

What and Why

Educational objectives:

To define the constructive process as cultural and operative reference of the architectural practice; relation between idealization and materialization of architecture;

- To understand the architectural product as a complex environmental control system; protection of the natural and built environment; rational use of resources;
- To assimilate methodological aspects of the professional practice concerning the management of the complex quality of the architectural product, in relation with user requirements, norms and construction market offer;
- To appropriate the relation of the architect with other professional profiles involved in building design process, as an instrument to manage complex decision criteria; exercise the work in interdisciplinary teams.

The disciplines of the Chair are generally defining **two main areas: architectural technology and engineering sciences**, both of them including **theoretical activities** and **practical exercises**. Some of the activities (covering fundamental technological aspects) are **compulsory**; some other activities (representing a different degree of thoroughgoing and/or particular aspects in the field) are **optional**.

The technological disciplines are generally focusing on **new building production**, but there are also disciplines dedicated to the study of the **existing/historic buildings** and the technological aspects involved by their **restoration/rehabilitation**.

The teaching activities of the Chair include:

- 26 Semester Theoretical Disciplines (17 Compulsory + 9 Optional)
- 3 Specialty Projects (2 Compulsory + 1 Optional);
- Practice in Building Site

The technical disciplines and their curricular distribution are synthetically presented in the enclosed table (in relation with design studio objectives and activities).

During the junior cycle (the first 3 years), teaching is mainly descriptive and analytical, focusing on certain basic aspects: relation building-environment; morphology of building and role of different component parts; building materials and products; general principles of technological design; basic elements of working details, concept and representation. In the 1st and 2nd year of study, all disciplines are compulsory; optional disciplines are introduced in the 3rd year.

TECHNICAL DISCIPLINES IN ARCHITECTURAL TRAINING at UAUIM Bucharest / ROMANIA RELATION WITH DESIGN STUDIO

'ARCHITECTURAL TECHNOLOGY' DISCIPLINARY AREA; 'ENGINEERING SCIENCES DISCIPLINARY AREA'; COMPULSORY AND OPTIONAL ACTIVITIES.

1 st YEAR		2 nd YEAR		3 rd YEAR		4 th YEAR		5 th YEAR		6 th YEAR		
1 st Semester	2 nd Semester	3 rd Semester	4 th Semester	5 th Semester	6 th Semester	7 th Semester	8 th Semester	9 th Semester	10 th Semester	11 th Semester	12 th Semester	
JUNIOR CYCLE / ANALYTICAL STUDY						SENIOR CYCLE / SYNTHETICAL STUDY						
	STRUCTURAL MECHANICS I Reactions. Sectional stresses. 14 H	STRUCTURAL MECHANICS II Efforts and deformations. Diagrams of sectional stresses. 28 H	STRUCTURAL MECHANICS III Calculation of structural systems in bars 28 H	THEORY OF STRUCTURES I Columns and beams in reinforced concrete Masonry. The frame in reinforced concrete. 28 H	THEORY OF STRUCTURES II Frame systems in reinforced concrete Foundations. Floors. Shear walls in r.c. 42 H	THEORY OF STRUCTURES III Structural systems for multistoried buildings in seismic areas. 28 H	THEORY OF STRUCTURES IV Structures for ground-floor buildings with spans up to 45 m (optional course) 28 H	PERFORMANT STRUCTURES Removable constructions from the point of view of height and opening (optional course) 28 H	SPECIAL PROBLEMS OF STRUCTURES Special foundations; special steel structures, etc (optional course) 28 H	STRUCTURAL RESTORATION Structural interventions in the restoration of historic monuments (optional course) 28 H	INDIVIDUAL WORK FOR DIPLOMA DISSERTATION AND PROJECT Possible specialized field of diploma work: Urbanism, Restoration, Interior Design (and Architectural Technology - Form & Use)	
MATHEMATICS I Basic notions for mathematical modeling of physical phenomena and for CAD 28 H	MATHEMATICS II Elements of analytic geometry Theory of graphs. Theory of games 28 H				INSTALLATIONS & EQUIPMENTS Sanitary install. Heating Ventilation & air-conditioning Electrical install. Special install. 28 H							
BUILDING MATERIALS Technology of building materials and products. Properties of materials. 28 H	BUILDING TECHNIQUES I Morphology of building systems based on masonry and reinforced concrete. 28 H	BUILDING TECHNIQUES II Morphology of building systems based on wood and steel. 28 H	FINISHING I Walls Ceilings Floors Parapets 42 H	FINISHING II Stairs Roofing Joineries 42 H	PRACTICE IN BUILDING SITE Direct contact with existing or under construction buildings 56 H	BUILDING PHYSICS I Hygro-thermal control. Natural light Solar control. Sustainable development. 28 H	BUILDING PHYSICS II Comfort in buildings. Artificial lighting. Acoustical comfort. Safety in use. 28 H	COMPLEX BUILDING DESIGN Synthesis course. Global control of building performances. 28 H				
					HISTORY OF BUILDING TECHNIQUES Architecture as expression of technological and historic civilizations (optional course) 28 H	TECHNOLOGY OF BUILDING REHABILITATION Recovery of an existing building within the limits of its characteristics (optional course) 28 H	ARCHITECTURAL DETAIL DESIGN The assumption and specific characteristics of the detail concept in architecture (optional course) 28 H	RESTORATION TECHNIQUES Latest technological concept for building design ecologically-aware (optional course) 28 H	ECOLOGY IN ARCHITECTURE Latest technological concept for building design ecologically-aware (optional project) 196 H			
					TECHNICAL PROJECT I / CTS Current building technologies Working details CORRELATED WITH STUDIO DESIGN WORK 42 H	TECHNICAL PROJECT II / CTS Environmental control Working details CORRELATED WITH STUDIO DESIGN WORK 42 H	ENGINEERING CONSULTING Structural concept, installations and equipment INTEGRATED TO STUDIO DESIGN WORK 14 H	ENGINEERING CONSULTING Structural concept, installations and equipment INTEGRATED TO STUDIO DESIGN WORK 14 H	ARCHITECTURE-TECHNOLOGY-TOWN Optional programs (optional project)	ARCHITECTURAL TECHNOLOGY PROJECT / CTS Applicative research & executive building design (optional project) 196 H		ENGINEERING CONSULTING Structural concept, installations and equipment 14 H
ARCHITECTURAL ELEMENT: ARCHIT SCALE: RELATION FORM-FUNCTION: COLOR, LIGHT, SITE	RELATION AMONG ELEMENTS: MATERIAL: SITE	STRUCTURE OF SPACE AND STRUCTURE OF MATERIAL Dwelling	INFLUENCE OF THE CONTEXT-STRUCTURAL LOGIC-ROLE OF DETAILS Dwelling	ARCHITECTURE AND ENVIRONMENT Ecological architecture. Tourism & leisure	PLACE-FUNCTION-STRUCTURE-SIGNIFICANCE-FORM/DETAIL Urban multistoried dwelling	REHABILITATION/INSERTION IN HISTORIC URBAN CONTEXT Urban dwelling & Cultural programs	ARCHITECTURE-LANDSCAPE-TERRITORY/ Serialized accommodation spaces	ARCHITECTURE-TECHNOLOGY-TOWN/ Wide spans buildings General design & working details	ARCHITECTURE-TECHNOLOGY-TOWN Optional programs (optional project)			
1 140 H	2 140 H	3 140 H	4 140 H	5 140 H	6 140 H	7 140 H	8 140 H	9 210 H	10 196 H			
CHAIR: BASIS OF DESIGN (1st year) GRAMMAR OF ARCHITECTURAL DISCOURSE ABSTRACTION, COMPOSITION DESIGN STUDIO MANAGER:		CHAIR: ARCHITECTURAL DESIGN (2nd and 3rd years) BASIC EDUCATION OF THE PROJECTIVE THINKING; INTEGRATION OF HETEROGENEOUS INPUT DATA IN BUILDING DESIGN DWELLING TYPOLOGY, PUBLIC SPACE, ELEMENTS OF ENVIRONMENT. ARCHITECTURAL DESIGN DEPARTMENT				CHAIRS: ARCHITECTURAL SYNTHESIS 1+2 (4th and 5th years) METHODOLOGY OF THE EXECUTIVE PROJECT, CONSTRUCTION MARKET AND REGULATIONS. WORK IN PLURIDISCIPLINARY TEAM INTEGRATED ARCHITECTURAL DESIGN (CROSS-CHAIR DESIGN STUDIO) DESIGN STUDIO MANAGER: SYNTHESIS OF DESIGN DEPARTMENT						PROFESSIONAL PRACTICE in design studio or research structures 336 H

According to the present School curriculum (2001-2002)

During the senior cycle, the study is conceived in a synthetic manner; the compulsory disciplines are focusing on the complex building design, integrating all the previously studied topics in a global technological concept. New particular aspects are also studied in an integrative manner: comfort in buildings, safety in use, bio-climatic control, energy efficiency and ecologic compatibility of buildings. The optional disciplines are preponderant in this cycle, thoroughgoing various technical aspects of building design. A student has to choose at least one compulsory discipline in the area.

Teaching activities

● Courses

- Compulsory courses with related practical activities specified in the school curriculum (only for the junior cycle)
- Courses without practical activities specified in the school curriculum (some of the compulsory courses in the junior cycle, all the compulsory courses in the senior cycle and all the optional courses)

● Practical activities

- Compulsory seminars (bi-mensual seminars in 2 hour modules) generally consisting of small design exercises (working details concept and representation)
- Practical activities integrated to courses; according to the teacher

How

option, practical activities are intercalated between the theoretical lectures (ex. Technology of Building Rehabilitation, optional course 8th semester: 28 hours divided in 20 hours for lectures+8 hours for practical exercises, consisting of the diagnosis of an old building)

- Compulsory practice in building site (2 weeks, 28 hours/week): generally visits in building sites; investigation of the construction market; analysis of existing buildings (relation architectural composition / materials and details)
- Compulsory technical projects (2 projects x 3 weeks, 14 hours/week)
- Optional project (11 weeks, 18 hours/week, only for a group of 9-11 students)
- Compulsory engineering consulting for studio design work (for structural concept and installations, 14 hours/year, only in the 8th and 9th semester, and also for diploma project)

• **Individual applicative works of students**

Are an important component of the training process, especially in the senior cycle (specific for optional courses, but not only), aiming to stimulate the practical use of theoretical knowledge, the free option for thoroughgoing of certain aspects, the personal observations and opinions: analyses of projects; study of remarkable buildings/authors; in site investigation of existing buildings; bibliographical and archive research; etc. These kinds of works are support for debates within interactive courses and basic instruments for continuous evaluation.

Principles & methods

• **'Image' as main instrument for knowledge transfer in the architectural education**

In 'construction teaching' the 'visual communication' is generally used to illustrate the relation between form and its material support, between design as idealization of architecture and constructive process as materialization of the architectural idea. With few exceptions, the lectures are accompanied by images (projections of slides, transparencies, computer slide shows, video tapes) presenting various technological aspects integrated to the architectural design of buildings (generally focusing on famous architectural objects).

• **Non-mediate contact with materials, products and constructive process reality**

- seminars in the 'laboratory' of the Chair equipped with samples of materials and products
- visits in building sites
- practice in building site

It is very important for the students to 'feel' the materiality of the building with their own hands. In this field of preoccupations an interesting experience is **the students' construction enterprise, called PRIMA**. Initiated in 1995, it is functioning as a small building unit formed by students, within the practical training activities (practice in building site, 6th semester) coordinated by the Chair of Technological Sciences. Its aim is to offer to students in architecture a building context in which they can act directly on materials, make decisions and achieve results. In most of the cases the theme is a delicate detail work within a conservation task in relation with an old existing buildings. Placed in a different context that the traditional school training, this kind of practical work allows a complex training process which implies working in a group, taking initiative, assuming responsibility and decision making, good organization, social commitment, communication with administrative factors.

• **Contact with construction market and legislation**

- guest-firms presentations
- analyses of projects (previously elaborated by the students at 'design' studio) according to various comfort criteria, norms and construction regulations
- visits and practice in building site

• **Practical design exercises (architectural working details); interdisciplinary dialogue**

- seminars
- specialized design studio work
- cross-chair design studio work

As the construction teaching is directly related to the building process and the executive design, the **practical activities**, and mostly the **studio design activities** have an important role.

Relation with other disciplinary areas

Within the curriculum of the School, there is a general thematic coordination of the technological disciplines with complementary subjects in the School curriculum, studied in other scientific Chairs (such as: Theory of

Architecture, History of Architecture, Building Restoration) and in the studio design teaching, managed by Design Chairs.

Synergic activities with the Chair of History, Theory and Restoration, are presently in common attention of the two Chairs (ex. the study of the same representative buildings, at 'theory of architecture' and 'building techniques').

The technological disciplines are generally **mediating the relation between 'theory' and 'practice'** within architectural education. We can also observe (especially in cross-chair activities) that the technological disciplines can represent the 'theoretical' or the 'practical' part, depending on the 'reference system': in relation with the History, Theory and Restoration area, the technological disciplines are considered defining the 'practical' part; in relation with the Architectural Design Departments the technological disciplines are considered the 'theoretical' notions suppliers, to be integrated in studio design teaching.

Relation with studio design teaching

As a general rule, at UAUIM the **studio design is the most important teaching activity** and it occupies about half of the time for study. The studio design training is generally managed by the Architectural Design Departments.

There are also **cross-chairs studio design activities** and **specialized studio design activities** (managed by scientific profile Chairs), but their 'weight' in the studio design teaching is minor (8.4% for technological sciences)

- **Studio design teaching managed by the Architectural Design Departments**

The Chair of Technological Sciences generally offers the theoretical support for design practice (materials and details, structural concept, installations & equipment, environmental control and comfort in built spaces, etc); it tries to follow the didactic logic of the Design Departments as major managers of studio design activity.

Unfortunately, it was observed that the technological problems (especially those related to structural engineering and installations, but also others, as environmental control) are not sufficiently present in the design studio activity and not enough reflected by the projects of the students (including diploma project).

This year was experimented (at the 5th year) the elaboration of the 'working details' for the building generally designed at studio design under the coordination of the same Design Chair.

- **Specialized studio design teaching managed by the Chair of Technological Sciences**

The specialized studio design teaching presently consists of 'technical projects' (architectural working details, 3 weeks, 14 hours/week) continuing 'general architectural projects' previously elaborated under the management of Design Chairs.

The specialized design activity is normally concentrating on specific didactic objectives of our Chair, related to already studied technological disciplines. From this point of view, the formula of 'correlated projects' experienced for several years (see below) is not completely successful. The 'support-project' produced under the management of Design Chairs and 'offered' to us for detailing is not always complying with our didactic objectives (considering the type of program, the general concept of the building and the representation scale).

The specialized studio design teaching mainly has to be focused on special technological aspects of the building design (such as: climatic control, ecologic architecture, architectural acoustics, technological compatibility in building rehabilitation, special structural systems, building industrialization, etc) and not to elaborate 'working details' for projects casually chosen.

The 'working details' are obviously a necessary exercise to be integrated in studio design activities, but the current detailing practice can be in charge of the Architectural Design Chairs.

- **Cross-chair design studio activities**

Our Chair has experienced in time various cross-chair design studio activities, with the Chair of History, Theory and Restoration, with the Chair of Interior Design (we had some good experiences of correlated specialized projects) and especially with the Architectural Design Departments (correlated projects and integrated design activities).

The formula of the '**correlated technical project**' means the elaboration of the 'working details' (under the management of the Chair of Technological Sciences) for a general project previously elaborated under the management of another Chair; the project can be a restoration or an interior design project, or, most frequently, a new building architectural project.

The long experience of the technical projects correlated with the Architectural Design Chairs has shown some

practical difficulties (mentioned above); there is not always evidence of an effective integration between the Chairs and the activities are still considered separately by the students.

A good result has given the practice of **interdisciplinary work in design studio** (engineering consulting in 'integrated projects'); presently this kind of activity is limited to 1 project/year (14 hours), only for the 4th & 5th year of study.

Who

- Full time staff: 24 teachers; average age: 44 years
 - 17 architects
 - 4 civil engineers
 - 2 installation engineers
 - 1 mathematician
- Part time staff: mainly architects & engineers, regularly or occasionally collaborating, especially for studio design activity, but also as guest-lecturers for certain courses.

The Chair of Technological Sciences has a complex professional team, mainly based on architects and engineers with practical building design experience, part of them well known personalities in their specific field of competence.

The design and research work is an important component of the activity of the Chair staff. It points out the specialization of the staff members in certain professional fields corresponding to particular topics of the teaching activity (such as architectural acoustics, structural diagnosis, restoration, etc). For the staff members the design and research activity is an appropriate way to gain practical experience as a useful support for the didactic activity.

When and to What Extent

The technological disciplines represent **15.9% from the total number of teaching hours** (including min 28 hours of optional discipline in the area).

The study of construction begins in the first year and continues until the last year. The maximum number of hours is in the 3rd year (23%); it decreases during the senior cycle.

The distribution of construction teaching at UAUIM and its topics, is illustrated in the enclosed synthetic table; there is also specified the number of teaching hours for each discipline. The technical disciplines are put in relation with the studio design training managed by the Design Departments.

Dynamics and Tendencies

Mission statement

More attention given to the technological component of the architectural training is recommended by international documents

(see EC Directives and UNESCO Charter for Architectural Education); it is also a requirement repeatedly expressed by representatives of all the parts involved in the educational process (Main Board of the School, teachers, students)

In order to integrate in the Common European Higher Education Space, **to redefine the role of the technological disciplines and their specific pedagogy**, makes an important goal within the strategy of our School and Chair.

Problems and future intentions

- **Segregation between 'studio design' (Design Chairs) and 'theory' (Scientific Chairs) is generally accused.**

Recent analyses have pointed out that **the technological aspects of building design are not integrated enough into the studio design teaching**; the students projects don't reflect the necessary preoccupation for environmental and ecological aspects, and their impact on the architectural design; the engineering problems are not considered enough in the projects; there are not evident complex technological solutions, integrated to the projects.

The **synergy with the studio design** - as main teaching activity - is in our attention. But in reality it is possible only as a result of the common effort of all partners, based on reciprocity in knowing and understanding the specific didactic objectives of each disciplinary area.

As a good experience, **the practice of the interdisciplinary teams in studio design teaching has to be extended.**

- It is necessary **to give more 'weight' to the practical exercises in technological areas**, in traditional form (seminars, projects) and in **innovative manners**, as students working in building site, repairing or materializing personal designs.
- **Specialised design studios have to redefine their specific identity**, concentrating the practical exercises on topics illustrating special technologic aspects of building design. The importance given to the **specialised design studios** by the curriculum of the School **have to increase**. For the next year we intend to propose for the 5th year a new formula of compulsory 'technological design studio' organized in several optional thematic modules.

- The students consider that **some of the technological disciplines are 'abstract' and 'dull'**, without practical utility in studio design work.

From this point of view, the **engineering sciences area**, and in particular the **'theory of structures' teaching** represents a **'hot' point in the architectural education**. The engineering area has to redefine its objectives. We intend to reconsider the logic of the teaching route in this area, and also the teaching methods (especially the 'communication' instruments), to make the 'engineering teaching' pedagogy more appropriate for the psychology of the student in architecture. More practical exercises are necessary. Specific studio design activities, as the engineering consultancy or specialized studio design teaching, could be considered.

News

- **A Minor in Architectural Technology** was recently introduced (since 2001-2002). Like the other existing Minors (in Urbanism, Restoration and Interior Design), it is an extra curricular option recorded in the Grade Sheet; in order to obtain this certificate, a student has to attend 2 extra courses in the profile area + the specialized studio design work (in the 10th semester) and has to elaborate its diploma (dissertation and project) in the same field. **Two 'oriented' didactic routes** are possible within this Minor: (a) new building design and (b) building rehabilitation.
- For the first time in our School, during the current semester **optional projects in Architectural Technology** were elaborated. Next year (2002-2003) these students will have the possibility to elaborate **a diploma project in Architectural Technology**.
- As an innovative teaching method, an **experimental project** is now in act at the 3rd year (for a group of 15 students); it is a studio design work combined with practice in building site; it consist in **the complete executive design and construction of a small pedestrian bridge**.



"ION MINCU" UNIVERSITY OF ARCHITECTURE AND URBANISM, BUCHAREST, ROMANIA

MOTTO: 'Architecture is all about details. How we choose materials and put them together becomes the life of architecture...' (H.M.Jahn /Details in Architecture-2, 1999)

defining the constructive process as cultural and operative reference of the architectural practice
 understanding the architectural product as a complex environmental control system
 exercise the management of complex decisional criteria, in relation with the construction market offer
 exercise the interdisciplinarity in building design process

EDUCATIONAL OBJECTIFS

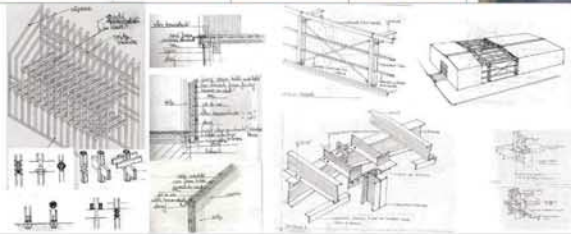
26 SEMESTRIAL THEORETICAL DISCIPLINES (17 compulsory + 9 optional)
 2 MAIN DISCIPLINARY AREAS: **ARCHITECTURAL TECHNOLOGY** + **ENGINEERING SCIENCES**
 3 SPECIALITY PROJECTS (2 compulsory + 1 optional); PRACTICE IN BUILDING SITE

1st year		2nd year		3rd year		4th year		5th year		6th year	
Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10	Semester 11	Semester 12

JUNIOR CYCLE/ANALYTICAL STUDY

SENIOR CYCLE/SYNTHETIC STUDY

STRUCTURAL MECHANICS (I) Reactions. Sectional stresses. 14 H	STRUCTURAL MECHANICS (II) Efforts and deformations. Diagrams of sectional stresses. 28 H	STRUCTURAL MECHANICS (III) Calculation of structural systems in bars 28 H	THEORY OF STRUCTURES (I) Columns and beams in r.c. Masonry. The frame in reinforced concrete. 28 H	THEORY OF STRUCTURES (II) Framed systems in r.c. Foundations. Floors. Shear walls in r.c. 42 H	THEORY OF STRUCTURES (III) Structural systems for multistoried buildings in seismic areas. 28 H	THEORY OF STRUCTURES (IV) Structures for ground-floor buildings with spans up to 45 m (optional course) 28 H	PERFORMANT STRUCTURES Remainable constructions from the point of view of height and opening (optional course) 28 H	SPECIAL PROBLEMS OF STRUCTURES Special foundations, special steel structures, etc (optional course) 28 H	STRUCTURAL RESTORATION Structural interventions in the restoration of historic monuments (optional course) 28 H		
MATHEMATICS (I) Basic notions for mathematical modeling of physical phenomena and CAD 28 H	MATHEMATICS (II) Elements of analytic geometry and theory of graphs 28 H				INSTALLATIONS & EQUIPMENTS Sanitary install. Heating install. Ventilation and air-conditioning. Electrical install. Special install. 28 H						
BUILDING MATERIALS Current materials producing technology. Properties of materials. 28 H	BUILDING TECHNIQUES (I) Building systems based on masonry and reinforced concrete. 28 H	BUILDING TECHNIQUES (II) Building systems based on wood and steel. 28 H	FINISHING (I) Walls Ceilings Floors Parapets 42 H	FINISHING (II) Stairs Roofing Windows & doors 42 H	PRACTICE IN BUILDING SITE Direct contact with existing or under construction buildings. 56 H	BUILDING PHYSICS (I) Hygro-thermal control. Natural light Solar control. Sustainable development. 28 H	BUILDING PHYSICS (II) Comfort in buildings. Artificial lighting. Acoustical comfort. Safety in use. 28 H	COMPLEX BUILDING DESIGN Synthesis course. Global control of building performances. 28 H			
					HISTORY OF BUILDING TECHNIQUES Architecture as observer of a specific technological evolution. (optional course) 28 H	TECHNOLOGY OF BUILDING REHABILITATION To evaluate the functionality of an existing building within the limits of its characteristics. (optional course) 28 H	ARCHITECTURAL DETAIL DESIGN The evolution and specific characteristics of the detail contained in structures. (optional course) 28 H	RESTORATION TECHNIQUES Technical problems concerning the restoration of historic monuments. (optional course) 28 H	ECOLOGY IN ARCHITECTURE Latest technological concepts for building design ecologically aware. (optional course) 28 H		



TEACHING METHODS:
 LECTURES WITH IMAGE SUPPORT. SAMPLES OF TECHNOLOGICAL ASPECTS INTEGRATED TO ARCHITECTURAL DESIGN
 DIRECT CONTACT WITH MATERIALS AND PRODUCTS (LABORATORY, VISITS, GUEST-FIRM PRESENTATIONS, PRACTICE IN BUILDING SITE)
 SMALL PRACTICAL DESIGN EXERCISES (2 HOURS MODULES)
 ANALYSIS OF PROJECTS AND/OR EXISTING REMARKABLE BUILDINGS (SEMINARS; INDIVIDUAL RESEARCH AND ESSAYS)
 SPECIALITY PROJECTS (ARCHITECTURAL WORKING DETAILS)

RELATION WITH DESIGN STUDIO:
 THEORETICAL SUPPORT FOR DESIGN STUDIO ACTIVITY
 CROSS-CHAIR DESIGN STUDIO ACTIVITIES
 ENGINEERING CONSULTING

ARCHITECTURAL ELEMENT, SCALE, RELATIONS: FORM-FUNCTION-STRUCTURE 1 140 H	RELATIONS BETWEEN ELEMENTS: MATERIAL, COLOUR, LIGHT; SITE-LOCATION 2 140 H	STRUCTURE OF SPACE AND STRUCTURE OF THE MATERIA 3 140 H	INFLUENCE OF THE CONTEXT/ STRUCTURAL LOGIC/ ROLE OF DETAILS 4 140 H	ARCHITECTURE AND ENVIRONMENT/ ECOLOGICAL ARCHITECTURE, TOURISM / LEISURE 5 140 H	URBAN DWELLING/ SITE-FUNCTION-STRUCTURE- SIGNIFICANCE FORM-DETAIL 6 140 H	REHABILITATION/ INSERTION IN HISTORIC URBAN CONTEXT/ CULTURAL PROGRAMS 7 140 H	ARCHITECTURE-LANDSCAPE-TERRITORY/ SERIALIZED ACCOMMODATION SPACES 8 140 H	MATHEMATICS (I) Basic notions for mathematical modeling of physical phenomena and CAD 28 H	MATHEMATICS (II) Basic notions for mathematical modeling of physical phenomena and CAD 28 H		
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CHAIR: BASIS OF DESIGN (1st year)
 GRAMMAR OF ARCHITECTURAL DISCOURSE
 ABSTRACTION, COMPOSITION

CHAIR: ARCHITECTURAL DESIGN (2nd and 3rd years)
 BASIC EDUCATION OF THE PROJECTIVE THINKING; INTEGRATION OF HETEROGENEOUS DATA IN DWELLING TYPOLOGY; PUBLIC SPACE, ELEMENTS OF ENVIRONMENT.

CHAIRS: ARCHITECTURAL SYNTHESIS 1+2 (4th and 5th years)
 METHODOLOGY OF THE EXECUTIVE PROJECT; CONSTRUCTION MARKET AND REGULATIONS, WORK IN PLURIDISCIPLINARY TEAM
 INTEGRATED ARCHITECTURAL DESIGN (CROSS-CHAIR DESIGN STUDIO)

MATHEMATICS (I)
 Basic notions for mathematical modeling of physical phenomena and CAD

DESIGN STUDIO MANAGER:

ARCHITECTURAL DESIGN DEPARTMENT

DESIGN STUDIO MANAGER:

SYNTESIS OF DESIGN DEPARTMENT

28 H

INDIVIDUAL WORK FOR DIPLOMA (DISSERTATION AND PROJECT) - from 2003
 Possible specialized field of diploma work: Urbanism, Restoration, Interior Design (and "Architectural Technology" - from 2003)
 Diploma of Architect with Major in Building Design. Possible certificate for Minor in Urbanism, Restoration, Interior Design (and "Architectural Technology" - from 2003)

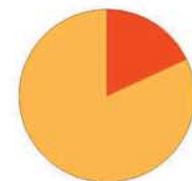
ENGINEERING CONSULTING
 Structural engineering, installations and equipment
 14 H



FULL TIME STAFF

FULL TIME STAFF:
 24 TEACHERS
 17 ARCHITECTS
 4 CIVIL ENGINEERS
 2 INSTALLATION ENGINEERS
 1 MATHEMATICIAN

PART TIME STAFF:
 MAINLY ARCHITECTS & ENGINEERS

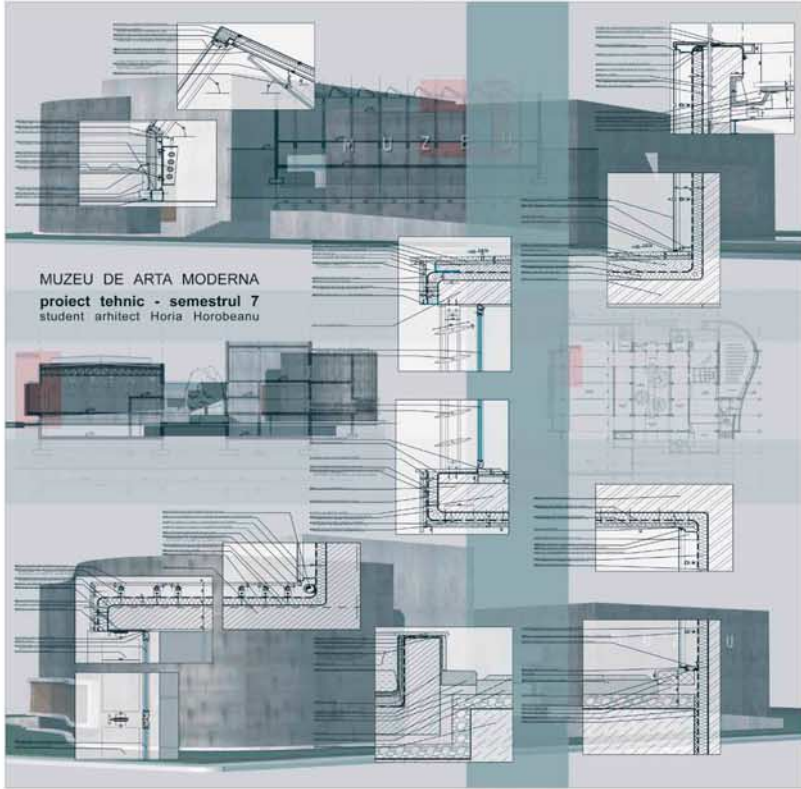


TECHNICAL DISCIPLINES: 15.9% FROM THE TOTAL NUMBER OF HOURS

TIMING



CLIMATE CONTROL Project for a MUSEUM



MUZEU DE ARTA MODERNA
proiect tehnic - semestrul 7
student arhitect Horia Horobeau

“PRIMA” THE FIRST BUILDING ENTERPRISE OF THE STUDENTS IN ARCHITECTURE



STUDENTS WORKING IN
BUILDING SITE

STUDENTS WORKING IN
BUILDING SITE

STUDENTS WORKING IN
BUILDING SITE

REHABILITATION AND CONSERVATION OF
HISTORICAL MONUMENTS - MEDIAS 1996-1998

WIDESPAN BUILDINGS Project for a SWIMMING POOL



BAZIN DE INOT - TINERETULUI
proiect tehnic - semestrul 9
student arhitect Alexandru Stoinescu



GENERAL VIEW OF THE 3D MODEL

STUDENTS WORKING IN
BUILDING SITE

STUDENTS WORKING IN
BUILDING SITE

STUDENTS WORKING IN
BUILDING SITE

REHABILITATION AND CONSERVATION OF
THE FORTIFIED EVANGELIC CHURCH
OF MOSNA



STUDENTS WORKING IN
BUILDING SITE

REHABILITATION AND
CONSERVATION OF
HISTORICAL MONUMENTS
VISCRI 1997-1998



STUDENTS WORK
BUILDING SITE