

1ST YEAR - 1ST SEMESTER

A01YΠ ARCHITECTURAL DESIGN I – ELEMENTARY PRINCIPLES AND NOTIONS

1st Semester

Compulsory Course

8 h/w

12 ECTS

First part of an annual introductory study on the concepts of architectural composition, in both theory and practice. By activating the students' creative forces, the course seeks to familiarize them with the means of architectural representation. A considerable part of the course relies on theory and explores architectural synthesis by recourse to key principles and concepts of architectural composition, structure, constitution, such as basic properties, elements and archetypical arrangements of spatial phenomena, etc. The theoretical procedure is developed through both lectures and the use of an educational model of compositional applications. In addition, students are given two projects in line with theory: Firstly, to investigate the compositional structure of a realized object (of their choice); secondly, to analyze, perceive and represent the built environment. The class is divided into three sections. Students work in groups of two, both in the studio and at selected locations of the city, assisted and critiqued by the instructors.

A02YΠ HISTORY OF ARCHITECTURE AND ART I

1st Semester

Compulsory Course

4 h/w

3 ECTS

First Part: HISTORY OF ARCHITECTURE – I

Diachronic transformations of the built environment in Eastern Mediterranean. Architecture of the Greek area: Prehistoric Architecture. Ancient Near East, Egypt and Mesopotamia. Minoan - Cycladic - Mycenaean culture. Geometric and Early Archaic period. Ancient Greece (Archaic - Classical - Hellenistic period). Roman architecture.

Early Christian and Byzantine architecture: Historical data, theological backgrounds, materials and techniques, forms and functional elements, architects and sponsors. Early Christian Architecture. Byzantine architecture. The dissemination of Byzantine architecture to East and West.

Second Part: HISTORY OF ART – I

General characteristics of artworks. From Antiquity to Medieval Times: The art of Prehistoric man. The Ancient Near East. Egyptian Art. Greek Art: Aegean Art, Archaic Art, Classical Art, Hellenistic Art, Etruscan Art, Roman Art, Early Christian and Byzantine Art, Romanesque Art, Gothic Art

A03YΠ VISUAL ARTS I

1st Semester

Compulsory Course

4 h/w

6 ECTS

The course introduces students to theory and practice, mainly through laboratory exercises, research and clarification of the basic concepts of space and aesthetic form, and the relation between them.

Emphasis is given in parallel to the familiarization of students using representational tools and techniques, as the ideas and intentions of thought and expression for critical analysis, evaluation and presentation of visible and hidden qualities, places and spatial situations.

The work which is developed concerns the visual documentation and presentation of objects and spaces with various illustrative and narrative media (drawings, photographs, video, animations, written text).

The course is based on laboratory exercises and supported by theoretical lectures, presentations and similar literature.

The teaching method encourages experimentation, critical perception, thought and free expression. This promotes and develops personal creative initiatives, sensibilities and skills, in a climate of cooperation and dialogue.

A04YΠ STRUCTURAL SCIENCE I
– RIGID BODY MECHANICS

1st Semester

Compulsory course

4 h/w

3 ECTS

First course of a yearly study cycle explaining the basic principles of equilibrium, types of structural members and stresses, the statically determinate and indeterminate structural members. The cycle aims at essential knowledge of the basic concepts of Structural Mechanics and the optimum design of the Structural Support System of buildings. RIGID BODY MECHANICS emphasizes on support and the equilibrium equations in statically determinate simple or composite elements whereas DEFORMABLE BODY MECHANICS emphasizes on stresses and deformations of structural elements under loads, the mechanical behaviour of materials and the statically indeterminate elements.

Content

Basic principles of rigid body mechanics. Force, Moment, Equilibrium of forces, support of planar structural member, statically determinate members, loads, supports, reactions, free body diagram, types of full body linear structural members, equilibrium equations - diagrams of moment (M), shear (Q) and axial forces (N) in statically determinate beams. Reactions and N, Q, M diagrams in statically determinate frames. Complex member composition, calculation of reactions, N, Q, M diagrams. Trusses. Flexible members.

Teaching method

Theory/lectures, tutorials/practical exercises in small groups of students.

Assessment method

Written exams.

A05YΠ TECHNOLOGY I
– BUILDING CONSTRUCTION AND MATERIALS

1st Semester

Compulsory course

4 h/w

3 ECTS

Initial course to Architectural Technology aiming at introducing students to Building Construction.

Survey of the theoretical prerequisites on Building Science.

Specific Contents: building systems, basic elements - methods - and steps of construction, main features of typical building material.

A06YΠ COMPUTER-AIDED DESIGN I

1st Semester

Compulsory course

4 h/w

3 ECTS

The module is an introduction to architectural computer design and the production of a 2D visualization of a project, through the use of autoCAD. During the semester several 2D exercises of graded difficulty familiarize students with the CAD environment, in order to learn how to support an architectural project with the necessary 2D documentation. The module also includes the teaching of sketchup program, as an introduction to the 3D design environment.

1ST YEAR – 2ND SEMESTER

B01YΠ ARCHITECTURAL DESIGN II – ELEMENTARY PRINCIPLES AND NOTIONS

2nd Semester

Compulsory Course

8 h/w

12 ECTS

This studio forms an organic extension of course **A01YΠ**. Issues of composition, organization and representation of architectural space are introduced, aiming at the familiarization of the student with procedures, methodology and techniques of architectural design, by means of appropriately selected small scale projects. Theory includes issues such as the means of spatial representation, the programmatic and building data and various ergonomic parameters involved in architectural design and also an analysis of factors affecting the conditions and problems of an architectural project. Students are asked to prepare two assignments: the first concerns a permanent non enclosed structure where students are asked to compose building elements in an architectural set-up. The second deals with the design of a building in a specific site, with a relatively simple program. The class is divided into three sections. Studio work is organized in groups of two students, assisted and critiqued by the teacher responsible for each section.

B02YΠ HISTORY OF ARCHITECTURE AND ART II

2nd Semester

Compulsory Course

4 h/w

3 ECTS

First Part: HISTORY OF ARCHITECTURE – II

The architecture in the Balkans and the Greek area during Ottoman period. The impact of Istanbul and Central Europe. Traditional villages and houses. Buildings with defense, social and economic functions. Post-Byzantine religious architecture. Architecture of the Ottomans - the new face of the Balkan city.

Venetian domination: Urban elements and settlement organization. Residential houses, mansions, villas, farm houses. Towers. Public buildings. Churches, monasteries.

Neoclassical architecture in Greece - 19th century. Influences of European historical styles.

Second Part: HISTORY OF ART – II

From Renaissance to Realism: Flemish Art. Italian Renaissance. Mannerism and other trends. The Renaissance in the North. The Baroque. Neoclassicism. Romanticism. Oriental Art. Realism.

B03YΠ VISUAL ARTS II

2nd Semester

Compulsory Course

4 h/w

6 ECTS

The course focuses on further familiarization of students with practical measures, documentation and presentation techniques of perceptual and mainly optical characteristics, which give meaning and highlight the particular "character" of affairs and spatial situations, individually or collectively.

In addition, through designs under scale, spatial structures, methods of proper handling, these elements are explored in order to yield specific aesthetic character in the resulting form, which promotes the creation of target "atmospheres" in the interior and surroundings.

The course is based on laboratory exercises and supported by theoretical lectures, presentations and similar literature.

The teaching method encourages experimentation, critical perception, thought and free expression. This promotes and develops personal creative initiatives, sensibilities and skills, in a climate of cooperation and dialogue.

B04YΠ STRUCTURAL SCIENCE II
– DEFORMABLE BODY MECHANICS

2nd Semester

Compulsory Course

4 h/w

3 ECTS

Second course of a yearly study cycle explaining the basic principles of equilibrium, types of structural members and stresses, the statically determinate and indeterminate structural members. The cycle aims at essential knowledge of the basic concepts of Structural Mechanics and the optimum design of the Structural Support System of buildings. RIGID BODY MECHANICS emphasizes on support and the equilibrium equations in statically determinate simple or composite elements whereas DEFORMABLE BODY MECHANICS emphasizes on stresses and deformations of structural elements under loads, the mechanical behaviour of materials and the statically indeterminate elements.

Content

Stresses and strains of beams. Three – dimensional stress conditions. Simple stress conditions. Moments of inertia – principal axes of inertia. Axial tension and compression of bar members - Hook's law. Technical Bending Theory. Simple bending. Shear. Temperature variation effects/Support failure. The elastic line of beam. Axial force bending (N+M). Skew bending-Core of a cross section. Torsion. Buckling. Compression and bending of composite sections. Deformations of statically determinate frames-Principle of virtual work. Statically indeterminate elements. The method of forces in the solution of fixed end beam. The uniform beam and the equation of three moments. The method of nodal displacement. Fundamental concepts in dynamic structural analysis and earthquake engineering. Elastic seismic response spectra.

Teaching method

Theory/lectures, tutorials/practical exercises in small groups of students.

Assessment method

Written exams.

B05YΠ TECHNOLOGY II
– INTRODUCTION TO SUSTAINABLE DESIGN

2nd Semester

Compulsory Course

4 h/w

3 ECTS

Initialization to Building Science and familiarization with the demands of the Greek and European Building Regulations.

Specific Contents: sound insulation (criteria of acoustic comfort, building elements' efficiency, simple and multiple walls, doors and windows), sun protection (buildings' orientation, transparency and shades), fire protection (fire resistance indexes, building materials' fire insulation), water proofing (humidity resistance indexes, building elements' protection), thermal insulation (basic notions and units, the Greek regulations), combinatory evaluation of insulating materials.

B06YΠ COMPUTER-AIDED DESIGN II

2nd Semester

Compulsory Course

4 h/w

3 ECTS

2D and 3D visualization of architectural design. Firstly, focus on the production of architectural space, in a 2D digital documentation and then, creation of a 3D digital reproduction with the use of 3d and rendering programs, (archiCAD, artlantis). Students get familiarized with 3D model space of architectural design via the design tools and methods provided by the software. Work on the creation of a 3d digital reproduction of architectural projects (from a small object to a 2-storey building). The use of artlantis helps students to explore the possibilities of creating a realistic representation of their own architectural projects.

2ND YEAR - 3RD SEMESTER

Γ01ΥΠ ARCHITECTURAL DESIGN III

3rd Semester

Compulsory Course

8 h/w

12 ECTS

The main objective of the course is to familiarize the students with the concept of “inhabiting” in the form of a small scale residence. The theme of the studio concerns the design of “a house for four persons”, i.e., a private family space with different choices of cohabitation. Although «a house» sounds so common an architectural issue, to actually design one is not that simple, insofar as a wide range of complex questions urge for appropriate answers. The course centers upon teaching and understanding the synthetic procedure through the following basic concepts: environmental factors, integration of the building to its immediate environment, introversion, extroversion, transparency, formulating the building’s program in the phase of designing, environments of inhabitancy and the way of life, private and public space, analysis of functions, organization and elaboration of indoor and outdoor spaces, solid and void, expression of form, significance of construction materials. The course is conducted with lectures and presentations.

Γ02ΥΠ HISTORY OF ARCHITECTURE AND ART III

3rd Semester

Compulsory Course

4 h/w

3 ECTS

First Part: HISTORY OF ARCHITECTURE – III

Architecture of Late Middle Ages, New and Modern Era in Europe: Carolingian and Romanesque architecture. Gothic Style. Renaissance - Mannerism - Baroque. Classicism and garden design. Rococo - Romanticism. 18th century: Enlightenment - Palladian Revival - Archaeological Neoclassicism in Europe. Gothic Revival. Romantic gardens. Structural Neoclassicism. Revolutionary Neoclassicism. Historicism, 19th century, Second Empire Style - Victorian Gothic style.

Architecture after the industrial revolution: High Technology Constructions. Gothic Revival. Chicago School. Birth of Modern Architecture, 20th century. Prairie School. Organic architecture. Art Nouveau, Art Deco. School of Glasgow and the Arts & Crafts Movement. Secession - School of Vienna. Jugendstil - German Working Environment Association.

Second Part: HISTORY OF ART – III

European modernism: From Impressionism to Surrealism: Impressionism, Post-Impressionism, Fauvism, Cubism, Orphism, Futurism, Expressionism, Abstraction, Dada, Suprematism, Constructivism, Surrealism.

Γ03ΥΠ VISUAL ARTS III

3rd Semester

Compulsory Course

4 h/w

3 ECTS

The main objective set in this semester is the investigation and reflection of the relationship between perceptual and conceptual content of aesthetic form, as it is captured in a specific context or occurs during the formative and representational process.

Through individual or group projects, lectures and presentations, students are encouraged to develop methods for experiential exploration of these relationships. Alongside the emphasis on understanding of the possibilities arising from the use of various visual, audiovisual and narrative tools and techniques and their combination for the identification, evaluation and presentation of visible and invisible parameters that define the "personality" and "identity" of specific places and spatial situations.

The ultimate goal is the creation of representative iconographic audiovisual or plastic forms that selectively reconstruct reality and recorded information, that derive from observation, which reveal the particular aesthetic and conceptual content, as it is experienced and internalized in the individual or collective level.

F04YΠ STRUCTURAL SCIENCE III
– STEEL, TIMBER AND COMPOSITE STRUCTURES

3rd Semester
Compulsory Course
4 h/w
3 ECTS

Content

The course examines and describes in detail the organisational system, the structural support system and the design of steel, timber, mixed and composite structures, masonry structures and special structures. The main aim of the courses is the acquisition of basic knowledge concerning the possibilities and limitations of the above-mentioned structural systems in meeting the requirements and facilitating completion of architectural construction projects.

Basic principles of steel, timber, mixed/composite, masonry and special structures organisation, concerning the requirements for the structural support system.

Systematic classification of structural support systems, selection criteria.

Analysis and design for elements in tension, compression, bending, shear, bending deformations, skew bending, bulking, torsion.

Coding regulations and calculation methods.

Form and types of connections, riveting, bolting, welding.

Special structures: Roofs formed with cables and arches. Tensile structures. Membranes. Nutshells. Space trusses. Forms and basic design principles for domed and vaulted steel structures.

Teaching method

Theory/ lectures, tutorials/practical exercises, completion of relevant projects in small groups of students, fieldwork in construction projects.

Assessment method

Written exam – project submission/oral examination of the project.

F05YΠ BUILDING CONSTRUCTION DESIGN I

3rd Semester
Compulsory Course
4 h/w
3 ECTS

Introduction into building construction methods, emphasizing the inextricable interrelationship between such methods and the fundamental mechanisms of architectural design, along the following steps:

i. A series of lectures on the genealogy of building structures aims at keynoting the ideas of “structural economy”, “pertinent structural form”, “design purposefulness”. Such fundamental notions, essential to any constructive and design reasoning, are traced in a wide spectrum of urban and vernacular architecture, historical periods and cultural milieus. Moreover, they initiate an ongoing discussion on the main theme proposed by the course, i.e., the exploration of four distinct (more or less perennial) constructive strategies.

ii. Subsequently, the students are asked to illustrate a related instructive text, i.e., an exercise in the field of critical observation.

iii. Shorthand surveys of small scale constructions, in situ, assist the students in discerning the aforementioned building systems.

iv. The final 7-week studio addresses a simple project (e.g., bus stop shed). It serves as a testing ground upon which students may prove firm grasp and due manipulation of the aforementioned notions and building systems.

Students are being assessed in ii., iii., iv.

Γ06ΥΠ THEORY OF FORM AND PRESERVATION STUDIES I:

DOCUMENTATION, ANALYSIS AND PRESERVATION OF BUILDINGS AND MONUMENTS

3rd Semester

Compulsory Course

4 h/w

3 ECTS

The Theory of Forms and Preservation Studies I & II courses are the analytical phase of the student's approach to architectural values and the dialogue between the past and the present and aims at broadening the knowledge of the cultural tradition over time through the study and analysis of the architectural and residential complexes of the past.

Objective of the course I: To acquire the knowledge of the forms and rhythms that characterize the architectural works, to explore and analyze their evolution over time, in relation to the social context, the aesthetics, as well as their protection and preservation. It focuses on the deepening of the architectural composition of an existing building, through methods of depiction and documenting, critical observation and analysis of its creative and constructive process.

The lesson is taught in a mixed system and includes lectures, laboratory applications and exercises. The lectures concern the theoretical introductory approach, the exercises the deepening of individual themes and the laboratory applications the practical training of students in the field of documentation, analysis and application of theoretical knowledge.

The practical training concerns the architectural analysis and documentation of individual buildings - monuments of the Old City of Xanthi. It is prepared by student groups and the progress is controlled by the teaching group. Presentations of the stages of the exercise, in the presence of all the students, take place at predetermined intervals so that there is an exchange of views and experiences.

The aim of the exercise is:

- the familiarization of students with the methods and techniques of analysis and documentation of important monument buildings,
- the completion of all stages of a building-monument-based analysis and documentation study,
- the deepening on issues of recording, analyzing and evaluating architectural heritage.

Detailed weekly curriculum, bibliography, etc. is available on the website of the Theory of Form and Preservation Studies Lab and e-class. A rich bibliography on the course and the exercises required by the students is available on the Laboratory's website: <http://morfologia.arch.duth.gr/>

Critical, prerequisite fields (existing lower semester courses) - Applied Geometry (3d Representations), History of Architecture, Relevant subjects for other fields (existing higher semester courses): Theory of Forms and Preservation Studies II-III-IV, History of Architecture, Theory of Forms, Compositions, Building Restoration of Monuments.

The Laboratory of Theory of Form and Preservation Studies assists with the provision of books, specialized measuring instruments as well as with the help it provides to the students during the laboratory exercises in situ and during the data processing and processing in the laboratory.

Instructor: prof. Nikolaos A. Lianos

Bibliography: http://morfologia.arch.duth.gr/3o_etos/3o_exam_V/bibliografia.pdf

Γ01ΕΠ ARCHITECTURAL ANALYSIS AND SPACE COMPOSITION. SPECIAL TOPICS I

3rd Semester

Elective Course

4 h/w

3 ECTS

The course deals with small-scale architectural space arrangements in the context of ordinary uses. It specifically addresses the scope of design issues involved in a "palpable" mode of perceiving and experiencing architecture. These appear gradually as one proceeds from a general to a closer scale and understanding of the work and are critical towards defining its characteristic qualities. The course aims at making students familiar with a set of parameters upon which the integration and finalization of the project depends, as well as with the study of arrangements, equipments, configuration and elaboration of spatial sectors and surfaces. Theoretical presentations include matters such as design unity, the degree of design integrity, contexts thanks to which an architectural work is activated, studies on details, specifications,

ergonomics, function, construction, aesthetics, as well as ways and principles of spatial elaboration (materials, textures, colours, furnishings, lighting techniques, signage and graphics). The students are assigned a project, i.e., they are asked to review accordingly a theme already worked upon (in a previous semester). By means of meticulous analysis, proper designation of constituent structural parts, definition of equipments, exploration of alternative orderings, they seek to highlight the spirit of the design concept as well as to attain a composition characterised by unity and consistency. Studio work is conducted by groups of two students.

Γ02ΕΠ DIGITAL REPRESENTATIONS – MULTIMEDIA

3rd Semester

Elective Course

4 h/w

3 ECTS

During this course, the students will be further familiarized with the use of various depictive mediums, as well as with digital 2-dimensional and 3-dimensional design. Seminars and practical applications will present both the sound and image techniques and systems of digital 2-dimensional and 3-dimensional depiction and procession of image and video (Photoshop, Premiere Aftereffects, Rhino, Grasshopper, Artlantis). Moreover, ways to combine different mediums will be presented. The course aims at the examination and comprehension of the potentialities these mediums offer with respect to a complete and persuasive procession and presentation of issues that concern the perusal, substantiation, interpretation and procession of the qualitative and geometrical features of space.

2ND YEAR - 4TH SEMESTER

Δ01ΥΠ ARCHITECTURAL DESIGN IV

4th Semester

Compulsory Course

8 h/w

12 ECTS

The studio examines aspects of residential design characterized by a moderate degree of complexity. The students work on a small high-rise, mixed-use residential complex located in a dense urban sector. Design criteria and principles include: Interpretation of the brief, modules' interrelationships, private and collective spaces, osmosis with the surroundings, interactions between interior spaces and exterior form, architectural response to the climate and behavioural conditions of the tenants. The course (supported by lectures and presentations) aims at cultivating the students' ability to consider such necessary parameters and make such appropriate choices so as to bring about a complete architectural proposal.

Δ02ΥΠ HISTORY OF ARCHITECTURE AND ART IV

4th Semester

Compulsory Course

4 h/w

3 ECTS

First Part: HISTORY OF ARCHITECTURE – IV

Modern architecture: Industrial city - Classical Rationalism. Futurism. Expressionism in Germany. Main Modernism: De Stijl. Bauhaus. Suprematism, Constructivism, Rationalism in the Soviet Union. Purism. International Style. Architecture and State.

Contemporary architecture in Europe and Greece: Late Modernism, Neo-expressionism, Brutalism, Neo-Rationalism, Postmodernism, Deconstruction, Critical Regionalism. Inter-war, post-war and contemporary architecture in Greece.

Second Part: HISTORY OF ART – IV

Art since 1945: Abstract Expressionism. European Abstraction. Neo-Dada, Pop Art. Art and Technology. Nouveau Realism. Minimal art. Conceptual art. Process art. Arte Povera. Art in Space. Races Art. New tendencies.

Δ03ΥΠ VISUAL ARTS IV

4th Semester

Compulsory Course

4 h/w

3 ECTS

The course continues the negotiation of the subject of the previous semester with a focus on exploring the function and effect of visual forms and action, and their communicative ability in physical space, especially in the urban environment.

The work focuses on processing design programs for artistic interventions in the form of installations and actions, permanent or temporary, in direct relation to the particular place or urban environment that has already been studied and interpreted in the previous six months. A key objective will be to investigate the possibilities of such interventions to comment, to highlight, to topple or to create new spatial values and qualities.

Δ04ΥΠ STRUCTURAL SCIENCE IV

– REINFORCED CONCRETE DESIGN, EARTHQUAKE ENGINEERING

4th Semester

Compulsory Course

4 h/w

3 ECTS

Content

The course examines basic principles of structural analysis and design with emphasis on the Reinforced

Concrete structures subjected to static and dynamic actions.

Basic principles of ideal morphology of Reinforced Concrete structural systems. Identification of typical deficiencies of structural systems and design to minimize seismic vulnerability of Reinforced Concrete structures.

Basic concepts, Concrete, Reinforcing Steel, Mechanical Behaviour. Basic principles for the design of Reinforced Concrete Structures. Design of critical sections for bending with or without axial force, shear, torsion and punching. Buckling prevention. Serviceability Limit states regarding restriction of crack width and deformations. Basic principles for the design of structural elements. Solid slabs. Flat slabs, and slabs with voids. Staircases, beams, columns, foundations. Detailing rules for earthquake design. Morphology of structural systems. Building Requirements.

Teaching method

Theory/ lectures, tutorials/practical exercises, completion of relevant projects in small groups of students, fieldwork in construction projects.

Assessment method

Written exam – project submission/oral examination of the project.

Δ05ΥΠ BUILDING CONSTRUCTION DESIGN II

4th Semester

Compulsory Course

4 h/w

3 ECTS

The studio conducts a systematic exploration of conventional building construction issues, applied to a selected student project which is being checked anew, against a multitude of freshly introduced aspects and objectives, the fulfillment of which sets the *sine qua non* conditions with regard to actual construction: Relationship between the building and the ground; excavations and counterscarps; concise and efficient constitution of the load bearing structure; types of walls and roofs; insulation strategies; interaction with electromechanical ducts and appliances; stairways and floors; function and performance of fenestrations; metal or wood lightweight structures; simple spatial arrangements meant to increase the environmental disposition of the project; rainwater and gutters; railings; landscaping, etc.

The strenuous confrontation with building construction requisites may often result in unforeseen, beneficial modifications of the design proposed initially. Accordingly, the fundamental interrelationships binding together architectural conception and constructive decisions become gradually manifest. Large scale drawings and models are carried out in successive stages; a developing process which simulates the actual phases of construction, familiarizes the students with the construction site and directs decisions from the "general" to the "specific".

The teaching process is assisted by a series of presentations on related issues.

Δ06ΥΠ THEORY OF FORM AND PRESERVATION STUDIES II:

DOCUMENTATION, ANALYSIS AND PRESERVATION OF HISTORIC SITES.

4th Semester

Compulsory Course

4 h/w

3 ECTS

After completing the course Theory of Forms and Preservation Studies I, which concerned the deepening in architectural composition of an existing building, Theory of Forms and Preservation Studies II continues the analytical approach phase by working on urban level. The widening of the object of the morphological analysis-study from the individual monument to the historical ensemble (that is to say from the architectural to the urban scale) aims in contributing to the recognition and understanding of the traditional settlements of our country and at the same time to perceive the diachronic values of Architectural forms, and the need to protect them, which is the ultimate goal in accordance with internationally accepted laws and conventions (Monuments Maps, UNESCO, ICOMOS, National Laws, etc.), where every urban or rural location with intense human activity and history testifies its culture and thus has a monumental value.

The course aims at developing students' interest in studying and documenting, not only the "high" architecture (public, religious, etc.) but also the simplest "humble". Even though these secondary buildings

don't stand out as "monumental", they are an integral part of an urban fabric that as a whole is also considered a monument and therefore needs protection and is subject to recording, analysis and critical assessment.

The lesson is taught in a mixed system and includes lectures, laboratory applications and exercises. The lectures concern the theoretical introductory approach, the exercises the deepening on individual themes and the laboratory applications the practical training of students in the field of documentation, analysis and application of theoretical knowledge.

The lectures take place on a weekly basis (see weekly course lesson) as well as by invited speakers specialized in specific thematic units. There are also educational visits to the city of Xanthi and the surrounding areas.

The practical training concerns the architectural analysis and documentation of the residential islets of the Old City of Xanthi. It is prepared by student groups and the progress is controlled by the teaching group. Presentations of the stages of the exercise, in the presence of all the students, take place at predetermined intervals so that there is an exchange of views and experiences. The aim of the exercise is to familiarize the students with the methods and techniques of analysis - documentation of residential complexes, to deepen on issues of recording, analysis and evaluation of the architectural heritage, to understand the historical evolution of the residential complexes in combination with the economic and social development of the wider region.

Detailed weekly curriculum, bibliography, etc. is available on the website of the Theory of Forms and Preservation Studies Lab and e-class. A rich bibliography on the course and the exercises required by the students is available on the Laboratory's website: <http://morfologia.arch.duth.gr/>

Critical, prerequisite courses:

Theory of Forms and Preservation Studies I, History of Architecture,

Relevant subjects for other higher semester courses:

Theory of Forms and Preservation Studies III-IV, History of Architecture, Arch. Design, Restoration of Monuments.

The Laboratory of Theory of Forma and Preservation Studies assists with the provision of books, specialized measuring instruments as well as with the help it provides to the students during the laboratory exercises in situ and during the data processing and processing in the laboratory.

Instructor: prof. Nikolaos A. Lianos

Bibliography: http://morfologia.arch.duth.gr/3o_etos/3o_exam_V/bibliografia.pdf

Δ01ΕΠ ARCHITECTURAL ANALYSIS AND SPACE COMPOSITION. SPECIAL TOPICS II

4th Semester

Elective Course

4 h/w

3 ECTS

The course deals with several qualitative and quantitative factors the importance of which is critical for the proper detailed organization and finalization of architectural space. It addresses especially those sectors and scales coded under the term «micro-environment», with respect to building units of limited size and ordinary or specific use. The aim is to familiarize students with parameters that affect architecture and to further their knowledge on spatial arrangements, equipment configurations, the grouping of materials and surface finishes. Theory focuses on presentation and analysis of examples related to the project specifications, equipment and use requirements, materials, colours, lighting techniques. Students are assigned a project in the form of a small existing building designated with a prospective use and are asked to submit detailed proposals concerning the facades, indoor and outdoor space according to the said use so as to reveal and express the appropriate architectural character and atmosphere. Studio work is conducted by groups of two students.

Δ02ΕΠ NEW MEDIA IN ARCHITECTURE

4th Semester

Elective Course

4 h/w

3 ECTS

3RD YEAR - 5TH SEMESTER

E01YΠ ARCHITECTURAL DESIGN V

5th Semester

Compulsory Course

8 h/w

12 ECTS

This studio intends to draw attention on the importance which the public realm (and the conditions of its proper visualization) bears upon present-day cities. The public essence inherent in architecture is being acknowledged as the primary factor which marks the status of both the collective social field and its artificial and/or natural context. In order to become critically aware of this multivalent essence, to define, highlight and activate it properly, the students have to design a public building of assorted uses (municipal market, educational workshops, meeting and entertainment milieus), located in the busy commercial hub of Xanthi. Special emphasis is directed to

- a) The proper regulation of parameters pertaining to the variously patterned open and semi-covered public spaces of the project (street/ arcade/ courts/ piazza/ garden, etc.), i.e., respective hierarchies, distribution, interplay with enveloped spaces, etc.; this compels the students to manipulate a range of architectural design issues, such as “spatial demarcation” and “accessibility”, the importance of which is nodal as regards the posited public character of the proposal.
- b) A design procedure that fosters the generation and organization of spatial dispositions as a result of multiple constitutive relationships held between the primary structural elements. Herewith the students come across design tools and notions, such as “homogeneity”, “autonomy”, “repetition”, etc., which contribute to the project’s rhythm and ordering.
- c) The selection of relevant materials for the implementation of the project, with a view to reconciling feasibility with the vision of an architecturally and technically advanced contemporary building.

The studio is supported by lectures, critiques and visits to public buildings in Greece.

The students are being assessed throughout the studio.

E02YΠ NEW TECHNOLOGIES IN ARCHITECTURE I

5th Semester

Compulsory Course

5 h/w

6 ECTS

E03YΠ BUILDING CONSTRUCTION DESIGN III

– ENERGY EFFICIENT DESIGN

5th Semester

Compulsory Course

4 h/w

3 ECTS

Building Construction is a common course extended in the fifth and sixth semester. It includes elements of architectural design and construction analysis, synthesis and expression. The main objective of the course is the discussion of the relationship between design and construction while formulating an architectural proposal. A public multifunctional building stands as the case study. Issues to be discussed: Criteria and principles of architectural design, urban space characteristics and their importance as design options, integration of the building into its environment, outdoor communal spaces, public movement and gathering spaces, interior space and functional units, structural systems of a large-scale construction, development of load-bearing structure, advanced structural systems, bridging wide spans, underground parking space, vertical communication, interior circulation.

Theoretical and methodological support for the design of energy-efficient buildings is given. Lectures and presentations for Climate (European and Greek data), Bioclimatic strategies for ventilation, applications), Passive solar and low energy systems, glass technology, overhangs and light shelves, Natural lighting (orientations, comfort criteria, applications).

E04YΠ URBAN PLANNING I

5th Semester

Compulsory Course

4 h/w

3 ECTS

Introduction to the methods of recognition and representation of the urban environment, in connection to the historical, economical, social and cultural factors by which it is determined. Main objectives of the course are: Familiarization of the students with the basic concepts and terminology; recognition of problems and potentialities inherent in the ever changing frame of urban activities and development; acknowledgement of the relations and interdependence between architectural constructions and the urban environment; gearing the ability of the students to conceive and represent accordingly the urban environment, as a means to communicate their thoughts and proposals.

The two course projects require studio team work, students-teachers collaboration and include a great deal of field work.

The first project concerns the compound recognition of a small city part of Xanthi (usually a few blocks) in terms of: built and open space relationships; characteristics of the built environment (structure of urban fabric, building periods, height and forms); characteristics of open space (designed or not, green areas, role and function); traffic conditions, parking and pedestrian movements; a detailed inventory and assessment of land use; institutional urban regime; social characteristics; landmarks. The purpose of the exercise is to introduce methods of identification and representation of urban space.

The second project deals with the identification process of an urban unit, usually in Xanthi, the evaluation of its identity and the identification of problems and opportunities in the light of a future urban intervention. The students use the tools with which they have become familiar in the first project, tailored to the size and characteristics of the specific unit, and end up with a process of "composite typology", both of the overall study area and of separate subsections.

Through these projects students are asked to approach the parameters of the city with a critical perspective, enriched by the elements of theory and analysis developed in the course.

The students are evaluated through the course projects (30% for the first and 70% for the second).

E05YΠ THEORY OF ARCHITECTURE AND ART I

5th Semester

Compulsory Course

4 h/w

3 ECTS

First Part: THEORY OF ARCHITECTURE – I

"Theory of Architecture" insights into architectural concepts and elements, which over time and disposition have concerned the architectural thought, both as regards the realisation of the project, as well as its criticism. From consideration and understanding the projects of great architects, to the comparison between architectural projects by architecture critics, till the connection with the humanities, the "Theory of Architecture" attempts to commune the importance of theory in practice.

Second Part: THEORY OF ART – I

About theory and history of Art: Economy and Art, Museums and Art, Cultural Management, Public Art, Private Collections, Criticism on Art

E01EΠ ARCHITECTURAL DESIGN METHODOLOGY I

5th Semester

Elective Course

4 h/w

3 ECTS

An exploration of the architectural design tracks as well as a quest for methods leading to a discernible composition language. The course is run as a studio and tackles issues such as: The complexity of reasoning involved into the architectural design procedure; subjectivity of ways by which the environment is perceived; particularities pertaining to various spatial instances. By means of such hints and corresponding successive exercises, the studio attempts to highlight notions, mental links and objective conditions that mingle in the fundamental relationship which binds the built with the unbuilt. It is upon challenging this

relationship, thence, that the students gradually acquire a clear view of the adventures of the architectural design formative process.

**E02EΠ THEORY OF FORM AND PRESERVATION STUDIES III:
MORPHOLOGICAL ANALYSIS AND REINTEGRATION OF CONTEMPORARY BUILDINGS IN
HISTORIC SITES**

5th Semester
Elective Course
4 h/w
3 ECTS

This is the first course of the 2nd circle of the Theory of Form and Preservation Studies III Laboratory, in which it is attempted to consolidate the knowledge of architectural styles and rhythms-styles, through the "synthetic phase" of the courses. Students are invited to creatively design and apply the analytical thinking, taught during the exploration and documentation of the forms and rhythms of the previous course.

As part of this process, students are invited to design and integrate modern constructions into historic residential complexes or archaeological sites, taking into account that any contemporary intervention must take in consideration the internationally accepted charts (Map of Venice, Amsterdam, Granada, Washington for historic cities etc.) and national laws, subject of specialized knowledge and architectural design manipulations with a strong theoretical background from the architect. By extension, in this lesson are developed: a) theoretical aspects of morphological investigation and analysis at the level of a single historical building and historical settlement, through lectures, visits and exercises; b) issues of morphological integration of new constructions in historical sites are investigated, as a factor of protection of their form and character; and c) the practical laboratory application of the above issues through the design and integration of a new building into a historic residential complex is attempted.

The basic exercise concerns the design of a modern residential building in the Old City of Xanthi. It is compiled by groups of three (3) students and covers the 5th winter semester of the academic year.

The students' progress in the subject preparation is checked weekly by the teaching group within the scheduled correction time set during each lesson, and at predetermined time intervals, there are total presentations of the stages of the exercise, in the presence of all the students, so that there is exchange of views and experiences. At the same time, small theoretical exercises aiming at the investigation and deepening of the students on related topics are being developed.

Critical, prerequisite courses: Theory of Form and Preservation Studies I-II.

Related subjects for other lessons: Theory of Form and Preservation Studies IV, Architectural Design, Restoration of Monuments.

Detailed weekly curriculum, bibliography, etc. is available on the website of the Theory of Form and Preservation Studies Lab. and e-class. A rich bibliography on the course and the exercises required by the students is available on the Laboratory's website: <http://morfologia.arch.duth.gr/> (under reformation - implementation).

Instructor: prof. Nikolaos A. Lianos

Bibliography: http://morfologia.arch.duth.gr/3o_etos/3o_exam_V/bibliografia.pdf

E03EΠ VISUAL ARTS V

5th Semester
Elective Course
4 h/w
3 ECTS

The theme of the course, is the applied negotiation of the relationship and connection methods of the aesthetic form with a certain conceptual content or idea. The work is aimed at further consolidating those theoretically and practically developed in previous semesters. Practices, tools and techniques are related to the whole process, from the critical analysis and the conception of the initial idea, to the design process and the establishment of the final proposal till their successful completion. The final proposal is supported through integrated design programs, in terms of process and the presentation of the final result.

One of the following topics can be selected for study:

A1. Stage design study for a particular play or

A2. Scenic and dramaturgical editing of a multimedia show that thematically and aesthetically is linked to a

specific urban or natural space.

B. Aesthetic intervention outdoors or indoors using different media and techniques (construction, installations, microenvironments, lighting, multimedia, etc.).

C. Object designing primarily focusing on aesthetics and functional connection and its inclusion to a specific spatial environment.

3RD YEAR - 6TH SEMESTER

ΣΤ01ΥΠ ARCHITECTURAL DESIGN VI

6th Semester

Compulsory Course

8 h/w

12 ECTS

The studio develops further issues concerning the “Public Buildings” architectural category. The theme is a Primary School located in Xanthi and the essential matters spring mainly from the specified “open school” character. This represents an issue largely discussed over the last decades, in view of a creative and liberating redefinition of the school’s role. It relates to a compound that, in conjunction with the facilities allotted to strictly educational purposes, is further provided with several functions and spaces (multi-purpose hall, library, music room, athletic activities, educational workshops) lending themselves (besides the pupils proper) to the surrounding community, thus, causing the extension of the school’s opening hours (afternoons, evenings, week-ends) and turning it into a catalyst for the enrichment of communal life. More specifically, the design procedure is primarily concerned with:

The classroom, considered as the substantial unit of the architectural whole; ways of organizing the functional groups of the compound; the effective disposition of (horizontal/vertical) circulation tracks; proper interrelationships between closed, semi-open and open spaces; ways of improving architectural responsiveness to climate and environmental parameters (orientation, natural light and ventilation, etc.) as a means to decrease dependence upon technology; the attainment of an attractive and efficient architectural overall expression based on a feasible and flexible structural system/concept and liable to relating evenly with the surroundings (urban fabric and natural environment).

Studio work evolves as a gradual elaboration of the proposal through a wide range of sketches, drawings and models under the continuous supervision of the teaching staff. Moreover, it is supported by lectures and visits to school buildings. The students are being assessed throughout the studio.

ΣΤ02ΥΠ NEW TECHNOLOGIES IN ARCHITECTURE II

6th Semester

Compulsory Course

5 h/w

6 ECTS

ΣΤ03ΥΠ BUILDING CONSTRUCTION DESIGN IV

– SUSTAINABLE DESIGN AND HVAC

6th Semester

Compulsory Course

4 h/w

3 ECTS

The course aims at highlighting the relationship between design and construction. The educational objectives involve the study of issues concerning the combination between architectural proposal and construction expression. The comprehension of this relationship will allow the students to be creative and, at the same time, enable them to promote innovative architectural ideas in terms both of design and construction. The significance of the construction materials and their use for the elaboration of the project is also discussed.

The students are encouraged to make appropriate choices for the form and the design of the supporting structures while developing a complete architectural proposal taking into consideration parameters affecting construction, such as environmental design and technology options. Interior organization of open layout office space area. Elaboration through design representations in construction detail scales (1:10, 1:5).

ΣΤ04ΥΠ URBAN PLANNING II

6th Semester

Compulsory Course

5 h/w

6 ECTS

The course deals with matters concerning the theoretical approach of the urban planning and the tools of the urban planning practice. It aims at: introducing to theory and history of the urban planning and design, mainly within the context of the European and Greek experience; to develop ability towards discerning thought and programming-planning skills in relation with the complicated and –always- transformable frame of urban environments; to develop special skills at the level of urban design.

The course project requires studio team work and collaboration between the students and the instructors. The project addresses the elaboration of an urban rehabilitation program and the design of the spatial interventions, having as a case study a specific urban area, usually in Xanthi.

The student evaluation comes through the course project.

ΣΤ01ΕΠ ARCHITECTURAL DESIGN METHODOLOGY II

6th Semester

Elective Course

4 h/w

3 ECTS

An extension and deepening of the main themes elaborated by course Ε01ΕΠ (ARCHITECTURAL DESIGN METHODOLOGY I). The studio posits a theme based on a simple brief (or “pretext”) and asks the students to conceive, elaborate and design a corresponding architectural proposal, holding firm grasp of the “built-unbuilt” relationship as the springboard of the formative adventure. In this context, special emphasis is drawn to the conditions of relating to the terrain and to the surroundings (thought of both as man-made and natural); in addition, the studio evokes and examines thoroughly crucial design aspects such as the interpretation of spatial arrangements in terms of geometrical structural patterns, and the exploration of fundamental elements as a means to constitute a discernible architectural code or expressive idiom.

ΣΤ02ΕΠ THEORY OF ARCHITECTURE AND ART II

6th Semester

Elective Course

4 h/w

3 ECTS

First Part: THEORY OF ARCHITECTURE – II

“Theory of Architecture” insights into architectural concepts and elements, which over time and disposition have concerned the architectural thought, both as regards the realisation of the project, as well as its criticism. From consideration and understanding the projects of great architects, to the comparison between architectural projects by architecture critics, till the connection with the humanities, the “Theory of Architecture” attempts to commune the importance of theory in practice.

Second Part: THEORY OF ART - II

About theory and history of Art: Technology and Art, Ecology and Art, Society and Art, Theosophy and artworks, Strategies, Aesthetics and Decoration

ΣΤ03ΕΠ VISUAL ARTS VI

6th Semester

Elective Course

4 h/w

3 ECTS

The theme of the course, is the applied negotiation of the relationship and connection methods of the aesthetic form with a certain conceptual content or idea. The work is aimed at further consolidating those theoretically and practically developed in previous semesters. Practices, tools and techniques are related to the whole process, from the critical analysis and the conception of the initial idea, to the design process and the establishment of the final proposal till their successful completion. The final proposal is supported through integrated design programs, in terms of process and the presentation of the final result.

One of the following topics can be selected for study:

A1. Stage design study for a particular play or

A2. Scenic and dramaturgical editing of a multimedia show that thematically and aesthetically is linked to a specific urban or natural space.

B. Aesthetic intervention outdoors or indoors using different media and techniques (construction, installations, microenvironments, lighting, multimedia, etc.).

C. Object designing primarily focusing on aesthetics and functional connection and its inclusion to a specific spatial environment.

4TH YEAR - 7TH SEMESTER

Z01YΠ ARCHITECTURAL DESIGN VII

7th Semester

Compulsory Course

8 h/w

12 ECTS

The course concerns the design of a building compound marked by cultural importance and social character, i.e., one which is expected to reinforce collective identity, memory and civic amelioration (a museum, a library, an arts center, etc.). Its objective is to gear all the interrelated parameters involved in architectural design into a well-tuned and eloquent spatial complex, capable of both responding to its functional requirements and transmitting its proper meaning in terms of a familiar “locus” to be and refer to; in addition, a spatial complex capable of being smoothly incorporated to the surroundings, in that it manages to envision, determine and activate essential links with them. The class is divided into three sections. Studio work is conducted in class by groups of two or three students under the supervision of the teaching staff. Intermittent group presentations and critiques. Theory, in the form of lectures and presentations support the studio.

Z02YΠ SMALL SCALE ARCHITECTURAL PROJECTS

7th Semester

Compulsory Course

4 h/w

6 ECTS

The course intends to foster the focused study of a range of architectural arrangements addressing both indoor and outdoor themes along a variety of typological cases, e.g., café, shop, apartment, art-gallery, as well as specified fixtures and complementary elements such as furniture systems, fixed and movable equipment, signage contrivances, etc. The spatial constituents are being examined in depth with the aim to highlight the importance a minutely detailed composition holds over the anticipated character of an architectural proposal. By way of a suitably themed project, the students get confronted with a multiplicity of issues, i.e., working in small scales, evaluating choices of materials on the basis of their properties and performance checked against a variety of factors, inventing construction details and relationships on the basis of a prospected aesthetic interaction, apprehending to manipulate the “volatile” impact architectural space may be attributed as regards symbolic expression and communicative power. The course is organized in studio form (two-membered student teams, work in class attended by the teaching staff, lectures and presentations complementing the studio).

Z03YΠ REGIONAL PLANNING

– CONCEPTS, INSTRUMENTS AND PROCESSES OF REGIONAL PLANNING AND REGIONAL DEVELOPMENT

7th Semester

Compulsory Course

4 h/w

6 ECTS

The course deals with definitions of the main theoretical components synthesizing the notion of regional planning: Space (geographical, social, economic and physical notions), Planning (necessity, variation of sectional interests and ethics), Development (historical evolution of the concept) and the “Region” as the main reference unit of regional planning. It also explores past experience of regional planning practice in Greece, providing information on the content, goals, institutions and legal framework. Additional emphasis is put on the actual regional planning practice within the EU policy framework, as well as on the main EU sectoral policies affecting regional development.

It is of critical importance that the course will contribute to the students’ familiarization with and understanding of the spatial dimensions in a wide range of problems and policies, always combining developmental, social, economic and environmental considerations.

The course project requires studio team work and the collaboration between students and teaching-staff.

The object of the project is the elaboration of a strategic plan drawing of intervention of regional scale,

usually in the level of a prefecture in the region of Thrace,

In the first phase students are asked for collection, analysis and evaluation of elements for the regional integration and organization of study area. Simultaneously they attempt the location of problems, investigation of their causes and estimation of tendencies and possibilities of territorial/regional organization and growth.

In the second phase students attempt the formulation of general principles for the growth of the region. Particular accent is given in the forms of tourist activities that are proposed to be introduced in the region and in their relation with the natural environment, the identity of place and the characteristics of the existing settlement network.

The student evaluation comes through the course project.

Z04YΠ RESTORATION, REDESIGN AND REVIVAL OF HISTORIC BUILDINGS AND SITES I

7th Semester

Compulsory Course

4 h/w

3 ECTS

Lectures-presentations on theoretical approaches and presentation of applied studies intending to familiarize students with the theoretical and methodological issues of restoration, redesign and reuse of historic buildings and sites, as well as the specific techniques and materials used. The assimilation of this knowledge is checked by written examinations at the end of the semester.

In parallel students perform **practical training** which relates to survey, design visualization, analysis and documentation of a representative building from the historic center of Xanthi. It aims to cultivate the ability of students to observe, analyze and understand the historic and aesthetic values of historic buildings through the systematic analysis and documentation of the types, forms and their special structural systems. The process of exercise done throughout the semester is presented and delivered at the end of the semester.

Z01EΠ FINANCING AND INSTITUTIONS – ASPECTS OF THE ARCHITECTURAL PROFESSION

7th Semester

Elective Course

4 hours/week

3 ECTS

Market and public interest

Private Assignments: Building permit/ Design/ Supervision/ Health and Safety/Fees and “opening the profession”/ Small practices and large companies/ A discrete Greek institution (“Antiparochi”)/ Petitions, accusations, legal complications/ Professional rights and permits

Public Assignments: Taxonomy of bidding tracks and methods/ Professional experience and expertise/ Kinds of architectural competitions/ Negotiations and fees/ Consultants/ Interdisciplinary teams and the architect’s role as coordinator.

The above mentioned topics are presented in class by way of recourse to experienced (and, sometimes, renowned) examples.

An extensive web of multiple relationships involved therein is revealed, discussed critically and analyzed. The task of tracing them discloses unexpected affinities between themes which at first glance are usually considered as being independent and remote, e.g., financing, legal codes, mandatory specifications, social conventions, bureaucratic structures, curricula, and the possibilities of attaining good/ acceptable/ unacceptable architecture, in both the public and private realm.

The presentations are meant to incite the students’ interest by way of projecting them into the multi-faceted professional adventure.

The course asks the students to produce successive papers of limited extent, in a seminar-like condition, in an order corresponding to the progression of the topics dealt with.

Students’ assessment is based in both the aforementioned papers and a final test.

Z02EΠ THEATER SPACE AND TECHNOLOGY

7th Semester

Elective Course

4 hours/week

3 ECTS

The course aims at familiarizing students with issues concerning theatre design and scenography equipment (stage mechanisms). A series of lectures with both historical and theoretical content are given, such as:

- the space as a sign of the theatrical code
- the theatre and the theatrical machinery in Ancient times
- the theatre in the Middle Ages and the Renaissance folk theatres
- the theatre in the Italian Renaissance, the Italian scene
- the theatrical era of Baroque and the theatre in the 19th century
- the avant-garde theatre of the 20th century
- the forms of contemporary theatre
- the stage infrastructure and the technical equipment of the modern halls

Z03EΠ STRUCTURAL SCIENCE V

– CONCRETE AND STEEL TECHNOLOGY

7th Semester

Elective course

4 h/w

3 ECTS

Content

The course examines all the basic characteristics of concrete and steel reinforcement and the corresponding European and Greek standards and regulations. Its main focus is the appropriate use of concrete and steel reinforcement in Reinforced Concrete Structures.

Cements: composition and hydration of the major compounds of cements, Types of cement, cementitious materials, blended Portlands cements.

Aggregates: classification, Sieve analysis - grading curves, physical and mechanical properties, Artificial aggregates.

Concrete: Properties of the fresh and hardened concrete, Non-destructive tests for definition of concrete quality, Types of concrete, Greek and European regulations and standards for concrete technology and reinforcing steel for concrete.

Deterioration of reinforced concrete due to corrosion of concrete or/and reinforcing steel.

Teaching method

Theory/lectures, tutorials/practical exercises in small groups of students.

Assessment method

Written/oral exam.

4TH YEAR - 8TH SEMESTER

H01YΠ ARCHITECTURAL DESIGN VIII

8th Semester

Compulsory Course

8 h/w

12 ECTS

The course concerns the design of a building compound marked by a powerful social character, i.e., one which is expected to reinforce patterns of collective involvement and civic participation (a Town Hall, a cultural center, a multi-purpose building, etc.). Its objective is to enforce the students' skills towards attaining a good hold of design consistency and a recognizable architectural "language". These assets will be pursued –and required- as key attributes of the project proposal. By way of exploring the multitude of interrelated parameters involved in the synthesizing process as well as "digging" deep into the latter's essential generative mechanisms, the course attempts to shed light on as much as possible aspects of the architectural design activity and strategies. Studio work is conducted in class by groups of two or three students under the supervision of the teaching staff. Intermittent group presentations and critiques. Theory, in the form of lectures and presentations support the studio.

H02YΠ URBAN DESIGN

8th Semester

Compulsory Course

8 h/w

12 ECTS

The course exploits the potential of the studio, as a form of design-based critical inquiry. The studio projects focus on topics related to contemporary Urban Design theory and practice, in conjunction with the architectural design for public places and buildings. Both studios emphasize on a multi scale approach to the urban site and Urban Design, i.e., an inter-disciplinary practice between architecture and urban dynamics.

By proposing such an "architecturally-expanded" teaching model for Urban Design, the public living places and the building environment are being treated as a continuum, with regard to relevant topology parameters and social activities.

The studio combines architectural concerns for site specificity, spatial experience, construction logic and physical form, with information associated with disciplines such as urban ecology and landscape design.

The sequence of the two semestral studios is intended to emphasize a) how the urban site design determines the quality of public living and b) ways by which operational mechanisms for urban transformations (on both the formal and programmatic levels) may spring from appropriate conditions of public engagement.

Relevant design tools and methods are presented in each studio, in order to provide the students with a "working language", necessary for the communication of Urban Design ideas and for the elaboration of critical skills aimed at testing and refining the interventions proposed.

Web page: <http://astikos2011.blogspot.com/> Web page of Architectural design: place – construction (Studio B): <http://arxitektonikos9b2011.blogspot.com/>

H03YΠ THEORY OF FORM IV:

MORPHOLOGICAL ANALYSIS, REINTEGRATION AND REHABILITATION OF MONUMENTS AND ARCHAEOLOGICAL SITES IN URBAN AND NON URBAN AREAS

8th Semester

Compulsory Course

4 h/w

3 ECTS

These courses (Theory of Form and Preservation Studies III & IV), are the synthetic phase, in which students are asked to apply the knowledge and experience of previous years, to specialized design topics, such as the integration of new buildings into a strong historical environment or archaeological sites, in order to protect and maintain and feature out the continuity of the settlements and historical sites.

The lesson is taught in a mixed system and includes lectures and laboratory applications.

The lectures concern the theoretical introductory approach of students on topics such as: Introduction to the philosophy of protecting and preserving monuments and historical complexes, diachronic exploration and morphological analysis - presentation of specialized topics in environments with a strong historical identity, architectural design questions of integration and reintegration of the architectural forms etc. Representative examples of ways of dealing with monuments, historical sites and archaeological sites are presented.

Laboratory applications concern the processing of a contemporary design issues, which aims at practicing and consolidating the theoretical approach.

Applications are being developed on specialized compositional themes, concerning the method of design approach of the re-integration and incorporation of contemporary constructions in intense historical environments for the purpose of protection, rehabilitation and re-use.

Detailed weekly curriculum, bibliography, is available on the website of the Theory of Form and Preservation Studies Lab and e-class. A rich bibliography on the course and the exercises required by the students is available on the Laboratory's website: <http://morfologia.arch.duth.gr/> (under reformation - implementation).

Critical, prerequisite courses: Theory of Form and Preservation Studies III.

Related subjects for other lessons: Architectural design, Building constructions, Restoration of monuments.

Instructor: Nikolaos A. Lianos

Bibliography: http://morfologia.arch.duth.gr/3o_etos/3o_exam_V/bibliografia.pdf

H01ΕΠ URBAN PLANNING III – CONTEMPORARY URBAN IDENTITIES

8th Semester

Elective course

4 h/w

3 ECTS

The course deals with the main points of the debate concerning the concepts of Urban Planning, Urban Management and Urban Governance, in relation to the Urban Design in contemporary cities. Through these concepts a series of non spatial parameters are being introduced into the disciplines of space that strongly interplay with the spatial, as well as the socioeconomic level, affecting the contemporary identity and future of cities.

These issues are being investigated through theoretical approaches and typical urban practices. Moreover there are references to contemporary legal or developmental instruments that are being gradually introduced in urban practices within the EU or Greek context.

The course project takes the form of a paper concerning either a critical presentation of selected bibliography, or an investigation of the main aspects of urban management issues in Greek cities with special emphasis on the region of Thrace.

The students' evaluation comes through the paper at the rate of 70% and through the participation and presentation in the course seminars at the rate of 30%.

H02ΕΠ RESTORATION, REDESIGN AND REVIVAL OF HISTORIC BUILDINGS AND SITES II

8th Semester

Elective course

4 h/w

3 ECTS

Lectures-presentations relate mainly to detailed presentation on realized restoration works and re-design projects, from the study to the construction and reuse of historic buildings, and revival of sites. The examples offer the students the opportunity to analyze and discuss both construction techniques and methods of restoration of historical structures as well as modern architectural proposals and the introduction of contemporary technology, enabling the historic building to meet the needs of our time.

In parallel students perform compositional **exercise**, based on the building analysis carried out during the winter semester: they are trained on designing structures and spaces aiming to both the maintenance and restoration of the building's historic shell, and to fully integrate a new function and modern architecture therein. The process of exercise done throughout the semester is presented and delivered at the end of the semester.

H03EΠ ARCHITECTURAL ACOUSTICS

8th Semester

Elective course

4 h/w

3 ECTS

The course aims at providing theoretical and applied support to students for the designing of a large-scale educational project (theatre, concert hall, multi-purposed halls).

Specific Contents: Acoustic design parameters (seating capacity, volume and area proportions), Visual design (visual comfort, tracing techniques, circulation and safety of the audience), Reflectors design (geometrical tracing in 3D simulation), Acoustic correction (reverberation time, interior revetments).

H04EΠ OUTDOOR PUBLIC SPACES

8th Semester

Elective course

4 h/w

3 ECTS

5TH YEAR - 9TH SEMESTER

001YΠ ARCHITECTURAL DESIGN IX a

– ARCHITECTURAL, BUILDING CONSTRUCTION AND URBAN DESIGN TOPICS

8th Semester

Compulsory Course

8 h/w

10 ECTS

This intensive studio emphasizes on

- i. The fruitful cooperation and re-integration of several “specializations” in which architecture is customarily (and often mistakenly) divided. Students are encouraged to develop all-inclusive design strategies by means of which the manifold requirements and conditions appertaining to the project should constantly be acknowledged, activated and expressed accordingly with regard to the needs and potentialities of each successive stage in the design development. This procedure involves consecutive acts of ordering, tracing potential overlappings, efficiently combining the constituent parts of the problem so as to attain a well-balanced whole.
- ii. Familiarization with characteristic professional conditions (for instance, an architectural competition), whereby students are confronted with extensive demands as to both the content and display of the project, under the pressure of a short deadline.
- iii. Instilling a definite ideological stance towards which the architectural intention and proposal should be consistently directed. Claiming specific preferences and, consequently, producing documented value-judgments constitutes a high and critical scientific responsibility. Moreover, on the occasion of studio criticisms, the commentation upon the relative quality, state and concomitant traits of such claims processes a variety of stimuli, approaches and techniques which, in turn, prove beneficial for the success of the project.

The studio highlights the problems and tensions inherent in an extensive urban district and investigates the conditions for a total rearrangement of it in the light of the aforementioned principles, as follows:

- a) Master plan (drawings and model in scale 1:500);
- b) A characteristic portion (30%) of the scheme is selected for further elaboration in scale 1:200;
- c) The construction of specific constituents of the project is dealt with in detail.

Students are assessed throughout the studio as well as in a final review.

002YΠ ARCHITECTURAL DESIGN IX b

– ARCHITECTURE IN THE LANDSCAPE

– NEW TECHNOLOGIES IN ARCHITECTURE

8th Semester

Compulsory Course

8 h/w

10 ECTS

Studio a: The design course deals with issues of specific requirements, where the architectural design, could be perceived as a comprehensive multi-parametric procedure. Particular emphasis is given on how knowledge, which coming from individual courses of previous years, might be formed and articulated in a unified and holistic approach to architectural design. New redefinitions of conventional hierarchies of objects, make clear that distinctions, made in previous semesters, have administrative and not substantive in nature.

The course emphasizes the interdisciplinary as a treatment of the physiognomy of the place and the inter-conjunctions between "natural" and "artificial", during the architectural synthesis.

"Place", with its uniqueness, is treated as a kind of platform for inventing construction, which can be raised (by attached, developed, articulated etc), without exhausting the selected site.

Despite the strong conceptual approach offered by the place through the initial interpretation, students attempt to invent an actual intervention, that can reverse or extends the conceptual content at different growth stages of design.

The course examines the connection of design with the conceptual framework, within which it is developed. Students have to support their design choices, through the idea of concept, (such as habitation,

place, temporality, etc.) while the clarity of conceptual approaches indicates the architectural synthesis as an integral element of the current cultural environment.

The course is organized as follows:

- Design studio, focused on resolving the synthetic issue of the semester, operated in two days (Tuesday and Wednesday) 10 hours/week.
- Theory, made by a series of presentations by teaching staff of the course and also guest speakers, from different knowledge areas such as, architects, artists, philosophers, historians. In the above lectures theoretical aspects and design examples (case studies) are presented, giving students a suitable material to familiarize themselves and to acquire specific skills on a series of theoretical and practical tools.

Studio b: The design course deals with issues of specific requirements, where the architectural design, could be perceived as a comprehensive multi-parametric procedure. Particular emphasis is given on how knowledge, which coming from individual courses of previous years, might be formed and articulated in a unified and holistic approach to architectural design. New redefinitions of conventional hierarchies of fields, reveal the administrative character of distinctions made in previous semesters. Special attention is given in the analysis of architectural matters and the conjunction of theory and practice through the evaluation and critique of important architectural projects.

Students work in groups of 3-4 and they are invited to investigate, analyze and design their projects and to communicate with the other teams constantly. A blog is used as a tool of continuous interchange and presentations are organized every week. Theoretical interventions take place every week and teaching staff as well as students prepare and exchange investigations relative to the design studio. Evaluation is based on the project presented throughout the semester and the ongoing participation of each team during the progress of the studio.

<http://parasitehousingcell.blogspot.com/>