionals who are capable of establishing themselves in a professional and academic field that requires constant redefinition of the scope and nature of their work.

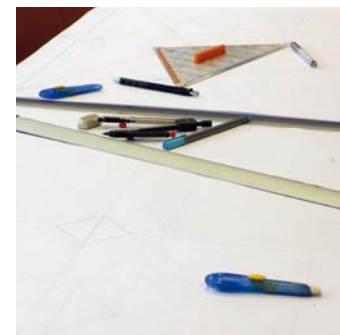


## TEACHING STAFF

The teaching staff on the Integrated Master's in Architecture includes professionals with a wide range of experience in design, as well as teachers from other subject areas that feature on the course, who deliver the specific contents of each curriculum unit from an integrated perspective linked to an overall vision of the degree course and the skills that are to be acquired.

The names and contacts for the teaching staff can be found at [www.fa.ulisboa.pt](http://www.fa.ulisboa.pt)  
FA > Trabalho > Órgãos > Informações > Docentes

## APPLICATIONS



### ENTRY REQUIREMENTS

**1 • Students applying via the *Concurso Nacional de Acesso ao Ensino Superior* (National Application Scheme for Admission to Higher Education)**  
Course Code: 0802/9257

Consult the DGES site for information on procedures and number of places: [www.dges.mctes.pt](http://www.dges.mctes.pt)  
DGES > Estudantes > Acesso > Concurso Nacional Público

Entry requirements. One of the following combinations:  
03 Drawing + 10 Descriptive Geometry  
ou  
10 Descriptive Geometry + 16 Mathematics  
ou  
10 Descriptive Geometry + 12 Art and Cultural History

**2 • Students enrolled in higher education courses in Portugal or abroad**

Consult the FA site for information on applications for re-entry, transfers and changing courses  
[www.fa.ulisboa.pt](http://www.fa.ulisboa.pt) FA > Estudar > Candidaturas

**3 • Students holding a Bachelor's degree awarded in Portugal or abroad**

Consult the FA site for information on applications for the 2nd cycle and special candidatures (holders of higher or post-secondary courses)  
[www.fa.ulisboa.pt](http://www.fa.ulisboa.pt) FA > Estudar > Candidaturas

**4 • Students aged over 23**

Consult the FA site for information on applications for students aged over 23  
[www.fa.ulisboa.pt](http://www.fa.ulisboa.pt) FA > Estudar > Candidaturas

### APPLICATIONS AND ENROLMENT

The FA site may be consulted for information on dates and enrolment procedures immediately after the DGES publishes the results of applications.  
[www.fa.ulisboa.pt](http://www.fa.ulisboa.pt) FA > Estudar > Candidaturas

### FEES

The fees for Bachelor's, Master's and PhD courses are updated annually. Information on amounts and payment methods is provided on the FA site.  
[www.fa.ulisboa.pt](http://www.fa.ulisboa.pt) FA > Estudar > Propinas

# COURSE PLAN

The Integrated Master's in Architecture covers two cycles. The first cycle corresponds to the Bachelor's in Architectural Studies and aims to provide students with a basic and comprehensive training in this field. The second cycle leads to the award of the Master's in Architecture and allows for greater specialisation, whilst still ensuring the transversality that enables new graduates to approach a wide range of problems on a number of levels in multidisciplinary contexts and is also a factor in employability. →

## 1st. CYCLE

1st. semester	HCS	ECTS
Architecture Laboratory I	9	12,5
Drawing	6	7,0
Conceptual and Descriptive Geometry I	3	3,5
Architectural and City Culture	3	3,5
Further Mathematics and Statistics	3	3,5
2nd. semester		
Architecture Laboratory II	9	12,5
Architectural Drawing I	6	7,0
Conceptual and Descriptive Geometry II	3	3,5
Materials	3	3,5
History of Contemporary Art	3	3,5
3rd. semester		
Architecture Laboratory III	9	12,5
Architectural Drawing II	3	3,5
Physical Geography	3	3,5
History of Classical and Medieval Architecture	3	3,5
Buildings I – Support elements	3	3,5
Digital Representation Systems in Architecture	3	3,5

ECTS European Credit Transfer System units

HCS Weekly contact hours

The specialisation in Architecture focuses on both the design of new buildings and the rehabilitation of existing ones. The specialisation in Interior Architecture is directed towards intervention and rehabilitation involving existing spaces, whereas the specialisation in Urbanism focuses on intervention in urban and territorial space. (For further information, see the study plans in the brochures for the Specialisations in Interior Architecture and Urbanism).

## 1st. CYCLE

4th. semester	HCS	ECTS
Project Laboratory I	9	12,5
Drawing in the City	3	3,5
Buildings II – Coverings and Materials	3	3,5
Construction Physics	3	3,5
Urban Geography	3	3,5
History of Modern Architecture	3	3,5
5th. semester		
Project Laboratory II	9	12,5
Buildings III – Networks and Technical Installations	3	3,5
Environmental Comfort	3	3,5
Urbanism I	3	3,5
Statics	3	3,5
Architecture Theory	3	3,5
6th. semester		
Project Laboratory III	9	12,5
Urbanism II	6	7,0
History of Contemporary Architecture	3	3,5
Structures I	3	3,5
3D Modelling and Visualisation in Architecture	3	3,5

## 2nd. CYCLE

7th. semester	HCS	ECTS
Project Laboratory IV	9	12,5
Technological Innovation and New Materials	3	3,5
Structures II	3	3,5
Place Theory	3	3,5
Urban Sociology	3	3,5
Geometric and Generative Modelling	3	3,5

8th. semester		
Project Laboratory V	9	13,0
Conservation, Restoration and Rehabilitation	3	3,5
History of Architecture in Portugal	3	3,5
Rehabilitation and Conservation Technologies	3	3,5
Project Economics	3	3,5
Specialisation Elective	1,5	1,5
Specialisation Elective	1,5	1,5

9th. semester		
Project Laboratory VI	9	13,0
Buildings IV / Project Support	3	3,5
Structural and Constructional Systems	3	3,5
Energy and Environmental Efficiency	3	3,5
Specialisation Elective	1,5	1,5
Specialisation Elective	1,5	1,5
Research Seminars	3	3,5

10th. semester		
Master's Final Project / Dissertation*	9	22,0
Support Seminars for MFP / Dissertation	3	8,0

\* Students may opt to submit a Master's Final Project or Dissertation, following approval of the respective Work Plan by the 2nd. cycle Committee.

ECTS European Credit Transfer  
System units  
HCS Weekly contact hours



## CURRICULAR UNITS



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# CURRICULAR UNITS

## 1st YEAR / 1st semester

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### Architecture Laboratory I

Introduction to architectural analysis and design. Essential mastery of the skills of cognition, conception, expression, rationalisation and representation of architectural ideas and images. At the start of design studio project work, the aim will be to stimulate ways of seeing, feeling, imagining and designing, developing a poetic imagination grounded in metaphorical-metonymic thinking in conjunction with the appropriate considerations – aesthetic-compositional, technical-componential, and those concerned with materiality, use and context – which create purpose and meaning.

### Drawing

Drawing as an individual process of reflecting on and discovering the world. Drawing as a selective and purposeful communication process. Development of the skills of observation, critical analysis and creative imagination. Learning how to explore the graphic and expressive potential of the different materials and instruments specific to drawing.

### Conceptual and Descriptive Geometry I

Fostering awareness of the relationship between geometry and architecture, namely the geometric parameters for representation and spatial-formal structuring. Specifying and systematising the potential of the various systems of design/representation, contextualised within the creative process. Providing students with the knowledge required to execute and control parameters for perspective/axonometric projection and examining their use in different contexts and in relation to complex shapes and spaces. Developing the capacity for geometrically structured reasoning.

### Architectural and City Culture

Introduction to the theoretical principles and core concepts of architecture. Architecture as a habitable human construct, production process and field of knowledge. Architecture and the city. Architecture and its academic context.

### Further Mathematics and Statistics

Mathematics as an essential tool for studying the environment, physics and engineering of construction and its management. Introduction to the basic concepts of trigonometry, algebra, mathematical analysis and statistics.

## 1st YEAR / 2nd semester

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### Architecture Laboratory II

Extending initial studies of architectural analysis and design by introducing the urban dimension. Mastery of basic skills of cognition, conception, expression, rationalisation and representation of architectural ideas and images in an urban context. Extending design work by introducing the concept of place. Linking spatial options to an understanding of location and a programme of uses with some level of complexity. Critical reflection on forms of habitation, functions and use values.

### Architectural Drawing I

Learning how to use drawing as a tool for quick, personal records. Encouraging morphological analysis of objects and interior space. Learning how to draw freehand perspective. Understanding the relationship between the horizon and the artist's position. Developing the possibilities of spatial representations exterior to perspective. Representations of connections for interiors, exteriors and circulation areas.

### Conceptual and Descriptive Geometry II

Developing geometrically structured representational skills. Extending spatial-formal structuring skills through defining, understanding and systematising geometrical surfaces and their respective transformations. Principles and mechanisms that boost the use of multiple orthogonal projections as conceptual and analytical tools. Defining, systematising and working with defined projections in terms of the representation, analysis and modelling of shapes and topographical surface volumes. Developing geometrically structured reasoning for representation.

### Materials

Introduction to building materials. Physical, chemical, pathological and environmental characterisation. The function of materials and their incorporation into the formalisation of constructed space. Natural and artificial stone materials. Binders or binding agents and agglomerates; argillaceous and ceramic materials.

### History of Contemporary Art

Characterisation of history as a humanist discipline within the arts. Study and research methodologies. Expressions of contemporary art in various artistic fields and their contexts. Historical-artistic developments, from modernity to the contemporary age. Key topics in Portugal and their place in the international context.

## 2nd. YEAR / 3rd. semester

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### Architecture Laboratory III

Introduction to the broader – scientific, humanist, artistic and technical – field which is the basis of architecture and urbanism projects. Design as the creation of carefully elaborated and well-defined artefacts which constitute a formal synthesis between constraints and freedoms. Identifying and organising common ground between architecture and urbanism. Understanding the urban reality and the possibilities and phases of urban intervention.

### Architectural Drawing II

Learning to use drawing as a tool for gathering information. Understanding the relationship between the body/object inhabiting architectural and urban space and the body as subject, i.e. the observer and creator of the spatial and volumetric reality.

### Physical Geography

Introduction to the morphology and structure of the earth's surface, the variables which affect it and their effects, with a particular focus on geomorphology and climatology. The complexity and interdependence of the phenomena which intervene in a territory and the need to understand them globally. Tools for the assessment and diagnosis of the natural and anthropic conditions of a territory.

### History of Classical and Medieval Architecture

Analysis of the origins, formation and development of western architecture and its historical and contemporary significance. Architecture and the classical Greco-Roman city. Medieval architecture, from the Romanesque to the Gothic period: spatial, constructional, artistic and social aspects. Key topics in the architecture of Portuguese territories and their place in the international context.

### Buildings I – Support Elements

Introduction and characterisation of primary building support elements and their relation to physical and functional requirements, together with the decisive role played by the

construction context in defining the space/environment for architecture, comfort and weather protection. Basic notions of geology, geotechnics and soil mechanics. Structural elements. Primary construction elements.

### Digital Representation Systems in Architecture

Presentation of the Internet as an undifferentiated network; URL composition; mastering representations of projects based on vector graphics; production and printing of representations using graphic differentiation. Publishing digital images using bitmaps. Mastering publication of on-line images.

## 2nd. YEAR / 4th. semester

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### Project Laboratory I

Approaching real-world design. Assessment of design variables (spatial, cultural, material, technical, programming, urban, landscape) in relation to a chosen place and programme. Developing professional design skills, understood as a complex creative process that includes the phases of gathering information and cognitive assimilation and leads to a synthesis. The conventions of the discipline. The materiality of the design project.

### Drawing in the City

Learning how to use drawing as a tool for analysing urban structure. Learning how to use drawing to record and identify phenomena with a variety of different characteristics: formal, structural, stylistic and/or historical, as well as psychological and sociological.

### Buildings II – Coverings and Materials

Understanding and characterisation of secondary building elements – coverings and finishings – and their relation to physical and functional requirements, together with the decisive role played by the construction context in defining the space/environment for architecture, comfort and weather protection. Functional and regulatory requirements.

### Construction Physics

Architecture, construction and environmental sustainability. Site, climate, culture and technology: the lessons of vernacular architecture. Environmental site analysis. The environmental impact of construction. The human metabolism and comfort: design parameters and factors. Geometry and solar power control. Hygrothermal behaviour in construction. The behaviour of natural light in construction. Acoustic behaviour in construction. Introduction to the diagnosis and definition of overall environmental/physical

strategies in the design and construction process. Management of conflicts and synergies. The legal framework.

### Urban Geography

Understanding the evolution of space and urban morphology and the natural and socioeconomic influences which affect them. Recognising functional urban structure types and transformation trends. Analysis and explanation of the relationships between different urban activities and functions and the various aspects of the urban fabric, together with the role played by agents of change, specifically transport, in transforming territories.

### History of Modern Architecture

Analysis of the development of western architecture in the Modern Age (15th – 18th centuries). Renaissance to Mannerism. The Baroque era to Neoclassicism. Case studies. Key references in European architecture in an international context.

## 3rd. YEAR / 5th. semester

### Project Laboratory II

This curricular unit marks the transition from the academic work undertaken at the beginning of the course to the disciplinary work that will mark the beginning of professional life. In its approach to design, it recognises that an understanding of design must be confronted with critical knowledge in order to ensure that no decision is accepted without a hypothesis or, in other words, that a project cannot be accepted without planning. Thinking and doing are the ongoing basis and *raison d'être* of architecture.

### Buildings III – Networks and Technical Installations

Introduction to the study of networks and technical installations, with a view to developing the capacity to integrate the conditions required for these infrastructures into architectural designs. Basic principles, systems, standards and regulations for: water, sewage and drainage systems; electrical and telecommunications networks and installations; heating, ventilation and air conditioning networks; gas networks and installations; lifts and transport systems.

### Environmental Comfort

Introduction to the main Portuguese regulations for environmental comfort in buildings: RCCTE (regulations for thermal performance in buildings); NP 1037-1 (standards for ventilation and removal of combustion products from places using gas-burning equipment); acoustic regulations; thermal certification for buildings; thermal inspections.

### Urbanism I

Introduction to the fundamental concepts associated with the subject of the study – the city – and the discipline which intervenes in it – urbanism. Form and organisation of the city, considering the urban fabric broken down into its components and the major functions of the contemporary city. Methodologies for analysis, intervention and management of the city. The process of urbanisation and the genesis of contemporary urbanism. Tools and techniques for intervention, with reference to the legal framework.

### Statics

Introduction to the analysis of statically determinate systems subject to static actions, adopting the fundamental principles of the free body and the equations for the equilibrium of forces. Particle equilibrium. Graphic and analytical methods. Mass geometry. The centre of gravity of an area. The system of equivalent forces. Notions of strength and movement of a force in relation to a point. Equilibrium of rigid bodies. Support reactions. Types of exterior support. Transversal and normal forces. Bending moments. Force diagrams.

### Architecture Theory

Conceptualisation of architecture as an autonomous discipline – object, methodological processes, purposes – in order to establish an epistemological horizon that will support the interdependent inclusion of architectural knowledge and practice that combines scientific, technical and artistic dimensions. Examination of the various forms and examples of architecture based on the various dimensions of the architectural phenomenon: formal/perceptive, design/constructional, experiential/aesthetic and critical.

## 3rd. YEAR / 6th. semester

### Project Laboratory III

The objectives of this unit are to consolidate and systematise disciplinary work – the design project – as a professional base. The design project as the product of the nexus between site and programme, executed using a set of tools that may be technical or figurative or based on best practices, regulations, communication, etc., emerging from an idea of synthesis which allows for conceptualisation in architecture.

### Urbanism II

Understanding urban planning and territorial integration by extending the scope of the Project curricular unit and analysing the relations involved in this broader context. Analysis and characterisation, applying the concepts learned in Urbanism I, of an urban area which includes rapidly developing consolidated and/or peripheral zones, major infrastructures and environmental areas. Exploring the concepts of land planning, urban form and process, on various scales.

### History of Contemporary Architecture

A historical approach to the culture of architecture and urbanism in the contemporary age (19th – 20th centuries). Framework for themes within a political-social, cultural and artistic context. The construction of modernity in architecture. Case study and key topics in the architecture of Portuguese territories and the Portuguese geocultural sphere of influence in the world.

### Structures I

Introduction to the study of the functions of structures. Understanding individual structural typologies and introduction to understanding structural systems. Moments of inertia and symmetry axes. Mechanical behaviour of materials. Simple force, simple bending, composite and unsymmetrical bending. Curving, torsion, relative deformation. Yield strengths. Structural materials. Simple and composite materials.

### 3D Modelling and Visualisation in Architecture

Understanding and manipulating three-dimensional space and systems of coordinates in computer-assisted drawing programs. Modelling solids. Coordinate system rotation in three dimensions, extrusions on vertical planes. 3D modelling in 3dsMax.

## 4th. YEAR / 7th. semester

### Project Laboratory IV

Understanding and exploring the built form of the city within the context of its instrumental framework and architectural territory, by decoding building cycles using urban history and cartography. Understanding the system for urban form, which also involves understanding layout and building practices – including typologies and the significance of models – and the applicable regulatory framework. In terms of planning proposals, this unit covers urban requalification and the organisation and resolution of an urban programme involving different uses and types of occupation. Acquisition of basic principles and instruments for urban design.

### Technological Innovation and New Materials

Introduction to new materials and new construction technologies. Analysis of life cycle and embodied energy.

### Structures II

Functions of individual typological elements: traditional systems – tie rods, funicular polygons and curves, catenary, suspension systems, openings and archways, resistance and rigidity, nets and pre-stressed membranes; compressed systems – the principle of inversion, instability due to buckling, hyperstatic and isostatic arches, equilibrium of support reactions, vaults, domes and shells; lattices – hypostaticity, isostaticity and hyperstaticity of lattice components and their functions, arrangement of diagonals, openings, height, rigidity and efficiency, horizontal, vertical and projecting trellises, trellis covers and spatial trellises; simply supported beams, trajectories of force and trellis model, resistance and rigidity, diagrams of bending, torsion and shear forces, reinforcements for concrete beams, pre-stressed supports and cantilevered beams.

### Place Theory

Providing students with the skills to enable them to construct their own method of conceptualising the phenomenon of architecture, both with regard to aspects associated with design practices and those through which the specific field of architecture is defined. Understanding architecture in all its operational dimensions from the point of view of architecture itself, and all aspects of its expression as an eminently human phenomenon. A phenomenological focus on the relationship between humans and space leading to, on the one hand, methodologies for analysing spatial boundaries that can be individualised and, on the other hand, various categories for the appropriation of territory, ultimately producing an ontological understanding of architecture.

### Urban Sociology

The sociology of the city and the sociology of forms of habitation. An interdisciplinary exploration of themes that may assist in interpreting zones and objects that are the target of architectural interventions. Fostering an interdisciplinary approach to sociology, anthropology and architecture to enable students to analyse, in some depth and rigour, the complexity of the contemporary city. Understanding, from a sociological perspective, the main theoretical and conceptual proposals for analysing major contemporary urban and territorial issues, namely the city and multiculturalism, diversity, the importance of ITC and globalisation, in addition to certain contentious developments which affect modern societies, such as poverty, exclusion, insecurity and socio-spatial segregation. Sociological approaches to accommodation and social housing in Portugal.

## Geometric and Generative Modelling

Specifying, systematising and exemplifying the application of geometric paradigms to spatial-formal morphogenesis. Synthesising and organising the metaphysical contributions of operative geometry – from traditional symbolism to fractals. Providing students with analytical-comprehensive theory, organised from a geometrical-conceptual perspective, which enhances and optimises conceptual intervention. Developing the capacity for geometrical-visual reasoning applied to architecture, urbanism and design, contained within a broad concept of fine regulating lines. Extending the following content: geometry and morphogenesis, geometry as operational scale, geometrical paradigms; geometrical structures, definitions, classifications, geometrical surfaces and their transformation; the geometries of digital morphogenetic processes; stereotomy – concepts, specifications for materials and applications.

## 4th. YEAR / 8th. semester

### Project Laboratory V

Understanding and exploring built forms within the instrumental framework of composition and city architecture, breaking morphological structure down into its component parts and considering the relationship between elementary buildings and public space. The understanding of built form focuses on understanding design practice supported by a programme and includes spatiality, tectonics, language and the applicable regulatory framework. In terms of planning proposals, it includes requalification of existing built forms and the organisation and resolution of a programme of facilities integrated into the urban fabric, including public space. The learning objectives consist of developing the operational instruments associated with building design, from overall concept to finer details.

### Conservation, Restoration and Rehabilitation

Training to provide methodological and critical skills for the conservation of the architectural and urban heritage. An integrated approach to conservation, restoration and rehabilitation projects. Understanding the scientific scope and disciplinary structure of architectural and urban conservation and its relation to the sub-disciplines (restoration, rehabilitation, rehabilitation of urban landscape and territory). Understanding the essential methods for analysis and theorising. Testing techniques and methodologies. Establishing the basis for many aspects of conservation of the architectural heritage (from individual object to historic city).

## History of Architecture in Portugal

Developing research skills applied to case studies and identifying, understanding and analysing the specific problematics of Portuguese architecture in historical and critical terms, Producing monographic studies. The study of Portuguese architecture, focussing on thematic historical and/or contemporary approaches, namely international position, specific Portuguese features, and erudite versus popular architecture. Architecture in the contemporary city; authors and leading works.

### Rehabilitation and Conservation Technologies

Rehabilitation and authenticity; architectural conservation and intervention criteria. Low intrusion intervention strategies; anatomy, materials and construction techniques for old buildings. Structural and non-structural pathologies: classification of anomalies; surveying, characterisation and diagnosis; analyses, inspection planning and testing. Concept and design of structural and non-structural rehabilitation work: requirements, methods, intervention strategies, Materials and solutions. Environmental impact of products used in rehabilitation. Specific features of the pre-industrial building culture; early building techniques and materials; surfaces, coverings and colours; early versus contemporary technologies. Rehabilitation of buildings: recovering what is recoverable and designing the improvements needed to meet new and current performance, safety and comfort standards. Construction within existing constructions, justified by ecological, economic and functional “upgrading”. Urban and environmental rehabilitation on the scale of the city and the relationship between groups of buildings and the landscape.

### Project Economics

Introducing optimisation principles to the design rationale, together with the objective elements used to value property in terms of the market segment for which it is intended, from the perspective of the final user or investor. Approaching/ extending the following concepts: economics and design; the added value of spatial interventions, (analysis of added value in real estate developments); property values; cost and performance indicators in real estate investment; information on management for architectural design.

## 5th. YEAR / 9th. semester

### Project Laboratory VI

Assessing the urban dimensions of architecture using reference models and concepts that focus on the quality of the environmental and social surroundings. Understanding and planning a proposal for intervention in a problematic urban context, implying an approach to various different urban fabrics and topographical and infrastructural constraints. Mastering the tools and means of communication and argumentation for proposals, including structural, formal, morphological, spatial, programming and constructional aspects. Identifying and proving the level of sustainability associated with the logic and form of the proposal during its life cycle.

### Buildings IV / Project Support

This curricular unit aims to provide support for the Project Laboratory IV unit, by focussing directly on the work that it develops.

### Structural and Constructional Systems

Understanding the links and interaction between structural and constructional systems. A more extensive exploration of the following: pre-stress; building structures; innovative construction systems; materials and special components; industrialisation and prefabrication; convertibility of building components; assessment of conditions of use in the systems, materials and solutions studied; conceptual morphological methodologies applied to the architectural synthesis.

### Energy and Environmental Efficiency

Consolidating knowledge of active and passive solar architecture. Introducing the following concepts: heat pumps; aerothermics and geothermics; domotics; photovoltaic systems; wind power systems; cogeneration; “intelligent buildings”.

### Research Seminars

Learning to outline a research project for the Master's degree in Architecture, identify and determine a theme, define the general and specific research objectives, produce a literature review for the proposed theme and objectives, and develop skills in scientific writing applied to architecture. Theoretical-practical support for conceptual development and the various aspects of writing the Master's project proposal. Master's final project; scientific dissertation.

## 6th. YEAR / 10th. semester

### Master's Final Project or Dissertation

Acquiring a deeper level of knowledge and skills in the specific disciplinary area of architecture, and the ability to undertake research and exercise the accompanying professional expertise. Mastery of a set of skills in this disciplinary area that establish a basis for reflection, development and imagination in original applications. The capacity to understand and resolve problems in new and unfamiliar situations in broader, multidisciplinary contexts related to the student's area of study. Developing the capacity to integrate knowledge, deal with complex issues, develop solutions, including reflections on the ethical and social implications resulting from these solutions, and the ability to communicate conclusions clearly and unambiguously. Acquiring skills that will allow for solid, lifelong learning.

### Support Seminars for Master's Final Project or Dissertation

Providing a working methodology for organising ideas and constructing a scientific text, systematising information, justifying options and the value of the different (theoretical or practical) phases in the development of the project. Justifying and providing a theoretical framework for the development of a theme that emerges from project research or autonomous theory.

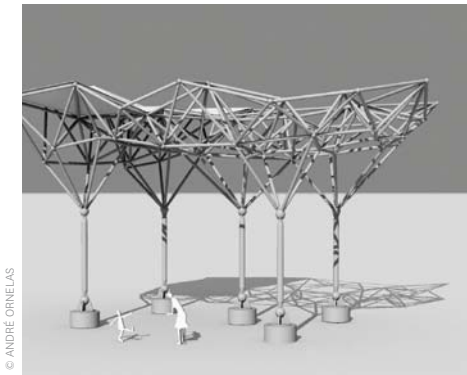
### Specialist Electives

In the eighth and ninth semesters students may choose from a wide range of specialist elective curricular units offered in various disciplinary areas. They may also choose an obligatory curricular unit from another course as their elective.

### Architecture

- Architecture, conceptualisation and design
- Ephemeral and Experimental Architectures
- History and Architecture of Construction
- Architecture in Paper and Sustainable Materials
- Experimental Architecture
- Useful/Useless Architecture
- Light and Colour
- Living Spaces
- Design in Conservation, Restoration and Rehabilitation





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### Urbanism

- Urban Culture
- Forms of Urban and Territorial Intervention
- Urban Design
- Requalification of Coastal Areas
- Urban Requalification
- Metropolitan Territories

### History and Theory

- Filmed Architecture
- Critical History of Modernity
- Critical History of the Built Heritage
- History of Performing Arts
- Image Theory
- Revitalisation Theory

### Technologies

- Construction of Stone Arches
- Earthquake Resistant Buildings
- Building, City and Territorial Environmental Management and Assessment
- Technical English
- Principles and Strategies in Bioclimatic Design
- Rationalisation of the Construction Industry

### Drawing and Visual Communication

- The Desire Machine
- The Anthropology of Seeing
- Cinema and Architecture
- Figure Drawing /Life Drawing
- Drawing and the City
- Architectural Photogrammetry
- Artistic Interventions in Urban Space
- Cinematic Narratives of Architectural and Urban Space
- Drawing the Background to Architecture
- Colour Design for the Rehabilitation of Architectural Surfaces
- Plastic Expressive Techniques for Architectural Drawing
- Flow Visualisation

### Computation

- Computer Animation
- Integrated Modelling Systems (BIM)
- 3D Digitalisation
- Tools for Analysis and Simulation
- Shape Grammars
- Digital Design and Manufacture
- Parametric Urban Design
- Space Syntax
- Geographic Information Systems

### Social Sciences

- Sustainable Urban Culture and Development
- Studies of the City: Living Spaces and Constructed Spaces
- Social Design ●



INFORMATION AND PROJECTS

## MOBILITY PROTOCOLS



- 99 agreements under the Erasmus programme
- 22 agreements with universities in Latin America
- 1 agreement with a Canadian university
- 2 agreements with universities in Israel
- Involvement of the Faculty of Architecture in a European-Japanese exchange network
- Involvement of the Faculty of Architecture in an Eastern European exchange network

Through various mobility programmes, the FA offers its students the opportunity to study abroad for one or two semesters. Students may be eligible to study in Europe under the Erasmus programme or in other countries such as Brazil, Argentina, Colombia or Canada via protocols established directly with a number of international universities.

Via the University Central Services, the Faculty of Architecture is a party to the protocol agreed with the Santander Bank which offers mobility support grants for study in Latin America through the Santander Bolsas Luso-Brasileiras and Bolsas Ibero-Americanas programmes. In addition, it is involved in a European-Japanese exchange network via the AUSMIP programme.

The FA is a partner in 2 other programmes: the Erasmus Mundus EURMED – Master's Degrees in Urban Studies in Mediterranean Regions, and TEMPO (the Trans-European Mobility Project on Education for Sustainable Development). Students are also eligible to apply to the Erasmus Placement and IAESTE programmes for traineeships in companies and research centres.



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## MATERIAL RESOURCES



© EDUARDO CASTRO E COSTA, Modelo 3D

The FA offers students a wide range of support facilities for the various stages of academic life including the Library, Audiovisual Centre, reprographics service, 24-hour workshop (a space where students can work on their assignments), Publications Centre, Multimedia Centre, Cartography Lab, IT centre, Fashion Atelier, workshops, Rapid Prototyping Centre, Colour Laboratory, Photography and Image Synthesis Laboratory, 3D Digitalisation Laboratory, Intellectual Property and Knowledge Transfer Office and the FA Incubator.

## PRIZES



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### Integrated Master's in Architecture – 1st cycle (Bachelor's in Architectural Studies)

Best Overall Grade:

**Professor Frederico George Prize (300€)**

Criteria in the event of a tie:

1st – best overall grade in the combined Project curricular units, 2nd – youngest student.

### Integrated Master's in Architecture – 2nd cycle

Best Final Project (highest mark):

**Comendador Joaquim Matias Prize (1000€)**

*Annual sum of 5,000€, converted to perpetual income.*

Best Dissertation (highest mark):

**Arquiteto Quelhas dos Santos Prize (300€)**

*Annual sum of 2,500€, converted to perpetual income.*

Criteria in the event of a tie:

1st – best overall grade for course,  
2nd – youngest student.

# PROJECTS

## Relations of scale between city and home

João Varandas, Master's Dissertation, 2011

This study aims to examine the different scales in the close relationship between humans and inhabited space. Reflecting on the present-day city, it can be seen that it has undergone various transformations, influenced by the general development of road networks and instantaneous communications (...). One of the main conclusions that may be drawn from this study focuses on people's need to relate to city space, turning it into an extension of their home in the search for spaces that enable them to live as a community. [1]

## The wall as inhabited interval: from the Santa Marta Convent enclosure to the revitalisation of the city.

Ana Bruto da Costa, Final Course Project, 2011

The city establishes roads and squares that create enclosed areas and boundaries. In the case of the Sant'Ana Hill, and the Santa Marta Convent in particular, the enclosure emerges as a wall that defines different realities. The aim is to understand the boundary and space which it frames, not as a barrier or obstacle, but more as a space that adds to the subliminal structure of the city.

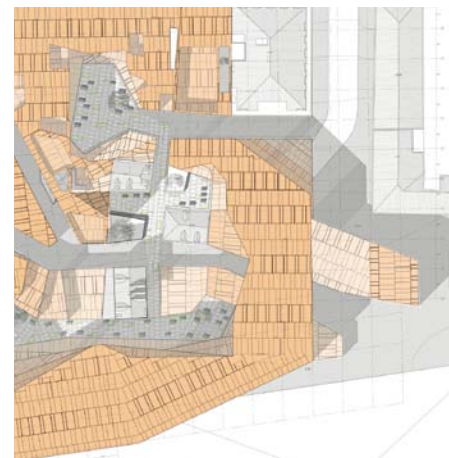
The enclosure is the boundary that contains and is contained. The inner area is occupied by a complex community – local residents, students and people from outside the local community – and the proposed programme – an Occupational Training Centre – is the key element in the various different realities. [2]

## The Santana Hill and Desterro Convent

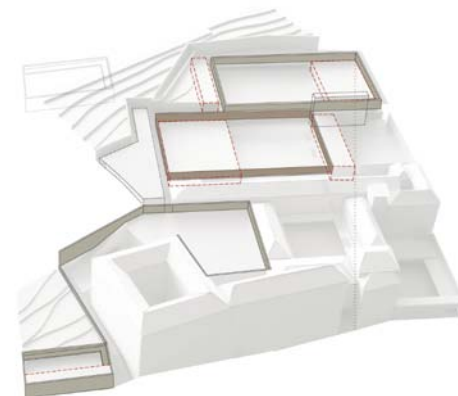
Mariana Custódios dos Santos, Master's Dissertation, 2013

Intervening by occupying the space that surrounds the former Desterro Convent on the Santana Hill not only involves devising a strategy for its re-involvement as a contemporary urban structure but also a proposal to densify the interior of the neighbourhood as a solution for reviving the dynamics of the city centre. (...) The strategy in this project involves the recreation and adaptation of practices based on place. It aims to be part of a general movement, following universal discourses, but also to reflect the cultural identity of the place.

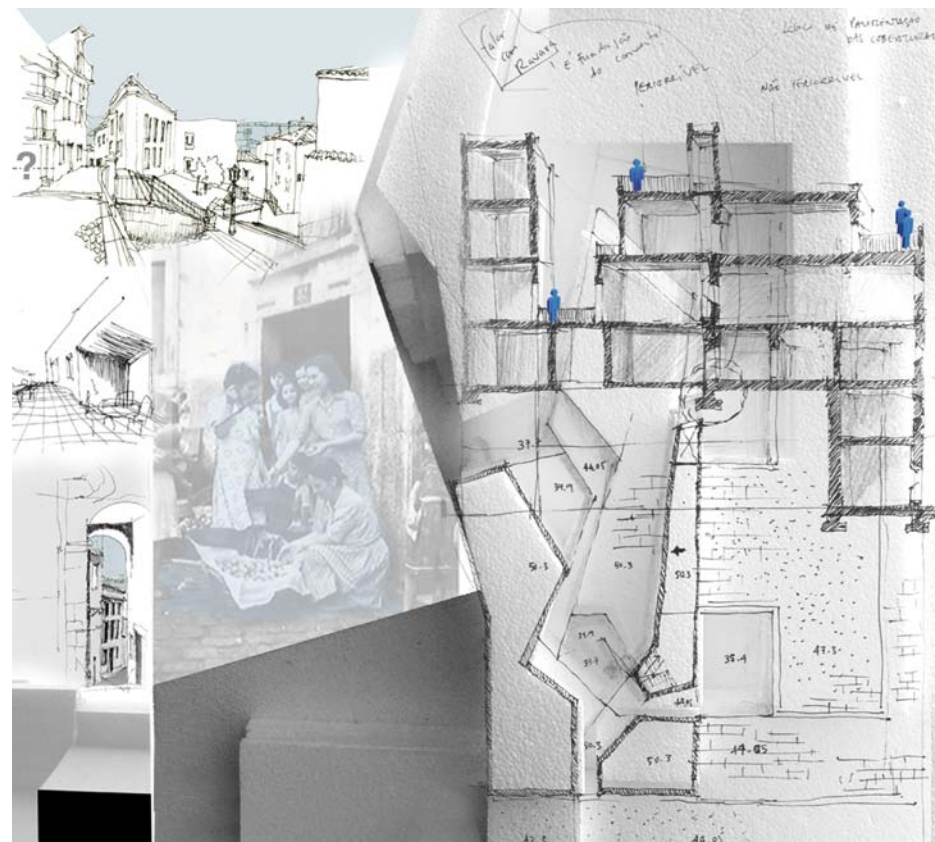
The strategy seeks to provide shelter for the individuals which it continues to recognise, and their representation within the overall system. [3]



1



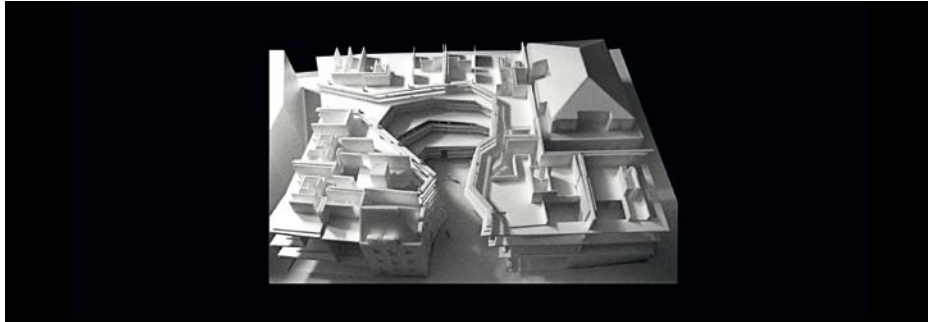
2



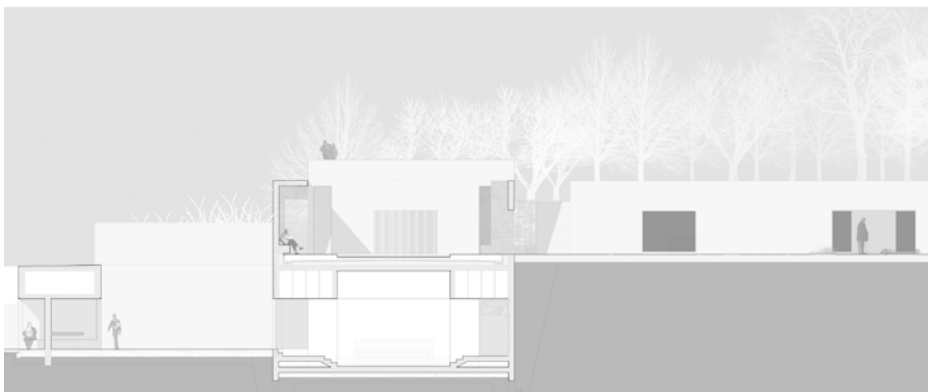
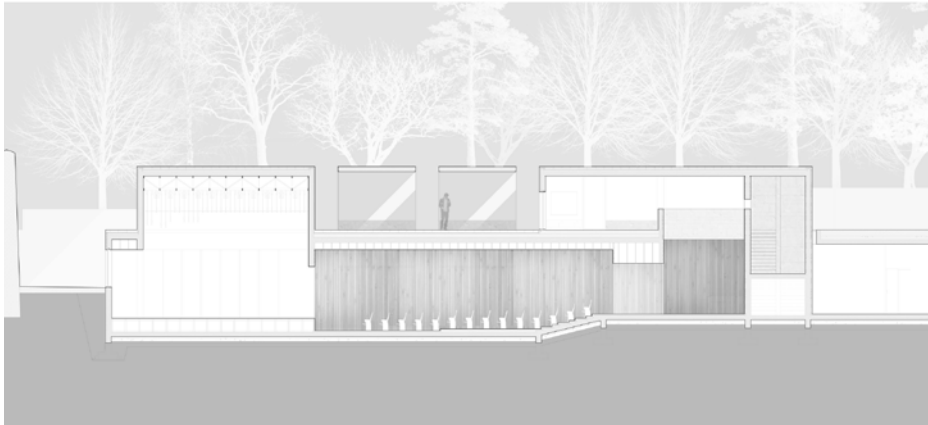
3

Special Inversions, Multipolar Trajectories via City and Home [4]  
Ana Sofia Amador, Final Course Project, 2013

Architecture as Enclave: reflections on the Santa Marta enclosure  
João Gonalo da Silva Moreira, Master's Dissertation, 2013



4



5

## TESTIMONIALS



*During the Architecture course at the FA I acquired a strong critical spirit and solid conceptual ideas. To achieve this it was necessary to work hard and continuously, often giving up my free time and going through major upheavals in terms of self-esteem. The enjoyable study trips, workshops I was involved in part in and socialising with my colleagues (particularly interesting people) opened my eyes and broadened my horizons!*

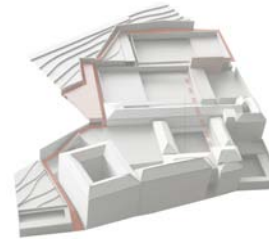
**Simão Silveira Botelho** [simaobot@hotmail.com](mailto:simaobot@hotmail.com)

Master's in Architecture, FA, 2010

Secil Universidades Prize 2010

Worked at the offices of Architect João Luís Carrilho da Graça

Currently working for Site Specific - Arquitetura



*The Integrated Master's in Architecture at the Faculty of Architecture in Lisbon enabled me to develop the ability to analyse and reinterpret the world around me. The teachers provided me with the essential tools in the various areas of knowledge to enable me to "read" and "re-write" spatial problems.*

**Ana Bruto da Costa**

Master's in Architecture, FA, 2012





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## ARCHITECTURE STUDIES

1st CYCLE + 2nd CYCLE • Integrated Master's  
in Architecture • Integrated Master's in Architecture –  
Specialisation in Interior Architecture • Integrated  
Master's in Architecture – Specialisation in Urbanism

3rd CYCLE • PhD in Architecture

## CONTINUING EDUCATION

Specialist courses and advanced studies

