BRIEF GUIDE TO FACULTY CURRICULUM
ACADEMIC INFORMATION FOR EXCHANGE STUDIES

TECHNICAL UNIVERSITY OF CLUJ-NAPOCA
FACULTY OF ARCHITECTURE AND URBAN PLANNING
Dear exchange students and international partners,

This is a brief guide through the curriculum of the Faculty of Architecture and Urban Planning at the Technical University of Cluj-Napoca. We offer a six-year - bachelor and master integrated - programme towards obtaining the Diploma of Architect.

Holding high the formative impact, cultural enrichment, and creative inspiration of international experience in architectural education, we are committed to fostering sustainable and meaningful student and academic staff exchange. External participation in our diploma-project juries has become a tradition.

While in our Faculty courses are currently taught in Romanian, exchange students and staff are warmly welcome. We offer our mobility students English tutoring and guidance for project work and other practical assignments, as well as English references to support and complement theoretical disciplines.

We look forward to partnering in projects that enhance architectural education’s potential of playing a relevant, responsible, and regenerating role in contemporary societies and territories.
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<tr>
<th>Time</th>
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<tr>
<td>01:00</td>
<td>Mathematics</td>
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<tr>
<td>02:00</td>
<td>History of Ancient Architecture</td>
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<td>Traditional Furniture</td>
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<td>Furniture of the 20th Century</td>
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<td>History of Modern and Contemporary Architecture</td>
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<td>Building Types</td>
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MATHMATICS

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Objectives

Acquiring knowledge of analytic and differential geometry.
Obtaining the ability to generate solutions to architectural problems based on the aforementioned information.

Lecture / project contents

C1 Coordinate system in Euclidean space. Vector calculus.
C2 Vector algebra.
C3 Plane in space. Line in space.
C4 Projection. Distance. Angle.
C7 Second order surfaces. Quadrics.
C8 Generation of surfaces.
C14 Second fundamental form. Principal curvatures. Total curvature.
Seminar contents

Solving mathematical problems based on the courses taking place during the week.

Evaluation

Formative assessment during the semester (20% of overall grade) min. 5p/10
Written test which includes theoretical knowledge and problem solving. (80% of overall grade) min. 5p/10.

Selected bibliography

V. MIHEȘAN, *Geometrie analitică și diferențială, teorie si probleme*, Editura Mediamira, Cluj-Napoca
HISTORY OF ANCIENT ARCHITECTURE

Objectives

The study of the evolution of architecture throughout Antiquity and the Middle Ages is seeking to explain the different manifestations, expressions, and representations of the architectural and artistic instances, in accordance with the economical means, the technical development, the forms of social organization, the religious beliefs, and the life philosophy.

The main goal of the discipline is to develop competences and knowledge specific to the architectural profession, by understanding the phenomenon and the architectural process, which unfolds starting from Prehistory up to the end of the 15th century.

The study is contextualized, a fact which is essential for understanding the following periods of the history of architecture.

Lecture / project contents

Near Eastern Civilizations - the Architecture of Ancient Egypt
Mediterranean Civilizations. Ancient Greece - the Classical Period
Mediterranean Civilizations. Ancient Greece - the Classical Period (part 2) and the Hellenistic Period
Mediterranean Civilizations. Etruscan Civilization. Roman Civilization - Ancient Rome, Building Types
Mediterranean Civilizations. Roman Civilization - Building Types (part2)
Seminar contents

Evaluation

1 hour and 20 minutes written exam
The answers should include both text and drawings.

Selected bibliography

Objectives

Acquiring general knowledge about architectural theory and understanding the importance of it in architectural projects.

Lecture / project contents

C1 Introduction
C2 The relationship between architect, engineer and the team of people
C3 Short history of architecture
C4 Short history of architectural theory through ideas and conventions
C5 Fundamental architectural archetypes
C6 Composition, scale, perspective
C7 Architecture and other arts
C8 The limits of architecture and the are forms of building
C9 Digital transformation and new mathematics
C10 Current problems of mankind and inconvenient truths
C11 The theory of sustainability and futuristic architecture
C12 The new role of architecture
C13 Architecture (temporal and evergreen)
C14 Architecture- a free profession through evolution

Responsible:
Assoc. Prof. PhD Arch. Șerban Țigănaș

e-mail: dragos.tiganas@arch.utcluj.ro
Seminar contents

Evaluation

Final exam – written test; min.5p/10.

Selected bibliography

PIERRE VON MEISS, *De la forme au lieu + de la tectonique*, Presses polytechniques romandes, Lausanne
L. B. ALBERTI, *De re aedificatorie, On the art of building in ten books*, trad. J. Rykwert, R
T. N. LEACH, MIT Press, CambridgeRem Koolhaas, Elements, Marsilio, Venetia
ENVIRONMENTAL ASPECTS IN URBAN PLANNING

Objectives

Developing an understanding on the complex relationship between the natural and human-transformed environment and architecture at a diverse range of territorial levels.

Aquiring essential knowledge about the history of the city and of urbanism.

Lecture / project contents

C1  Introduction. Basic notions about urbanism and environment
C2  Natural limitations. Introduction.
C3  Relief. Implications in the development of settlements
C4  Soil. Vegetation. Water
C6  Material and energetic resources. Pollution. Social, economical and political aspects
C7  The process of urbanisation. Artificial Environment. Morphologic elements
C8  Morphologic elements
C9  History of urbanism. Introduction
C10 Urbanism in Ancient Greece
C11 Urbanism in Ancient Rome
C12 Urbanism and politics: Renaissance
C13 Urbanism and politics: Baroque
C14 Urbanism and politics: Classicisms
Seminar contents

Evaluation

Total: 0.8*T + 0.2*C, notebook evaluation = C, final exam - written test, 3 theoretical questions = T
Optional homework – can replace one of the 3 theoretical questions.

Selected bibliography

J.O. SIMMONDS, Arhitectura peisajului, Ed. Tehnică București 1967
R. LAURIAN, Probleme de estetica orașelor, Ed. Tehnica București 1962
W. SCHNEIDER, Varosok Urtol Utopiaig, Condolat, Budapest 1973
Z. MIESZKOWSKY, Elemente de proiectare în arhitectură și urbanism, Ed. Tehnică, București 1981
J. GARNIER, G.CHABOT, Geografia urbană, Ed. Stiințifică București 1971
J.L. HAROUEL, Istoria urbanismului, Ed. Meridiane București 2000
Legea 137/1995, legea protectiei mediului, republicata in M. Of. nr. 512 partea I din 22.10.1999
## Descriptive Geometry

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Objectives  
The main task of Descriptive Geometry (DG) in architectural education is to train three-dimensional thinking and to form a precise logical spatial vision, the development of effective solution strategies. At the beginning of studies, this competence is best fostered didactically by manual drawing and later by scale models, providing new means of formal concept analysis and representation. The course covers basic DG concepts, solving problems involving lines and planes in space and their relationships; axonometric projection - plan and elevation, giving students the intellectual capability of space perception and the principles of its graphical representation; locating points and tangents on solids and surfaces; and development of surfaces. The students get knowledge and skills for drawing solids, plane solid's sections and intersection. The course provides tools to imagine and represent with precision, dexterity, and virtuosity, a continually expanding expression of three-dimensional architectural form. Abstract thinking in DG is a perfect medium for design in three-dimensional space. This is best realised in topics and tasks related to architecture, thus maintaining a high motivation level, essential for successfully building up three-dimensional imagination and thinking.

Lecture / project contents

Introduction. Projection systems. Projective transformations (Homothetic, affine and perspective transformations)

Elements of descriptive geometry. Two-dimensional and three-dimensional representation of points and lines

Plane. Relative position of two different planes. Relative position of a line in relation to a plane

The methods of descriptive geometry. Changing the projection planes. Rotation. Folding. Circle in descriptive geometry

Polyhedral surfaces

Cylindro-conical surfaces

Responsible  
Assist. Prof. PhD Arch. Ana-Maria Graur

e-mail: Anamaria.RUSU@arch.utcluj.ro
Seminar contents

S1  Projective transformations.
S2  Orthographic projection.
S3  Changing the projection planes.
S4  Rotation.
S5  Folding.
S6  Representation of cylindro-conical surfaces.
S7  Planar sections and unfolding of cylindro-conical surfaces and polyhedral surfaces.

Evaluation

1 point seminar attendance  + 1 point by default +  8 points exam

Selected bibliography


5.00
THE STUDY OF FORM AND VISUAL REPRESENTATION 1

Objectives

Understanding the relationship between object and visualization.
Exploring the process of representation in relation to different techniques of portrayal.

Lecture / project contents

.responsible:
Lect. PhD Leonard Vartic

E-mail: leonardvartic@yahoo.co.uk

Teaching team:
Lect. PhD Arch. Andreea Pop
Assist. Prof. PhD Arch. Laura Patachi
Assist. Prof. PhD Arch. Alina Voinea
PhDs Arch. Verona Musteață

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Seminar contents

Practical works on subjects connected to the Design Studio Assignments, using manual techniques, with tutors’ guidance.

Evaluation

Formative assessment during the semester through regular engagement during the seminar hours. Evaluation of final portfolio. min 5p/10

Selected bibliography

ARCHITECTURAL DESIGN STUDIO 1

Objectives

- understanding the qualities and configurations of architectural spaces through drawing, sketching and documenting through drawing
- practicing compositions and architectural concepts through drawings and models
- discovering the interaction between the architectural object and the natural context
- developing creativity in the process of designing
- practicing architectural graphics and poster presentations
- learning to build models for architectural objects

Lecture / project contents

Project: Pavilion for architecture in a park

Phase A: Documenting, analysing and representing an existing pavilion

Phase B: Developing the concept, the project and the scale model for an original pavilion

Responsible
Assoc. Prof. PhD Arch. Dana Sorina Opincariu
e-mail: dana.opincariu@Arch.utcluj.ro

Teaching Team
Lect. PhD Arch. Andreea Pop
Assist. Prof. PhD Arch. Laura Patachi
Assist. Prof. PhD Arch. PhD Alina Voinea
Arch. PhD Silviu Borș
Arch. PhD Răzvan Poting
Arch. PhDs Verona Musteata
Arch. PhDs Adrian Niculaș
Arch. PhDs Marius Păsculescu
Seminar contents

Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography


7.00
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**Objectives**

- Development of oral communication skills for professional technical context.
- Development of lexical, grammatical and discursive knowledge in technical language.
- Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

**Lecture / project contents**

- 

**Responsible**

Assoc. Prof. PhD. Sanda Paduretu  
e-mail: Sanda.Paduretu@lang.utcluj.ro
Seminar contents
1. Organizing of study groups - placement test
2. Personal coordinates: the business card, personal motivation
3. Higher technical education and educational systems
4. Notions of mathematics: calculations; bodies and figures
5. Forms and dimensions
6. The architect; training, responsibilities, skills
7. Elements of culture and civilization; Geography
8. Situation in time
9. Placement in space
10. Visiting a city where the taught language is spoken
11. Presentation of architectural monuments I
12. Presentation of architectural monuments II
13. Evaluation: written test
14. Final evaluation

Evaluation

1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80%
of the seminars is required

Selected bibliography

**FOREIGN LANGUAGES 1 - FRENCH**

Objectives

Development of oral communication skills for professional technical context.

Development of lexical, grammatical and discursive knowledge in technical language.

Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

Lecture / project contents

-
Seminar contents
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2. Personal coordinates: the business card, personal motivation
3. Higher technical education and educational systems
4. Notions of mathematics: calculations; bodies and figures
5. Forms and dimensions
6. The architect; training, responsibilities, skills
7. Elements of culture and civilization; Geography
8. Situation in time
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Evaluation

1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
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of the seminars is required

Selected bibliography

FOREIGN LANGUAGES 1 - GERMAN

Objectives

Development of oral communication skills for professional technical context.

Development of lexical, grammatical and discursive knowledge in technical language.

Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

Lecture / project contents

- 

Responsible:
Asist. CDA Miruna Opriș

E-mail:
Miruna.Opris@lang.utcluj.ro
Seminar contents
1. Organizing of study groups - placement test
2. Personal coordinates: the business card, personal motivation
3. Higher technical education and educational systems
4. Notions of mathematics: calculations; bodies and figures
5. Forms and dimensions
6. The architect; training, responsibilities, skills
7. Elements of culture and civilization; Geography
8. Situation in time
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11. Presentation of architectural monuments I
12. Presentation of architectural monuments II
13. Evaluation: written test
14. Final evaluation

Evaluation

1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80% of the seminars is required

Selected bibliography

# FOREIGN LANGUAGES 1 - ITALIAN

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**Objectives**

Development of oral communication skills for professional technical context.

Development of lexical, grammatical and discursive knowledge in technical language.

Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

**Lecture / project contents**

- **Responsible:**
  Conf. Dr. Angelica Căpraru

  **E-mail:**
  Angela.Capraru@lang.utcluj.ro
Seminar contents
1. Organizing of study groups - placement test
2. Personal coordinates: the business card, personal motivation
3. Higher technical education and educational systems
4. Notions of mathematics: calculations; bodies and figures
5. Forms and dimensions
6. The architect; training, responsibilities, skills
7. Elements of culture and civilization; Geography
8. Situation in time
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13. Evaluation: written test
14. Final evaluation

Evaluation

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2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80% of the seminars is required

Selected bibliography

PHYSICAL EDUCATION 1

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Objectives

Development of motor knowledge, skills and abilities. Teaching means and methods for harmonious and balanced physical development. Developing the concept of fair-play in sports and social activities.

Lecture / project contents

- 

Responsible:
Assoc. Prof. PhD. Alina Rusu
Lect. PhD. Mihai Olanescu
Lect. PhD. Radu Sabau
Lect. PhD. Vlad Grosu
Assist. Prof. PhD. Adrian Suciu

E-mail:
Alina.Rusu@mdm.utcluj.ro
Mihai.Olanescu@mdm.utcluj.ro
Seminar contents
1. Informing students about the requirements of the discipline. Testing the level of physical ability of students. Accommodating students with physical effort.
2. Teaching basic principles and technics in ball games and swimming.

Evaluation
A minimum presence of 10/14 seminars is required. The final test consists in completing a series of exercises in a specified order and time.

Selected bibliography
*Curs de Educație fizică* – Litografiat UTC-N.
*Dezvoltare fizică generală pentru studenți* – UTC-N.
*Cultură fizică pentru tineret* – UT.PRESS.
01 year
2nd semester
Objectives

Acquiring knowledge about Perception and Visual Communication; understanding the methods studied during the lectures and their importance in architectural visualization and obtaining the ability to use them in architectural representation.

Lecture / project contents

C1 Introduction. Perception (P). Representation (R)
C2 Communication (C)
C3 The art of perspective
C4 The Brunelleschi Method
C5 Dependent method perspective to the vertical plane FF90/OP, step-by-step
C6 Dependent method perspective to the vertical plane OF, FP, FM, step-by-step
C7 Free method perspective to the vertical plane
C8 Free method perspective to the vertical plane, step-by-step
C9 History of representation through perspective
C10 Aerial perspective
C11 Photography and restitution of perspective
C12 Shadows and mirroring through perspective
C13 Architectural visualisation through perspective
C14 The stenographic art - the language of visual communication.

Recapitulation
Seminar contents

Practical exercises, applications, perspective drawings.

Evaluation

Portfolio - max 3p/10.
Final exam – written test, perspective drawing- max 7p/10.
Requires attendance to lectures and seminars. (min 50%)

Selected bibliography
Z. DUMITRESCU, *Ars Perspectivae*, Bucuresti, 2002
HISTORY OF MEDIAEVAL ARCHITECTURE

Objectives

The study of the evolution of architecture throughout Antiquity and the Middle Ages is seeking to explain the different manifestations, expressions, and representations of the architectural and artistic instances, in accordance with the economical means, the technical development, the forms of social organization, the religious beliefs, and the life philosophy. The main goal of the discipline is to develop competences and knowledge specific to the architectural profession, by understanding the phenomenon and the architectural process, which unfolds starting from Prehistory up to the end of the 15th century. The study is contextualized, a fact which is essential for understanding the following periods of the history of architecture.

Lecture / project contents

The Preconditions of Medieval Art. PaleoChristianity. The Eastern Roman Empire, the Byzantine Style
The Eastern Roman Empire - the Byzantine Empire, the Byzantine Style (part 2)
The Middle Ages in Central and Western Europe. Pre-Romanesque and Romanesque Architecture
The Middle Ages in Central and Western Europe. Romanesque Architecture in France and Outside France
The Middle Ages in Central and Western Europe. Gothic Architecture - an Overview
The Middle Ages in Central and Western Europe. Gothic Architecture in France
The Middle Ages in Central and Western Europe. Gothic Architecture Outside France
Seminar contents

Evaluation

1 hour and 20 minutes written exam
The answers should include both text and drawings.

Selected bibliography

## URBAN MORPHOLOGY

### Objectives

Learning and understanding the basic concepts, theories and methods that is specific in contemporary urban planning. Understanding the urban space as an space of a community with specific identity.

### Lecture / project contents

| C1  | Urban Demographic Explosion. The genesis of the contemporary urban planning |
| C2  | Introduction to the morphological approach of urban space.                        |
| C3  | The neo-conservative urban planning                                             |
| C4  | The humanist current. The cultural movement 1                                   |
| C5  | The humanist current. The cultural movement 2                                   |
| C6  | The humanist current. The cultural movement 3                                   |
| C7  | Anthropological Urbanism                                                         |
| C8  | The Satellite City                                                               |
| C9  | The triumph of The Progressive Urban Planning, Le Corbusier and The Radiant City |
| C10 | The Charter of Athena                                                             |
| C11 | The expansion of the existing cities and the first reactions to The Functionalist Current |
| C12 | New utopia: imagining the cities of the future. The urban Gigantism               |
| C13 | New trends in city development in the last decades of the 20th Century. Returning to the traditional |
| C14 | The Friendly Urban Planning. Conclusions                                         |

### Responsible:

Prof. PhD Arch. Habil. Mihaela Ioana Maria Agachi  
e-mail: mihaela.ioana.agachi@arch.utcluj.ro
Seminar contents

Evaluation

Written exam, containing 7 questions of different complexity. The homework is optional and it can replace 3 of the exam questions.

Selected bibliography

P. HALL, *Orașele de mâine*, Ed. All Educational, București 1999
G.M. CANTACUZINO, *Despre o estetică a reconstrucției*, Ed. Paideea, București 2001

12.00
BUILDING MATERIALS

Objectives

Understanding the correlation between materials and architecture; acquiring the ability to design architecture while considering the physical aspect of it.

Lecture / project contents

C2 Context.
C3 Basic notions of mechanics and physical characteristics of different materials.
C4 Wood.
C5 Stone.
C6 Clay.
C7 Ceramic.
C8 Mineral binders.
C9 Concrete.
C10 Glass.
C11 Metals.
C13 Composite materials.
C14 Recapitulation.
Seminar contents

Evaluation

Written test of 3 questions; min.5p/10.

Requires theoretical knowledge, technical vocabulary and drawings.

Selected bibliography

C. BĂRBULESCU, Integrare tehnologică în arhitectura contemporană, Cluj-Napoca, Presa Universitară Clujiană, 2002
D. HARDT, Materiale pentru construcții și finisaje, București, Editura Didactică și Pedagogică, 1976
THE STUDY OF FORM AND VISUAL REPRESENTATIONS 2

Objectives

Encouraging creativity while designing the architectural space. Understanding the relationship between means of expression and ideas, between subjects and representation.

Lecture / project contents

- 

Responsible:
Lect. PhD Leonard Vartic

e-mail: leonardvartic@yahoo.co.uk

Teaching team:
Lect. PhD Arch. Andreea Pop
Assist. Prof. PhD Arch. Laura Patachi
Assist. Prof. PhD Arch. Alina Voinea
PhDs Arch. Verona Musteată
Seminar contents

S1  Creative exercise. Collage technique.
S2  Creative exercise. Minimalistic volumes.
S3  Basso-rilievo.
S4  Creating modular volumes out of paper.
S5  Creating modular volumes out of wire and rope.
S6  Creating modular volumes out of clay.
S7  Installation. Assembly. Teamwork.

Compensatory seminar.

Evaluation

Formative assessment during the semester through regular engagement during the seminar hours.
Evaluation of final portfolio. min 5p/10

Selected bibliography

R. ARNHEIM, Arta şi percepţia vizuală, Editura Meridiane, Bucureşti, 1979
R. ARNHEIM, Forţa centrului vizual, Editura Meridiane, Bucureşti, 1995
J. BALTRUSAÎTIS, Aberaţii - legende ale formelor, Ed. Meridiane, Bucureşti, 1972
J. BALTRUSAÎTIS, Formări, deformări, Editura Meridiane, Bucureşti, 1989
R. BERGER, Artă şi comunicare, Editura Meridiane, Bucureşti, 1976
E. H. GOMBRICH, Artă şi iluzie, Ed. Meridiane, Bucureşti, 1973
R. HUYGHE, Puterea imaginii, Ed. Meridiane, Bucureşti. 1971
J. ITTEN, Art de la couleur (édition intégrale), Ed. Dessain et Tolra, Paris, 1977
N. KNOBLER, Dialogul vizual, Ed. Meridiane, Bucuresti, 1983
ARCHITECTURAL DESIGN STUDIO 2

Objectives

Understanding the spatial layout and function of a dwelling
Deciphering the way of representation of the architectural project
Practicing polychrome drawing technique for the presentation of projects
The study of the interaction between the architectural object and its context
Practicing architectural model building

Lecture / project contents

Minimal holiday house on an imaginary given site.

The project develops according to the design assignment in 3 phases:

1. Gathering data for the project
2. Developing the concept for the project
3. Detailing the solution and project presentation

Responsible
Assoc. Prof. PhD Arch. Dana Sorina Opincariu

e-mail: dana.opincariu@Arch.utcluj.ro

Teaching Team
Assoc. Prof. PhD Arch. Dana Opincariu
Lect. PhD Arch. Andreea Pop
Assist. Prof. PhD Arch. Laura Patachi
Assist. Prof. PhD Arch. PhD Alina Voinea
Arch. PhD Silviu Borș
Arch. PhD Răzvan Poting
Arch. PhDs Verona Musteată
Arch. PhDs Adrian Niculaș
Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography
A. BAHAMON, ed. Houses, Casas / Häuser. Barcelona: Könemann, 2005 (517.479)
P. CHUECO, Urban Houses. Barcelona: Links, 2008 (531.013)
A. CORCUERA, Contemporary Houses. Barcelona: Könemann, 2006 (520.539)
NEUFERT. Manualul Arhitectului: Elemente de proiectare și de construcție. Miercurea Ciuc: Alutus, 2004 (537.936)
FOREIGN LANGUAGES 2 - ENGLISH

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Objectives

Development of language and communication skills in a foreign language for professional use.

Assimilation of the basic lexicon in the fields of interest and related to architecture. Effective use of language and communication skills in foreign languages.

Lecture / project contents

-
Seminar contents

Evaluation
1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80%
of the seminars is required

Selected bibliography
FOREIGN LANGUAGES 2 - FRENCH

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Objectives

Development of oral communication skills for professional technical context.

Development of lexical, grammatical and discursive knowledge in technical language.

Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

Lecture / project contents

-}

Responsible
Lect. dr. Aurel Bărbînță

E-mail: Aurel.Barbinta@lang.utcluj.ro
Seminar contents
1. The forces in a structure. Types of forces.
2. Buildings and structures
3. Architectural styles and house types
4. The elements of the building. Foundations and walls
5. Topographic measurements
6. Construction materials: traditional and modern
7. The seven wonders of the ancient world. Shapes and dimensions
8. Architectural elements: arches and windows
9. Gates and roofs
10. Vaults and domes
11. Styles and ornaments
12. The history of architecture. The first civilizations
13. Architecture in the Middle Ages
14. Gothic style
15. Renaissance in Europe
16. Baroque architecture
17. Industrial era
18. Modern architecture
19. International style
20. Cities of the twentieth century
21. Contemporary architecture
22. Architecture of the future
23-25. World famous constructions I-III
26. The project and its implementation

Evaluation
1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80% of the seminars is required

Selected bibliography
## FOREIGN LANGUAGES 2 - GERMAN

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**Objectives**

- Development of oral communication skills for professional technical context.
- Development of lexical, grammatical and discursive knowledge in technical language.
- Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

**Lecture / project contents**

- Responsible: Asist. CDA Miruna Opriş
  
  E-mail: Miruna.Opris@lang.utcluj.ro
Seminar contents

Evaluation

1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80% of the seminars is required

Selected bibliography

FOREIGN LANGUAGES 2 - ITALIAN

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Objectives

Development of oral communication skills for professional technical context.

Development of lexical, grammatical and discursive knowledge in technical language.

Developing the knowledge to understand, transmit and evaluate an oral message in a professional technical context.

Lecture / project contents

Responsible:
Conf. Dr. Angelica Căpraru

E-mail:
Angela.Capraru@lang.utcluj.ro
Seminar contents

Evaluation

1. Written test – 70%
2. Oral test – 10%
3. Evaluation during the semester – 20%
To attend the tests, a presence in min. 80% of the seminars is required

Selected bibliography

**PHYSICAL EDUCATION 2**

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**Objectives**

Development of motor knowledge, skills and abilities. Teaching means and methods for harmonious and balanced physical development. Developing the concept of fair-play in sports and social activities.

**Lecture / project contents**

- 

**Responsible:**

- Assoc. Prof. PhD. Alina Rusu
- Lect. PhD. Mihai Olanescu
- Lect. PhD. Radu Sabau
- Lect. PhD. Vlad Grosu
- Assist. Prof. PhD. Adrian Suciu

**E-mail:**

- Alina.Rusu@mdm.utcluj.ro
- Mihai.Olanescu@mdm.utcluj.ro
Seminar contents
1. Informing students about the requirements of the discipline. Testing the level of physical ability of students. Accommodating students with physical effort.
2. Teaching basic principles and technics in ball games and swimming.

Evaluation

A minimum presence of 10/14 seminars is required. The final test consists in completing a series of exercises in a specified order and time.

Selected bibliography

*Curs de Educație fizică* – Litografiat UTC-N.
*Dezvoltare fizică generală pentru studenți* – UTC-N.
*Cultură fizică pentru tineret* – UT.PRESS.
PRACTICAL ACTIVITY I

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Objectives

Acquiring the theoretical and practical skills required for a measured survey of an architectural object and its representation principles and techniques. Experimenting with specific architectural surveying tools and understanding the relationship between the purpose and the scale of representation and its specific graphic characteristics.

Lecture / project contents

Creating the student portfolio to include the projects and other creative assignments elaborated during the first two semesters. The portfolio will then be continuously updated in the framework of the following study years’ Practical activities.

Responsible
Assoc. Prof. PhD Arch. Dana Sorina Opincariu
e-mail: dana.opincariu@arch.utcluj.ro

Teaching Team
Lect. PhD Arch. Andreea Moțu
Assist. Prof. PhD Arch. Laura Patachi
Arch. PhD Silviu Borș
Arch. PhDs Adrian Niculaș
Arch. PhDs Marius Păsculescu
Arch. PhD Răzvan Potîng
Arch. PhD Alina Voinea
Seminar contents

Elaborating a measured survey for an existing architectural object. Students usually work in teams of three to five persons.

Evaluation

Portfolio assessment including the notes written on the field and final drawings.

Selected bibliography

**HISTORY OF RENAISSANCE AND BAROQUE ARCHITECTURE**

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**Objectives**

By acquiring general information about the architectural development during the Renaissance and Baroque, about the famous architects and fundamental notions from this period, students will be able to recognize the particularities of the architectural styles, the geographical area, and to evaluate the quality of the architectural object as well.

**Lecture / project contents**

- C1 The beginning of Renaissance
- C2 The works of Bruneleschi
- C3 The works of Alberti
- C4 The early Renaissance in Rome, urban transformations during the late Renaissance
- C5 Villa in the Renaissance period
- C6 The Renaissance architecture in North of Alps and in Transylvania
- C7 Introduction in Baroque
- C8 The late work of Michelangelo Bernini Boromini
- C9 The urban Baroque palaces in Rome
- C10 The transformations of the church during the Baroque period
- C11 The re-use of the Egyptian obelisks during the Baroque period
- C12 The Baroque urban planning in the 17th century
- C13 Baroque in Germany and Hungary
- C14 Baroque in Transylvania and Brancoven style

Responsible: Prof. PhD Arch. Habil. Virgil Pop

E-mail: arch.virgil.pop@gmail.com
Seminar contents
-

Evaluation

Final exam – written test, min.5p/10.

Selected bibliography

Synthesis work
Specific bibliography for each course
Objectives

Learning and understanding the basic concepts, theories and methods that is specific in contemporary urban planning. Understanding the urban space as an space of a community with specific identity.

Lecture / project contents

C1 Urban Demographic Explosion. The genesis of the contemporary urban planning
C2 Introduction to the morphological approach of urban space.
C3 The neo-conservative urban planning
C4 The humanist current. The cultural movement 1
C5 The humanist current. The cultural movement 2
C6 The humanist current. The cultural movement 3
C7 Anthropological Urbanism
C8 The Satellite City
C9 The triumph of The Progressive Urban Planning. Le Corbusier and The Radiant City
C10 The Charter of Athena
C11 The expansion of the existing cities and the first reactions to The Functionalist Current
C12 New utopia: imagining the cities of the future. The urban Gigantism
C13 New trends in city development in the last decades of the 20th Century. Returning to the traditional
C14 The Friendly Urban Planning. Conclusions
Evaluation

Written exam, containing 7 questions of different complexity. The homework is optional and it can replace 3 of the exam questions.

Selected bibliography

P. HALL, *Orașele de mâine*, Ed. All Educational, București 1999
G.M. CANTACUZINO, *Despre o estetică a reconstrucției*, Ed. Paideea, București 2001
COMPUTER AIDED DESIGN

Objectives

Offering the students the capacity to express their project ideas, completing the hand drawings and making the graphic representation part easier.

Lecture / project contents

Phase 1:
Presenting the model and the working mode in Allplan.
2D representation in Allplan
3D representation in Allplan: building structure and reference plans, foundations, floors and stairs
3D representation in Allplan: walls, pillars, windows, doors and carpentry
3D representation in Allplan: plans, roof plans, roofing
Architectural representation in Allplan: plans, sections, facades, renderings

Phase 2:
Presenting the model and the working mode in ArchiCad.
2D representation in ArchiCad.
3D representation in ArchiCad: building structure and reference plans, foundations, floors and stairs
3D representation in ArchiCad: walls, pillars, windows, doors and carpentry
3D representation in ArchiCad: plans, roof plans, roofing
Architectural representation in ArchiCad: plans, sections, facades, renderings
Evaluation

The final grade is the average between Phase 1 and Phase 2

Selected bibliography

Graphisoft ArchiCAD 22 Reference Guide; Graphisoft (in limba romana pe www.consoft.ro)
GDL Cookbook 4.0; David Nicholson-Cole; Marmelade Graphics, Nottingham; 2007
Allplan 2018 Tutorial de arhitectură © Nemetschek Allplan GmbH, Munich, 2018
Computer Graphics; D. Dayton Reuter, ASLA; Allworth Press; New York; 2002
GDL Cookbook 4.0; D. NICHOLSON-COLE; Marmelade Graphics, Nottingham; 2007
# ELEMENTS OF CONSTRUCTION

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## Objectives

Knowing the construction elements and their way of representation through architectural drawing.

## Lecture / project contents

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<thead>
<tr>
<th>C1</th>
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<tr>
<td>C2</td>
<td>Constructions with bearing structure</td>
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<td>C3</td>
<td>Construction of masonry</td>
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<td>C4</td>
<td>The overall concept of the masonry constructions</td>
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<td>C5</td>
<td>The construction in relation with the ground</td>
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<tr>
<td>C6</td>
<td>Insulating the construction against soil moisture</td>
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<td>C7</td>
<td>Horizontal structural elements for masonry and reinforced concrete construction</td>
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<tr>
<td>C8</td>
<td>Reinforced concrete construction</td>
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<td>C9</td>
<td>Traditional and modern wooden constructions</td>
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<td>C10</td>
<td>Roofs</td>
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<td>C11</td>
<td>Metal structures</td>
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<td>C12</td>
<td>The structure of the masonry, reinforced concrete, wooden and metal walls</td>
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<tr>
<td>C13</td>
<td>Prefabricated wooden and reinforced concrete constructions</td>
</tr>
</tbody>
</table>

Responsible: Assist. Prof. PhD Arch. Teodora Stanciu

E-mail: Teodora.Stanciu@arch.utcluj.ro
Seminar contents

S1 B+GF+FF building, masonry construction, technical representation in plan
S2 Section and elevation for the same building
S3 Characteristic element intersections, documentation
S4 Roof framing: plan and section
S5 Construction detail

Evaluation

Theoretical written exam (50%) and practical assisted work during seminar hours (50%).

Selected bibliography

E. NEUFERT, Manualul arhitectului, Elemente de proiectare si de constructie, Ed. Alutus, Miercurea Ciuc, 2004
R. VITTONE, Manuel de la construction, Ed. Presses politechniques et universitaires romandes, Lausanne, 1999
M. C. TORRICELLI, R. DEL NORD, P. FELLI, Materiali e tecnologie dell’architettura, Ed. Laterza, 2004
R. CRISAN, Constructii din lemn, an 2, Ed. 3, 2006
R. CRISAN, Constructii din zidarie si beton armat, Ed. Universitara „Ion Mincu”, Bucuresti 2012
R. CRISAN, Constructii din otel, Ed. Universitara „Ion Mincu” Bucuresti 2011
# THE GEOMETRY OF ARCHITECTURAL FORMS

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**Objectives**

The course examines the main categories of the geometric elements and it represents a guide that allows the student to learn the diversity of the architectural forms.

**Lecture / project contents**

- **C1** Introductory course- The geometry of architectural Forms
- **C2** The geometry of forms in the history of architecture
- **C3** Structure in relation with form, the process of creation
- **C4** Architectural shapes: polyhedrated, folded and made out of thin curved plates
- **C5** Architectural forms generated by cross-linked structural systems
- **C6** Architectural forms generated by suspended and pneumatic structures
- **C7** The geometry of forms in vernacular architecture
- **C8** The geometry and the perception of architectural space
- **C9** Geometry and composition in architecture
- **C10** The geometry of the facade elements of the buildings
- **C11** The geometry of ornamental elements in architecture
- **C12** Symbolic geometry in architecture
- **C13** New trends in architectural forms: advanced architecture

**Course of synthesis / colloquium**

Responsible:
Assoc. Prof. PhD Arch.
Dana Sorina Opincariu

e-mail: dana.opincariu@arch.utcluj.ro
Seminar contents

Evaluation

Elaboration of an about 5 pages paperwork on a subject chosen from the courses content, and building a model in relation with the chosen theoretical subject

Selected bibliography

F. CHING, *Architecture, Form Space and Order*, John Willey & Sons, New Jersey 1996
MECHANICS

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Objectives

Learning the main notions and principles from the mechanics of structures in order to successfully approach the technical disciplines in the following semesters.
Developing an intuitive understanding of the state of efforts, tensions and deformations of a structural element under external loads.
Applying the basic principles of structural mechanics at an elementary level in order to dimension and verify different structural elements.

Responsible:
Lect. PhD Eng. Radu Hulea
e-mail: radu.hulea@gmail.com

Lecture / project contents

C1  Structural elements and their evolution.
C2  Introduction. The architecture in relation with the structure.
C3  Actions in construction. Forces, operations with forces, the moment of a force.
C4  The stability of the objects, supports and reactions.
C5  Efforts and effort charts 1.
C6  Efforts and effort charts 2.
C7  Lattice beams.
C8  The geometric properties of the sections.
C9  Hooke's law.
C10 The axial stress.
C11 The bending stress and the cutting force.
C12 Compound stress. The stability of the straight bar.
C13 Structural walls and frames.
C14 The structural concept.
Seminar contents

S1  High structures made out of paper
S2  Fundamental concepts
S3  Actions, loads, forces and moments
S4  Equations of stability. Calculation of reactions
S5  Effort charts 1
S6  Effort charts 2
S7  Lattice beams
S8  Determining the properties of elements
S9  Dimensioning the axial stressed elements
S10 Dimensioning the bending stressed elements
S11 Dimensioning the stressed elements
S12 Verifying the elements
S13 Building a paper structure
S14 The general way of analyzing an element

Evaluation

Written exam

Selected bibliography

P. GARRISON, *Basic Structures for Engineers and Architects*, Blackwell Publishing, 2005
## Objective

The course intends to present, study and acquire the ability to work with technical documents specific to the field of architectural design, the ability to accurately draft the components of architectural blueprints and the ability to properly determine and design spaces, in accordance with the technical requirements agreed upon by the Romanian legislation in force.

### Lecture / project contents

- **C1** Areas and building heights
- **C2** Z coordinates, floor area ratio and building-to-land ratio
- **C3** Symbols and principles of architectural drawings
- **C4** Roof geometry
- **C5** Stairs and ramps 01
- **C6** Stairs and ramps 02
- **C7** Evaluation
Seminar contents

Applied exercises based on topics presented throughout the course

Evaluation

written test - 50 minutes

Selected bibliography

A selection of Romanian laws, regulations, guides in force.
ARCHITECTURAL DESIGN STUDIO 3

Objectives

Transforming a set of conditions into spatial solution through architectural design.

Lecture / project contents

Project subject: Country house / city house - comparative project during the semester
It aims to explore locations and capturing information. Desk top documentation, to create an architectural concept for the two contexts (rural and urban): presentation and evaluation, to develop the architectural concepts.
Seminar contents

Evaluation

The evaluation and the notation of the projects are made by the responsible professors

Selected bibliography

OZALID, Locuințe, ed. Emilia Țugui, București
Grupul de lucru Rural, Ghid de integrare în specificul rural, OAR,
G. MINKE, Construind cu pământ, Simetria, București
M. GAUSA, Housing, ACTAR, Barcelona
RESIDENTIAL PLANNING

Objectives

Developing theoretical, methodological and practical abilities in urban residential and urban planning areas.

Lecture / project contents

C1  Introduction
C2  The urban residencial in recent history
C3  The urban residential in the rationalist urban planning
C4  The recalibration of attitudes towards urban residential (user/inhabitant/pedestrian)
C5  The constituent units of the environment built within the urban residential area (typologies)
C6  The problems of urban design within the urban residential area
C7  The problems of sustainability design within the urban residential area
C8  The problems of communication design within the urban residential area
C9  Principles for a 21st Century urban residential
C10 Urban Residential in Romania for the last 25 years
C11 Conclusions. Recap
Seminar contents

Evaluation

Written exam and 10-15 minute tests with questions from the previous course at the beginning of every course.

Selected bibliography

P. GEDDES, (1915), *Cities in Evolution*, Ed. Williams & Norgate, Londra
S. LEWIS, (2005), *Front to Back – a design agenda for urban housing*, Architectural Press - Elsevier
G. TOWERS, (2005), *An Introduction to Urban Housing Design – At Home in the City*, Architectural Press
Code 26.00
Semester 2
Credits 2
No. of hours/ lecture 2
No. of hours/ seminar -
No. of hours project -
Discipline type Compulsory
Examination form Exam

Objectives

The course aims to gather knowledge about the concepts defining the architecture of habitation throughout history, to create understanding the relationship between the architecture of habitation and human lifestyles and to give the ability to address the problematics of contemporary housing.

Lecture / project contents

C1 Introduction - The Act of Dwelling as an All-Scales Phenomenon
C2 Explaining the Forms of Habitat
C3 Pre-Modern Habitation Models - Primitive, Traditional Rural, Vernacular
C4 Oriental and Mediterranean Models of Habitation
C5 Western Models of Habitation, from the Middle Ages to the Modern Era
C6 Modern Habitation
C7 Early Social Housing
C8 Modern and Contemporary Habitation
C9 Modern Social Housing
C10 Housing Typologies and the Functions of the Home
C11 Psychology, Anthropology and Sociology of Habitation
C12 Contemporary Social Housing and Housing Policies
C14 Problematics of Contemporary Housing Architecture
Seminar contents

Evaluation

Written exam - essay

Selected bibliography

D VAIS, Locuire, Universitatea Tehnică din Cluj-Napoca, 1997
ASPECTS OF HUMAN SETTLEMENT PLANNING

Objectives

The main purpose is to provide specific knowledge to understanding the operational urban intervention.

Lecture / project contents

C1 Introduction
C2 Local community planning tools in Romania
C3 The analysis and synthesis of the existing situation. Measuring plan, action plan, local scheme
C5 Organizing plots and lots
C6 Organizing the traffic area
C7 Organizing public urban spaces. The markets
C8 Organizing the green area of the city
C9 Organizing the built area of the city
C10 Detailed urban design
Urban planning representations
Evaluation

Written exam

Selected bibliography

D. PRINZ, Stadtbaulisches Entwerfen Vol. 1
D. PRINZ, Stadtbauliches Gestalten Vol. 2
National Association of City Transportation Officials, Urban Street Design Guide
LEGEA nr. 350 / 2001 privind amenajarea teritoriului și urbanismul PUG Cluj si RLU, in vigoare pentru diferite localități din Județul Cluj Ghid privind Metodologia de Elaborare și Conținutul-Cadru al Planului Urbanistic de Detaliu
Ghid privind Metodologia de Elaborare și Continutul-Cadru al Planului Urbanistic Zonal
Ghid privind Metodologia de Elaborare și Continutul-Cadru al Planului Urbanistic General
# DETAILS IN ARCHITECTURE 1

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**Objectives**

- 

**Lecture / project contents**

- **C1** Introduction
- **C2** Foundations and elevations
- **C3** Vertical structural elements
- **C4** Horizontal structural elements
- **C5** Frameworks
- **C6** Wall finish works
- **C7** Interior compartments
- **C8** Joineries
- **C9** Floors
- **C10** Stairs
- **C11** Complex details 1
- **C12** Complex details 2
- **C13** New technologies compared to traditional technologies

Responsible: Lect. PhD Arch. Silviu Aldea  
e-mail: silviu.aldea@arch.utcluj.ro
Seminar contents

Evaluation

Written exam, or minimum two 8 grades (for each compulsory work during the semester).

Selected bibliography

D. HARDT, Proiectarea detaliilor de finisaj, Vol I, Ed.Tehnică, Bucureşti, 1973
D. HARDT, Proiectarea detaliilor de finisaj, Vol II, Ed.Tehnică, Bucureşti, 1974
A. STAN, Finisaj - Volumul 1,2, Institutul de Arhitectură “Ion Mincu”, Bucureşti, 1979
Note de curs

28.00
# ART HISTORY

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Responsible
Assoc. Prof. PhD Arch. Cristina Purcar
e-mail: cristina.purcar@arch.utcluj.ro

## Objectives

Art history’s basic notions, techniques, periods, genres and personalities are discussed, aiming at broadening students’ horizon towards the other forms of artistic expression, forming an educated gaze, developing critical skills and a multi-layered understanding of the space-image relationship.

## Lecture / project contents

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<td>Materials and techniques: mural painting</td>
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<td>Materials and techniques: tempera/ wood, oil/canvas, gouache</td>
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<tr>
<td>C3</td>
<td>Materials and techniques: engraving, mozaic, stained glass</td>
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<td>C4</td>
<td>Materials and techniques: photography</td>
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<tr>
<td>C5</td>
<td>Materials and techniques: sculpture, installation, assemblage</td>
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<td>Composition: images in space</td>
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<td>C7</td>
<td>Composition: the space of the image</td>
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<td>C8</td>
<td>Composition: space as image - perspective</td>
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<td>Genres: landscape</td>
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<td>C13</td>
<td>Genres: still life</td>
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<tr>
<td>C14</td>
<td>A thematic chronology</td>
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Evaluation

Formative assessment during the semester through diverse methods with optional participation: short test, case study presentation, dialogue; max 3p/10. Final exam – written test of 8-10 questions; min.5p/10.

Selected bibliography

Annotated slides provided for every lecture.


BASIC DESIGN REGULATIONS 2

Objectives

The course intends to present, study and acquire the ability to work with technical documents specific to the field of architectural design, the ability to accurately draft the components of architectural blueprints and the ability to properly determine and design spaces, in accordance with the technical requirements agreed upon by the Romanian legislation in force.

Lecture / project contents

C1  Bathrooms and public restrooms 01
C2  Bathrooms and public restrooms 02
C3  Residential spaces - general legislation
C4  Residential spaces - the kitchen
C5  Residential spaces - daytime spaces
C6  Residential spaces - nighttime spaces
C7  Residential spaces - the attic apartment
C8  Civil defense shelters
C9  Multistory car parks
C10  Fire safety policies 01
C11  Fire safety policies 02
C12  Interactive course - case study
C13  Recapitulation and conclusions
C14  Evaluation
Seminar contents

- applied exercises based on topics presented throughout the course

Evaluation

written test - 50 minutes

Selected bibliography

A selection of Romanian laws, regulations, guides in force.
ARCHITECTURAL DESIGN STUDIO 4

Objectives

Transforming a set of conditions into spatial solution through architectural design

Lecture / project contents

Project subject: CASA - Students Architecture Contest, realized in partnership with student associations. Living in the community
- Exploring locations and capturing information. Desk top documentation
- Creating an architectural concept for the two contexts (rural and urban): presentation and evaluation
- Developing the architectural concepts
- Final presentation

Responsible
Assoc. Prof. PhD Arch. Șerban Țigănaș

e-mail: dragos.tiganas@arch.utcluj.ro

Teaching team
Assoc. Prof. PhD Arch. Cristina Purcar
Lect. PhD Arch. Paul Moldovan
Assist. Prof. PhD Arch. Flavius Muntean
Arch. PhD Alexandru Sabău
Arch. PhDs Tiberiu Bucsa
Arch. PhDs Fabian Luca
Arch. PhDs Catalin Pop
Arch. Cristian Urcan
Seminar contents

Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography

OZALID, Locuințe, ed. Emilia Țugui, București
Grupul de lucru Rural, Ghid de integrare în specificul rural, OAR
G. MINKE, Construind cu pământ, Simetria, București
M. GAUSA, Housing, ACTAR, Barcelona
## PRACTICAL ACTIVITY II

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**Objectives**

Extending knowledge about the architectural project, the interdisciplinary project and the connection between the project and the construction site.

Learning and practicing the specific vocabulary and arguments of the architecture project.

**Lecture / project contents**

Site visits, elaborating the practice work and practice colloquium.

The main activity consists in the presentation and explanation of architectural projects in the phase of construction. The projects are presented by the authors in their offices, with emphasis on interdisciplinarity and technology. Students get to acknowledge the phases of the projects and the phases of construction. The elements of construction previously studied are identified in reality in the studied buildings.

Updating the student portfolio with the projects elaborated during the previous two semesters.

**Responsible**
Assoc. Prof. PhD Arch. Șerban Țigănaș

e-mail: dragos.tiganas@arch.utcluj.ro

**Teaching team**
Assoc. Prof. PhD Arch. Cristina Purcar
Lect. PhD Arch. Paul Moldovan
Assist. Prof. PhD Arch. Flavius Muntean
Arch. PhD Alexandru Sabău
Arch. PhDs Tiberiu Bucsa
Arch. PhDs Fabian Luca
Arch. PhDs Catalin Pop
Arch. Cristian Urcan
Evaluation

The evaluation and the notation of the projects are made by the responsible professors.
03 year
1st semester
# GLOBAL AND LOCAL IN ARCHITECTURE

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**Objectives**

Understanding the process of composing theoretical argumentative essays, contemporary architecture serving as subject.

**Lecture / project contents**

- **C1** Introduction.
- **C2** Representation through architecture.
- **C3** Japan.
- **C4** Netherlands.
- **C5** Romania and the local aspect.
- **C6** Romania and contemporary architecture.
- **C7** Judged and unjudged globalising.
- **C8** Rem Koolhaas.
- **C9** Americanization.
- **C10** Contextualism.
- **C11** The Bilbao Effect.
- **C12** Translocal networks.
- **C13** Architecture as an action mechanism.
- **C14** Recapitulation.

**Responsible:**
Lect. PhD Arch. Adriana Măgeruşan

e-mail:
adriana_magerusan@yahoo.com
Evaluation

Formative assessment during the semester through diverse methods with optional participation: dialogue; max 1p/10.
Written test of 2 questions; min.5p/10.

Selected bibliography

M. LUPU, *Școli naționale în arhitectură [National Schools in Architecture]*, Ed. Tehnica, București,1977
SPACE PERCEPTION AND CONFIGURATION

Objectives

The course intends to seek and formulate a theory of space perception. Thus, it will focus on identifying the theoretical foundations of spatial perception and representation. A minute definition of the concepts will provide an analytical device that can then be used to understand the particular instances of architectural space. Therefore, the creator of space will be endowed with new theoretical tools in order to substantiate, argue and support future solutions.

Lecture / project contents

C1 Introduction
C2 The principles of perception
C3 Personal space
C4 The boundaries of space - the space of boundaries
C5 Space and its meanings
C6 From space to place and back
C7 The inclusive place
C8 The exclusive place
C9 Architecture and fear
C10 Spatial phobias
C11 Failed architecture
C12 “Cathedrals of Culture” - film screening
C13 Recapitulation and conclusions
C14 Evaluation
Seminar contents

Evaluation

written paper - 50 minutes

Selected bibliography
Objectives
To be determined

Lecture / project contents
To be determined

ACADEMIC ETHICS

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Responsible: To be determined
Seminar contents

Evaluation
To be determined

Selected bibliography
To be determined
STRUCTURAL ENGINEERING THEORY 1

Objectives

Getting familiarized with the behaviour of structural elements and developing the ability to approach a problem intuitively. Acquiring knowledge about structural problems that may arise and obtaining the ability to solve them.

Lecture / project contents

C1 The notions of mechanics and the resistance of materials used during the course, with examples focused on the development of intuition.
C2 Presentations, discussion.
C3 Designing structures.
  - Limit states
  - The stages of the design process
  - Graphic representation of structures. Schematic drawing of structural elements and links between them.
Analysing the behaviour of different types of structures using planar or spatial static schemes. Spatial behaviour of structures. Simplified schematization of some types of structures with the purpose of identifying determining factors in their behaviour.
C4 Construction actions. How to evaluate actions and the transmission of them.
C5 Numerical application for the evaluation of actions.

Responsible:
Assoc. Prof. PhD Eng. Petru Rus

e-mail: petru.rus@arch.utcluj.ro
Evaluation

Final exam – written test which includes theoretical knowledge (60% of overall grade) and a practical part (40% of overall grade). min. 5p/10.

Selected bibliography

V. BUDIU, Structuri, UTCN, 1997
### Objectives

The course is structured in two parts: the first one dealing with elements of language and composition principles; the second one describing the main historical periods and their correspondences with the furniture field, analyzing the particular technical and decorative methods. This ensures a correct understanding of the evolution of furniture, emphasizing the close connection with the architecture styles, and an appropriate evaluation of valuable pieces of furniture.

### Lecture / project contents

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<td>C1</td>
<td>General concepts related to the evolution of furniture and the establishment of the History of Furniture Design discipline</td>
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<tr>
<td>C2</td>
<td>The ornament (I)</td>
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<td>C3</td>
<td>The ornament (II)</td>
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<td>C4</td>
<td>The ornament (III)</td>
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<tr>
<td>C5</td>
<td>The evolution of furniture - Neolithic, Mesopotamian and</td>
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<td>C6</td>
<td>Egyptian Furniture</td>
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<td>C7</td>
<td>Furniture in ancient Greece and ancient Rome</td>
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<td>C8</td>
<td>Furniture in the Byzantine Empire and Islamic Space</td>
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<td>C9</td>
<td>Romanic furniture; Gothic furniture</td>
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<td>C10</td>
<td>Renaissance furniture</td>
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<td>C11</td>
<td>Baroque furniture; Régence furniture</td>
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<tr>
<td>C12</td>
<td>Rococo furniture, oriental influences and techniques</td>
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<tr>
<td>C13</td>
<td>Furniture in Classicism</td>
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<tr>
<td>C14</td>
<td>Furniture in the 19th century - Styles, materials, techniques and innovators</td>
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<tr>
<td>C15</td>
<td>Furniture in the 20th century</td>
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**Responsible:**
Lect. PhD Arch. Andreea Pop

**e-mail:** andreea.pop@arch.utcluj.ro
Seminar contents

Evaluation

Exam - questions regarding the content of the 14 courses.

Selected bibliography

P. PETRESCU, *Specific Ornamental Motifs (Motive ornamentale celebre)*, Ed. Meridiane, Bucureşti, 1971


A. PĂNOIU, *Old Romanian Furniture (Mobilierul vechi românesc)*, Ed. Meridiane, București, 1975


## SPECIALISED DESIGN - URBAN PLANNING 1

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### Objectives

Acquiring knowledge about urban design and the skills required further during the professional life.

### Lecture / project contents

Restructuring an urban residential area:
- **Phase 1** - Analysis of the existing situation
- **Phase 2** - Designing a guideline scheme and phasing out the intervention
- **Phase 3** - Completion of the urban planning project

Responsible

Lect. PhD Arch. Silvan Moldovan

e-mail
silivan.moldovan@arch.utcluj.ro

Teaching Team

Prof. PhD Arch. Iancu Adrian
Assoc. Prof. PhD Arch. Andreea Milea
Lect. PhD Arch. Dragoș Dascălu
Assist. Prof. PhD Arch. Alice Oprică
Assist. Prof. PhD Arch. Mihai Racu
Arch. Rodica Codoreanu
Arch. Alexandra Vancea
Seminar contents

Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography

Colecția de reviste de specialitate din biblioteca FAU și UTCN.
Ministerul Lucrărilor Publice și Amenajării Teritoriului, Ghid privind reglementarea dezvoltării urbane prin operațiuni de parcelare și repascalare a terenurilor introduse în intravilan, iunie 2002.
DETAILS IN ARCHITECTURE 2

Objectives

Getting familiarized with different types of building materials and the way they are handled and put to use.

Lecture / project contents

C1 The importance of architectural details.
C2 Hydro-insulation buildings with basement. The building in relation to the natural ground.
C3 The middle part of a building. Intermediate slab. Floating slab.
C4 Load bearing and non-load bearing partitions. Finishes.
C5 Technical and false ceilings.
C6 Reinforced concrete or metal stairways. Connection with slabs.
C8 Façade 1: ventilated wood façade, ventilated load bearing masonry façade.
C9 Façade 2: metal façade, concrete façade.
C10 Glass façade
C11 Pitched roofs: constructive elements
C12 Flat roof 1: no passage flat roof and walk-on terrace on a reinforced concrete slab
C13 Flat roof 2: metal systems, green roofs.
C14 Free talk about the themes studied during lecture. Optional presentations from students.
Seminar contents

Assisted work during seminar hours

Evaluation

Final exam – written test (architecture detail) min. 5p/10 on each given subject.
Requires attendance to lectures and seminars.

Selected bibliography

-D. HARDT, Proiectarea detaliiilor în construcții, Ed. Tehnica Bucuresti
-D. HARDT, Proiectarea detaliilor de finisaje, Ed. Tehnica Bucuresti 3 - GHIDUL ARHITECTULUI vol XIV – PIATRA
-A. MOISESCU, E. SAFTOIU, Betonul în arhitectură , Ed. Tehnica Bucuresti 1964
-Instructiuni tehnice pentru proiectarea constructiilor din beton aparent cu parament natural-Indicativ C. 122/89 Buletinul Constructiilor nr. 2/1991
-Sinteza documentara nr. 20/1967 – B.I.T. Executarea constructiilor din betoane aparente
- Al. STAN – FINISAJ vol. I si vol. II Inst. De Arhitectura ”ION MINCU” Bucuresti
-Instructiuni tehnice pentru executarea placajelor Indicativ C 6-68
-Catalogul de detalii tip pentru constructii de locuinte si social culturale vol. I,II,III (Biblioteca UTCN – cod 359.037)
HISTORY OF 19TH-CENTURY ARCHITECTURE

Objectives

The course addresses the architectural history of the period c.1750 – c.1890, discussing its major architectural themes, styles and personalities. Each theme departs from and returns to the 'station' of a familiar, local or Transylvanian monument, which is thereby positioned within the relevant socio-programmatic, technologic and aesthetic systems of meaning that it signifies.

Lecture / project contents

C1 Royal Squares. Absolutism. Illuminism. Classicism
C2 Neo-classical ensembles. Illuminism and reform
C3 Aristocratic rural residences. Picturesque, archaeology, historic relativism
C4 Architecture and revolution. Utopian projects. Legimising monuments. The emergence of national heritage
C5 Engineers' architecture. Structural uses of metal. Bridges and factories
C6 Romanticism, nationalism, style. Neoclassicism and Neogothic. The United Kingdom, France
C7 Romanticism, nationalism, style. Neoclassicism and Neogothic. Prussia, Bavaria, Greece
C8 Progressist historicism. Schinkel, Ruskin, Hübsch
C9 Progressist historicism. Bindesboll, Viollet-le-Duc, Labrouste, Paxton
C10 Haussmannian Paris
C11 Eclectic Classicism. The extension of the Louvre. The Garnier Opera. Semper
C12 The architecture of commerce. Galleries and grand magasins
C13 Ringstrasse Vienna. Architecture and representation
C14 Railway stations and universal exibitions
Seminar contents

-

Evaluation

Final exam – written test or thematic essay.

Selected bibliography

FRANCASTEL, Pierre. *Art and Technology in the Nineteenth and Twentieth Centuries*, NY.
ECOLOGICAL ARCHITECTURE

Objectives

Getting familiarized with ecological solutions that can be applied to urbanism, architecture and interior design.

Lecture / project contents

C1  Introduction.
C2  Basic notions for sustainable design.
C3  Basic notions for sustainable design.
C4  Examples of ecological houses.
C5  Energy sources and their ecological and architectural impact.
C6  The air in relation to architecture.
C7  The water in relation to architecture.
C8  Natural light.
C9  Building materials.
C10 Building materials.
C11 Urbanism and ecology.
C12 Generative simulations and design as methods of optimizing the architecture.
C13 Recommendations for sustainable architectural design.
C14 Recommendations for sustainable architectural design.
Seminar contents

Evaluation

Final exam – written test (theory) min. 5p/10

Selected bibliography

-Notes during the lecture hours.
-Course (pdf) - can be found in the 3rd year group.
**ARCHITECTURAL DESIGN STUDIO 5**

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**Objectives**

Acquiring the ability to develop an architectural project on a complex programme, in close connection to an urban site, based on in-depth contextual analyses.

**Lecture / project contents**

Exploring, analysing and documenting potential sites for an office - hub for creative industries. Defining the most opportune site and elaborating the architectural project, tackling integration, programmatic, spatial, structural and ambiental aspects.

**Responsible**

Assoc. Prof. PhD Arch. Paul Mutică

e-mail
paul.mutica@arch.utcluj.ro

**Teaching team**

Assoc. Prof. PhD Arch. Paul Mutică
Lect. PhD Arch. Smaranda Todoran
Lect. PhD Arch. Adriana Măgerușan
Assist. Prof. PhD Arch. Andrei Kiss
PhD Arch. Alexandru Fleşeriu
Arch. PhDs Ștefania Boca
Arch. PhDs Romeo Cuc
Arch. Radu Roșca
Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography

- Archdaily, Detail, Arhitectura, Zeppelin, igloo etc.;
- E. Neufert, Manualul arhitectului - elemente de proiectare si de constructie, Alutus S.A., Miercurea Ciuc, 2004;
- G. VAIS, Programe de arhitectura, UT Press, 2008
03 year
2nd semester
Objectives

The course includes several parts, comprising notions of ethnography, traditional ornamentation (materials, technique and ornaments), buildings layout of the traditional dwelling in Romania and furniture display. It presents the main furniture pieces which are to be found in some important ethnographic museums in Romania, developing an appreciative attitude of the students towards national identity and heritage.

Lecture / project contents

C1 Ethnography. History of Ethnography in Romania; ethnographic research
C2 Ethnographic museums worldwide and in Romania. (I)
C3 Ethnographic museums worldwide and in Romania. (II)
C4 Traditional ornamentation
C5 Genesis and evolution of settlements in Romania
C6 Household and Traditional House in Romania
C7 The interior of the traditional dwelling; heating systems
C8 Main types of traditional furniture by function and constructive techniques. (I)
C9 Main types of traditional furniture by function and constructive techniques. (II)
C10 Main types of traditional furniture by function and constructive techniques (III)
C11 Main types of traditional furniture by function and constructive techniques. (IV)
C12 Main types of traditional furniture by function and constructive techniques. (V)
C13 Furniture of urban influence
C14 * Variable theme
Seminar contents

Evaluation

Colloquium - questions regarding the content of the 14 courses, individual papers.

Selected bibliography
-C. BONTE P., IZARD M. *Dictionary of Ethnology and Anthropology (Dictionar de Etnologie și Antropologie)*, Ed Polirom, București, 1999
-V. BUTURA, *Old testimonies of Romanian civilization - Transylvania - ethnographic study (Străvechi mărturii de civilizație românească – Transilvania- studiu etnografic)*, Ed. Științifică și Enciclopedică, București, 1989
FURNITURE OF THE 20TH CENTURY

Objectives

The course's purpose is to broaden the perspective on the History of Furniture, for students who are interested in the domain, through the presentation of additional information regarding the specific artistic tendencies and their followers in the field, from the beginning of the 20th century, until the beginning of the 21st. This is accomplished in form of examples that highlight the connection between furniture design, and the creative work connected to the scientific, technical, artistic development of society.

Lecture / project contents

C1 Furniture fairs and exhibitions
C2 Science, art and technology at the end of the nineteenth and early twentieth centuries
C3 Science, art and technology in the twentieth century
C4 1900 Art - arts, architecture, furniture (definition, history, directions)
C5 Art Deco ' context, furniture (protagonists and works)
C6 Modern Current
C7 30s - 40s (premises, countries, authors)
C8 The '50s
C9 Pop Art
C10 Scandinavian Furniture Design ( premises, countries, authors, trends)
C11 Design in Germany
C12 Design in Italy
C13 Trends in the design of the last decades of the 20th century and the beginning of the 21st century
C14 * Variable theme

Code: 41.20
Semester: 2
Credits: 2
No. of hours/ lecture: 2
No. of hours/ seminar: -
No. of hours project: -
Discipline type: Elective
Examination form: Colloquium

Responsible
Assoc. Prof. PhD Arch. Dorina Vlad
e-mail: dorinavlad@yahoo.com
Seminar contents

- 

Evaluation

Colloquium - questions regarding the content of the 14 courses, individual papers

Selected bibliography

-M. BYERS, The Design Encyclopedia, Ed. MOMA, 2004
-Col. authors. Art at the Turn of the Millennium, Ed. Taschen, Köln, 1999
-FIELL Ch.,FIELL P. Designing the 21st Century, Ed. Taschen, Köln, 2002
-FIELL Ch.,FIELL P. Scandinavian Design, Ed. Taschen, Köln, 2002
-FIELL Ch.,FIELL P. 1000 Chairs, Ed. Taschen, Köln, 1991
# FURNITURE DESIGN TECHNIQUE

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**Objectives**

The course presents the basic notions regarding the function, dimension, and structure in furniture design, highlighting the aesthetic aspects, the connection between material, structure and aesthetic expression, the relations between furniture and the space in which it is located.

**Responsible:**

Lect. PhD Arch. Andreea Pop  
e-mail: andreea.pop@arch.utcluj.ro

**Lecture / project contents**

C1  Brief evolution of furniture design, materials, moments of professional separation. The furniture design project  
C2  Anthropometry and ergonomics.  
C3  Furniture design structure and construction  
C4  Furniture components construction.  
C5  Wood material. Concepts of responsible forest management  
C6  Wood essences - main features and examples.  
C7  Storage furniture I  
C8  Storage furniture II  
C9  Supporting furniture I  
C10 Supporting furniture II  
C11 Sleeping furniture  
C12 Furniture for various activities I  
C13 Furniture for various activities II  
C14 Furniture made of other materials
Seminar contents

Evaluation

Colloquium - questions regarding the content of the 14 courses, individual papers

Selected bibliography

- F. IONESCU, V. NĂSTASE, *Furniture Design and Interior Architecture* (Proiectarea mobilei şi arhitectura interioarelor), Bucureşti, 1970
- K. MURADIN BAYER, *Furniture structure and construction* (course), UTPRESS, Cluj – Napoca, 1992
OBJECTIVES

Acquiring the necessary knowledge for designing correct and economical structures.

Developing an optimal appreciation of the size of the elements.

Choosing the adequate materials for the structural elements.

Lecture / project contents

C1 Loads evaluation
C2 Calculation methods for constructions
C3 Reinforced concrete elements: deformations, behaviour
C4 Reinforced concrete elements: slabs
C5 Reinforced concrete elements: beams
C6 Reinforced concrete elements: columns
C7 Precompressed elements
C8 Metal elements: deformations, behaviour
C9 Metal elements: solid core beams
C10 Metal elements: columns
C11 Metal elements: lattice girders
C12 Lattice girders and arches
C13 Reinforced concrete structural walls, foundations
C14 Wood elements
Seminar contents

S1 Evaluation of actions in constructions
S2 Determining the efforts in the dimensioned elements
S3 Predimensioning of reinforced concrete slabs
S4 Predimensioning of flat plate slabs
S5 Predimensioning of main beams
S6 Predimensioning of secondary concrete beams
S7 Predimensioning of concrete columns
S8 Problem solving: reinforced concrete warehouse
S9 Predimensioning of metal purlins
S10 Predimensioning of main metal beams (simple and composed)
S11 Predimensioning of metal trusses
S12 Predimensioning of metal columns
S13 Problem solving: metal warehouse
S14 Predimensioning of wood elements

Evaluation

Written Test – Theoretical knowledge – 50 %
Written Test – Problem solving - 50 %

Selected bibliography

**BUILDING SERVICES**

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**Objectives**

Acquiring the necessary knowledge for conceiving architectural projects with a high awareness of the contemporary needs, requirements and technologies available in terms of building servicing.

Understanding the impact of building service integration in architecture.

Becoming familiar with state-of-the-art building service systems and technologies and their spatial implications.

**Lecture / project contents**

C1 The quality of indoor environment: thermal comfort, health and hygiene comfort, air quality, lighting, acoustics

C2-3 Heating installations

C4-5 Ventilation, air-conditioning and refrigeration installations

C6-8 Sanitary installations

C9-11 Electrical installations

C12 Gas supply installations

C13 Equipment and installations for renewable energy sources

C14 The role of installations in the sustainable development of buildings and cities

**Responsible Lect. PhD. Eng. Tania Rus**

e-mail tania.rus@insta.utcluj.ro
Seminar contents

Evaluation

Written Test – 100%.

Selected bibliography

Enciclopedia tehnică de instalații – Instalații de încălzire (Cap. 4-6), Ed. Artenco, București, 2010.
Enciclopedia tehnică de instalații – Instalații de ventilare și climatizare (Cap. 5-8), Ed. Artenco, București, 2010.
Enciclopedia tehnică de instalații – Instalații electrice și automatizare (Cap. 3-6), Ed. Artenco, București, 2010.
HISTORY OF MODERN AND CONTEMPORARY ARCHITECTURE

Objectives

The aims of the course is understanding the emergence and evolution of architectural modernity, to gain the ability to make value judgments about the architectural products of recent history and to gather knowledge about the 20th Century architecture and urbanism.

Lecture / project contents

C1 The styles of 1900 / Horta, Guimard, Gaudi, Van de Velde / A.Perret / T.Garnier
C2 Ch. Rennie-Mackintosh / Secession / Loos
C3 German Expressionism / Dutch Expressionism / De Stijl
C4 Behrens / Bauhaus / Gropius / Mies van der Rohe
C5 Futurism / Russian Constructivism
C6 Le Corbusier
C7 Frank Lloyd Wright / Art Deco
C8 Postwar Functionalism / Aalto / Brutalism
C9 Architecture-sculpture / Niemeyer
C10 Architecture-structure / Megastructures / Metabolism / High-tech
C11
C12 Postmodernism
C13 Deconstructivism / Minimalism
C14 Contemporary trends
An overall perspective on the 20th Century architecture
Seminar contents

Selected bibliography


Evaluation

Written exam - essay

Selected bibliography

Objectives

Basic notions about functionality in architecture that aim at broadening students’ horizon, forming an educated gaze used later during the professional life and further years of study.

Lecture / project contents

C1 Introductory notions: subject matter, defining the basic notions, defining the functional model;
C2 Administrative buildings: offices, local government - townhalls, credit institutions, justice;
C3 Public catering buildings: restaurants, snack bars, bars and confections;
C4 Tourism buildings: hotels, motels, cottages, shelters and camps;
C5 Entertainment building: theatres and cinemas;
C6 Library buildings: libraries, mediatheques and archives;
C7 Buildings for museums;
Seminar contents

Evaluation

Final exam – written test; includes theoretical knowledge (50% of overall grade) and a practical part (50% of overall grade). min. 5p/10.
Requires attendance to lectures.

Selected bibliography

- Architectural Design: Design Hotels, Links, Barcelona 1999-2000*
- R. ALOI, Architetture per lo spettacolo, Ulrico Hoepli Editore, Milano 1958
- M. Z. BOULET, & C. MOISSINAC, & F. SOULIGNAC, Auditoriums, Editions du Moniteur, Paris 1990*
- G. BRAGHIERI, Aldo Rossi, Zürich, München,London 1993*
- S. CANTACUZINO, RE/ARCHITECTURE, Old Buildings/New Uses, Thames and Hudson, 1989*
- A. COOLS, Les lieux de travail, architectures spécialisées, Presses Universitaires de Bruxelles 1984
- L. GÁDOROS, Középületek tervezése, Tankönyvkiadó, Budapest 1981
- C. LĂZĂRESCU, Construcții hoteliere, Ed.Tehnică, Bucuresti 1971
## SPECIALISED DESIGN - FURNITURE

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**Objectives**

- Ability to analyse and design an object in space in agreement with the proposed themes.
- Ability to translate the idea into material.

**Lecture / project contents**

Project with a variable theme depending on the requirements of topicality in the field of design.

**Responsible:**
Assoc. Prof. PhD Arch. Dorina Vlad

e-mail: dorinavlad@yahoo.com
Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography

-I. CIZMARU, M. CIZMARU, Proiectarea si fabricarea mobilei de arta, Braşov. 2005
-G. MANDU, L. EVI, Tehnologia maselor plastice, Ed. UAIM, Bucureşti, 2005
-K. M. BAYER, Structura şi constructia mobilei ( curs ), Ed. UTPRES, Cluj – Napoca, 1992
-D. VLAD, ed. coord., M. KATALIN, ed., A. ARAMĂ, ed. Caiet de studiu nr. 1, Istoria Mobilierului, relevee de mobilier popular, Ed. UTPRESS Cluj-Napoca, 2005
### ARCHITECTURAL DESIGN STUDIO 6

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**Objectives**

Acquiring the ability to develop an architectural project on a complex programme, in close connection to an urban site, based on in-depth contextual analyses.

**Lecture / project contents**

Exploring, analysing and documenting potential sites for a mixed urban programme, combining collective housing, commerce and (semi-) public space. Defining the most opportune site and elaborating the architectural project, tackling integration, programmatic, spatial, structural and interior design aspects.

**Responsible**
Assoc. Prof. PhD Arch. Paul Mutică

e-mail
paul.mutica@arch.utcluj.ro

**Teaching team**
Assoc. Prof. PhD Arch. Paul Mutică
Lect. PhD Arch. Smaranda Todoran
Lect. PhD Arch. Adriana Măgerușan
Assist. Prof. PhD Arch. Andrei Kiss
PhD Arch. Alexandru Fleşeriu
Arch. PhDs Ștefania Boca
Arch. PhDs Romeo Cuc
Arch. Radu Roșca
Evaluation

The evaluation and the notation of the projects are made by the responsible professors.

Selected bibliography

- Archdaily, Detail, Arhitectura, Zeppelin, igloo etc.;
- E. Neufert, Manualul arhitectului - elemente de proiectare si de constructie, Alutus S.A., Miercurea Ciuc, 2004;
- G. VAIS, Programe de arhitectura, UT Press, 2008
### PRACTICAL ACTIVITY III

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**Objectives**

Knowing the different building materials and techniques. Introducing the students into the construction site execution. Elaborating a paper work that synthesizes the observations and elaborating architectural details on the construction site.

**Lecture / project contents**

Site visits, elaborating the practice work and practice colloquium.

Updating the student portfolio with the projects elaborated during the previous two semesters.

**Responsible**

Assoc. Prof. PhD Arch. Paul Mutică

e-mail
paul.mutica@arch.utcluj.ro

**Teaching team**

Assoc. Prof. PhD Arch. Paul Mutică  
Lect. PhD Arch. Smaranda Todoran  
Lect. PhD Arch. Adriana Măgerușan  
Assist. Prof. PhD Arch. Andrei Kiss  
PhD Arch. Alexandru Fleșeriu  
Arch. PhDs Ștefania Boca  
Arch. PhDs Romeo Cuc  
Arch. Radu Roșca
Seminar contents

Evaluation

The activity will be evaluated by the responsible teachers.

Selected bibliography
### Objectives

Theoretical and practical acquisition of knowledge specific to the parametric design in architecture.

Acquisition of the theoretical principles specific to the parametric design.

Integration of design and algorithmic thinking into architectural design flows.

Developing computer-aided design skills in Rhinoceros 3D - McNeel Roberts & Associates.

### Lecture / project contents

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</table>

Responsible:
Assist. Prof. PhD Arch. Andrei Kiss

e-mail: andrei.kiss@me.com
Seminar contents

Evaluation

Colloquium - Cumulative sequential assessment during the semester

Selected bibliography

A. MENGES, S. AHLQUIST, *Computational Design Thinking*, John Wiley and Sons Ltd. Publication (2011) (OBLIGATORIE)
ENVIRONMENTAL DESIGN

Objectives

The course aims the initiation in the field of environmental architectural space, the Assimilation of knowledge about the elements of the architectural space involved in creating the ambience. With this course it is aimed to set the stages of realization of an Environmental Design project, to analysis of an existing architectural space from the point of view of the environment: spatial relations, compositional relations, chromatic relations, texture, conditions of physical and psychic comfort. The stages of the Environmental Design project are followed.

Lecture / project contents

C1 Introduction to the Architectural Space Ambience.
C2 The environmental components of the architectural space.
C3 The perception and the psychoplastic elements
C4 The ambient composition in the interior and exterior architectural space.
C6 Light and color in Architecture.
C7 Methods of activating environmental stimuli.
C8 Perceptual structure and behavior in the architectural environment.
C9 Ambient characteristics of the private architectural space
C10 The ambience of the public architectural space
C11 Sustainability and architectural ambience principles.
C12 The ambience of the scenic space - the space of the show.
C13 Environmental features of architectural spaces in history
C14 Environmental Design Project - conceptualization analysis, stages.

Trends and concepts in the context of contemporary space.
Seminar contents

Evaluation

Carrying out a paper with a theoretical part and a practical part - drawing, on a theme chosen from the themes presented at the course.

Selected bibliography

-G. ACHITEI, Frumusul dincolo de arta, Meridian
-M. BEAZLEY, Colour Healing Home, Octopus Publishing Group, Great Britain, 2000 e-1988
-F. IONESCU, V. NASTASE, Proiectarea Mobiliei si Arhitectura Interioarelor, Ed didactica si Pedagogica, Bucuresti - 1970
-C. JUROV, Arhitectura Ambientelor, Capitel-2006
-N. KNOBLER, Dialogul vizual, Meridiane-1983
-R. KOOLHAS & CO, 15 books – floor, wall, ceiling, roof, door, window, facade, balcony, corridor, fireplace, toilet, stair, escalator, elevator, ramp
-P. A. MICHELIS, Estetica arhitecturii, Meridiane-1982

49.20
# DESIGN IN ARCHITECTURE

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**Objectives**

Acquiring theoretical knowledge in design and design practice.
Assimilation of the theoretical knowledge regarding evolution and the main theories in the field of design.
The ability to recognize design elements that can improve the design process specific to the architect.

**Lecture / project contents**

<table>
<thead>
<tr>
<th>C1</th>
<th>Introduction</th>
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<tbody>
<tr>
<td>C2</td>
<td>History of design</td>
</tr>
<tr>
<td>C3</td>
<td>The basics of perception - function vs. Form</td>
</tr>
<tr>
<td>C4</td>
<td>Christology, psychoanalytic theories of stimulating creativity</td>
</tr>
<tr>
<td>C5</td>
<td>The stages of the creation process</td>
</tr>
<tr>
<td>C6</td>
<td>Semiotic and morphology</td>
</tr>
<tr>
<td>C7</td>
<td>The role of technology in the development of design</td>
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<td>C8</td>
<td>The influence of marketing and marketing study on design</td>
</tr>
<tr>
<td>C9</td>
<td>Marketing and social ethics</td>
</tr>
<tr>
<td>C10</td>
<td>Advertising and advertising graphics</td>
</tr>
<tr>
<td>C11</td>
<td>Brand, visual identity, style unit and their role on the perception</td>
</tr>
<tr>
<td>C12</td>
<td>of architectural space</td>
</tr>
<tr>
<td>C13</td>
<td>Design of architecture between details - furniture, carpentry, staircase as a sculptural element, access, etc.</td>
</tr>
<tr>
<td>C14</td>
<td>Architecture and architectural space - treated as a design object</td>
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<tr>
<td></td>
<td>Urban design and environment</td>
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Responsible:
Lect. PhD Arch. Silivan Moldovan
e-mail: silivan.moldovan@arch.utcluj.ro
Evaluation

Written exam with 5 questions, rated from 1 to 9, 1 point ex officio. Points for additional activity, accumulated over the semester, contribute to the final mark.

Selected bibliography

-T. FRY, *Design Beyond the Limits*, 2011
HISTORY OF ARCHITECTURE IN ROMANIA

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</table>

Objectives

The course aims to get knowledge and understanding of the history of architecture on the territory of Romania. Through selected case-studies, the lectures present the evolution of architecture in its contemporary socio-cultural context, the styles, remarkable architects and prevailing theoretical notions.

Lecture / project contents

C1  Antiquity Architecture in Dacia and Dobrogea
C2  Early fortifications in Transylvania
C3  Gothic
C4  Development of settlements during the XIII-XV centuries
C5  Medieval housing
C6  Reformation and urban modernization
C7  Fortifications and Castles
C8  The Age of Stefan the Great
C9  Architecture in Wallachia in XV-XVIIth century
C10 Urban Baroque Architecture
C11 The provincial Baroque
C12 Neoclassicism and Romanticism in Transylvania
C13 1900 national schools and architecture
C14 Pre- and post-war Modernism

Responsible: Prof. PhD Arch. Virgil Pop
e-mail: arh.virgil.pop@gmail.com
Seminar contents

The seminars consist in aplicative assignments, whereby students learn to read a historic monument in its complex temporal and spatial evolution, preparing architectural drawings which highlight the building's successive transformations. Transylvanian medieval and early-modern churches, in urban and rural contexts are often selected as case studies, each student working on a different monument.

Evaluation

Written exam about and evaluation of the seminar assignments.

Selected bibliography


* Revista sITA - studies in History and Theory of Architecture: https://sita.uauim.ro/*
Objectives

The course aims to spread knowledge and understanding of contemporary architectural speeches, to form a basic architectural culture for understanding the contemporary architectural landscape, to form a culture of architectural theory for the understanding of contemporary evolutions and to give the ability to make comparisons, critically analyze, and formulate views on contemporary themes.

Lecture / project contents

C1 Introductory course. The notion of architectural theory. 70s.
C2 Critics of modernism: Venturi, Rossi and Taffuri, IUAV and Peter Eisenman.
C3 The 70s. Critics of modernism: the crisis of meaning.
C4 From critics of modernism to early postmodernism. Charles Jencks.
C5 Modernism resists! SOM, Frei Otto, “British Renaissance
C6 Post-modernism resists! Manifestations of post-modernism in
C7 the 80s. New definitions. Opponents. 2 particular cases: Merida
C8 and Venice
The golden age of the theory. French post-structuralism.
C9 From Derrida to Deleuze. Geometry and autonomy.
C10 Pragmatism and the “post-theory” period. OMA. Netherlands
C11 Minimalism. Materiality and effects. Neomodernism
C12 Minimalism is. Phenomenological architecture.
C13 Sustainability and future of theory
C14 Discussions.
Evaluation

During the course, in the form of 6 tests. At the end of the course, a text/architectural works analysis paper will be delivered. In session, a minimum of 8 points in a + c will pass an exam.

Selected bibliography

Additional:
SOCIOLOGY

Objectives

All human action is localized. Therefore, there is clearly a link between built spaces and human activities. The Sociology course aims to present some of these links, thus broadening the student’s understanding of architectural and urban planning processes. It aims to offer a brief presentation of different concepts related to space and society. Starting from the fact that architecture and urban planning are social actions (they always have an effect on others), and the architect is a social actor, the course offers a toolbox of concepts and methods in order to understand some possible social effects of the architects’ work.

Lecture / project contents

C1 Introduction: What is sociology?
C2 Architectural determinism (Determinism(s) , Utopia,
C3 The Phalanstery Paradigm, The dangers of architectural
determinism).
C4 Power and the Production of Space (Discipline and
C5 Normalization, Controlling society by controlling its space, Social
space – Physical space, “(Social) space is a (social) product”)
C6 The architect’s social role in the XXIst Century
C7 Community and Society
C8 Public / Public Space – the space of society
C9 Community / Commons – common space
C11 The two Romanias – historical overview – 1918 – 2000
C12 The two Romanias – Today - Demographical Model, Economical
Model, Value system.
C13 The two Romanias – Magnet Cities (opportunities and issues)
The two Romanias – Small towns and Rural areas (opportunities
and issues)
C14 Sociological methods of research
Seminar contents

Evaluation

Written exam – short argumentative essay related to a current social problem related to urban planning or architectural processes.
Critical essay or book review.
Final grade = 0.4 x essay/review + 0.6 x exam

Selected bibliography
INTERIOR ARCHITECTURE

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Objectives

The course aims learning the basic elements in the design process in the field of Architecture (interior), to gain knowledge of the evolution of the term Architect in relation to the evolution of the profession and the architecture education for the understanding of the contemporary context of Architecture (interior), to study of the different architectural elements (and specific finishes) and their relations, characteristics of these elements and specific execution techniques, to study of furniture elements involved in space planning inside, to follow the role of sanitary installations (IS), thermal (IT), electrical (IE) and ventilation (IV) in the design of the interior architectural space and to follow the role of catalog and decorative objects in interior design.

Lecture / project contents

C1 The evolution of the architect profession in relation to the architecture education
C2 Introduction to interior architecture
C3 Furniture (in the context of the interior space)
C4 Flooring. (in the context of the interior space)
C5 Walls. (in the context of the interior space)
C6 Gaps. (doors, windows, voids, etc. in the context of the interior space)
C7 Ceilings. (in the context of the interior space)
C8 Connections. (plinths, scaffolds, etc. in the context of the interior space)
C9 Hygiene and maintenance spaces.
C10 Horizontal and vertical movements. (in the context of the interior space)
C11 Plumbing (IS), thermal (IT), electrical (IE) and ventilation (IV). (in the context of the interior space)
C12 Choice of catalog elements in the interior architectural space.
C13 Choice of decorative elements in the interior architectural space
C14 Interior Architecture Project: Stages. Transverse conclusion
Evaluation

Ability to assimilate, understand and synthesize the notions taught / discussed at the course, Accuracy of information, The correctness of the terms, Structure of the work, quality of expression.

Selected bibliography

# SPECIALISED DESIGN STUDIO - INTERIOR ARCHITECTURE

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**Objectives**

The project aims at the transformation of a set of conditions into a spatial solution through the design process. It also targets the development of a specific professional culture, offering students a coherent system for the analysis of the interior architectural space. Moreover, the discipline provides a theoretic platform addressing the architectural project strategies, both during the formative years as well as within professional practice.

**Lecture / project contents**

- **C1** Architecture project in a real-world context. Urban Hotel Room - Indoor Architecture Project
- **C2** Explore location and capture information. Desktop Documentation.
- **C3** Achieving concept of interior architecture, communication and evaluation.
- **C4** Developing interior architecture concepts. Representation - the adequacy of speech and representation to the essence of the proposal.

**Responsible:**
Lect. PhD Arch. Paul Mihai Moldovan  
e-mail: paul.moldovan@arch.utcluj.ro

**Coordinators**
Teach. Assist. PhD Arch. Laura Patachi  
Teach. Assist. PhD Arch. Alina Voinea  
Arch. Fabian Luca
Seminar contents

Individual and group discussions based on arguments and references. Crits, didactic and peer review. Comparative arguments.

Evaluation

Evaluation and notation of projects by the teaching staff.

Selected bibliography

Domus, Italia: *Periodice de arhitectură, arhitectură de interior și design.*
Detail, Germania: *Periodice de arhitectură și arhitectură de interior.*
E. Croquis, Spania: *Periodice de arhitectură și arhitectură de interior.*
SPECIALISED DESIGN STUDIO - TECHNICAL DESIGN

Objectives

The course aims the acquiring the knowledge needed to design buildings with the right and economic structure as well as electrical, thermal and sanitary installations, the ability to analyze in parallel the architectural requirements, the requirements of building the resistance structure, the installations and some details related to them, when designing a building, the pre-dimensioning elements of a resistance structure and the election and positioning of elements of Electrical, Thermal and Sanitary Plants, Assembly of Enclosures for a Building.

Lecture / project contents

-
Seminar contents

S1. Analysis of the structure of the spaces of the designed building
S2. Pre-dimensioning a slab, a beam, a column, and a foundation.
S3. Drawing up a layout plan of a floor plan, foundation plan, and foundation details.
S4. The representation of the sanitary-technical installations, of the thermal installations and of the electrical installation related to the structure studied at the structures.
S5. Details of trails, with sections on facades, planes and roof planes.

Evaluation

Quality of computational notes, timetables and activity during the semester. The evaluation of the quality of the project at the specialties: structure, electrical, thermal, sanitary installations.

Selected bibliography

Notele de curs de la disciplinele de specialitate
Normativele specifice problemelor abordate.
Reviste de specialitate
### DESIGN SYNTHESIS STUDIO 1

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**Objectives**

O1 - Developing students' competencies in the field of architectural design by applying the design methodology to the themes of plurivalent programs.

O2 - The elaboration of a complex architectural project, as the final stage of an interdisciplinary process, started with the urbanism project. Detailing the architectural object by enumerating a project concept, establishing neighborhood relations with a proposed urban context, functional, structural and spatial solution according to the design theme and the norms in force.

**Lecture / project contents**

Different public building types, such as offices, hotels, mediatheques etc. on complex urban sites.

**Responsible:**
Assoc.Prof. PhD Arch. Octav Silviu Olănescu

E-mail: octav.olanescu@arch.utcluj.ro

Prof. PhD Arch. Mihaela Ioana Agachi
Lect. PhD Arch. Silviu Moldovan
Lect. PhD Arch. Silviu Aldea
Teach. Assist. PhD Arch. Rareș Drăgan
Teach. Assist. PhD Arch. Alice Oprică
Arch. PhDs Maria Loșonți
Arch. Andrei Bacoșcă
Arch. Csaba Lázár
PhD Eng. Petru Rus
Lect. PhD Eng. Radu Hulea
Seminar contents

Architectural project: Exposition, applications, individual corrections, corrections in the collective, evaluation of the projects with public support.

Evaluation

Seminar: According to the design theme and the Regulation for Discipline Design Synthesis IV.

Selected bibliography

SPECIAL STRUCTURES

Objectives

The course aims to develop the capacity to analyze the behavior of structures for performing buildings. Developing the ability to intuitively approach the significant aspects that define the behavior of the building, to gain knowledge of the relevant aspects of the behavior of performing structures under load, to present the particularities of static compliance specific to performing structures, to raise the questions of how to optimize the resistance structure and to present the form-structure relationship.

Lecture / project contents

Principles of approximate determination of the requirements in the elements of a structural assembly using the external static scheme
Structures for high buildings.
High grounded ground floor structures:
Functional, mechanical and structural criteria
Structural features of suspended roofs.
Suspended roofs stabilized with reinforced
Roofing with pretensioned network cables
Roofing of cable farms.
Roofs with combined systems
Stay cable sistems.
Roofs of pre-stressed or leaked membranes.
Retractable structures.
Problems of the compliance of the marginal support structures
Arched structures
Structural assemblies with thin curved plates directly on foundations
Structural assemblies with thin curved plates resting on intermediate
Implications for overall conception
Functional, mechanical and deterministic criteria
Cut, pyramid, faceted systems.

Responsible:
Assoc. Prof. PhD Eng. Petru Rus
E-mail: petru.rus@arch.utcluj.ro
Seminar contents

Evaluation

Analysis of two topics of theory and related practical aspects.

Selected bibliography

PATHOLOGY AND THERAPEUTICS OF HISTORIC STRUCTURES

Objectives

The course aims to create the ability to rehabilitate or modify the function of a construction, to analysis of the factors that caused degradation and to get knowledge of technical solutions necessary for the maintenance, repair or consolidation of building elements.

Lecture / project contents

C1 Maintenance and repair of buildings.
C2 Accidents and damage in construction.
C3 Building expertise.
C4 Methods for consolidation of structures in masonry, reinforced concrete, metal and wood.
Seminar contents

Evaluation

Cours - Notes on topics: Written exam

Selected bibliography

- Journal articles.
### HISTORIC BUILDING RECOVERY

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**Objectives**

The course aims to ensure the knowledge needed to identify load bearing structures in historical buildings, the study of resistance and stability, but also of preserving heritage value, to gain knowledge of the main tools for investigating monuments and the specific role of the architect in their use, to get knowledge of the construction of bearing structures in historical buildings, to present materials used in historical structures and technologies for building historical structures. Types of interventions for monuments, historical buildings and to get knowledge of the protection of historical monuments in Romania and internationally.

**Lecture / project contents**

- C1 Defining Course Objectives. Terminology presentation specific
- C2 Structural bearing subassemblies
- C3 Historical roofs
- C4 Historical floors and arcades
- C5 Historical support systems
- C6 Historical foundations
- C7 Assemblies of historic bearing structures
- C8 Ground floor assemblies of historic bearing structures
- C9 Storied floor assemblies of historic bearing structures
- C10 Types of interventions
- C11 Intervention on historical roofs
- C12 Intervention on historical floors and arcades
- C13 Intervention on historical support systems
- C14 Intervention on historical foundations

**Responsible:**
Lect. PhD Eng. Imola Kirizsân

e-mail: Imola.Kirizsan@arch.utcluj.ro
Seminar contents

Evaluation

Active attendance at the course Presentations Project 1 and Project 2. Colloquium - two checks in written form or a paper / essay.

Selected bibliography

-B. SZABÓ, Dicționar ilustrat de structuri portante istorice Cluj-N., Ed. UTILITAS, 2004
-B. SZABÓ, I. KIRIZSÁN, Dicționar ilustrat de șarpante istorice Cluj-N., Ed. UTILITAS, 2011
-Y. M. FROIDEVAUX, Techniques de l’architecture ancienne – construction et restauration/ Liège, Solédi, 1985
URBAN COMPOSITION

Objectives

The course aims to get knowledge of the formal aspects to be considered in city planning and planning, of the elements that make up the city, of compositional principles, of urban compositional models and to develop a specific professional culture by analyzing examples of traditional, modern and contemporary practice.

Lecture / project contents

C1  Getting Started
C2  Form and space
C3  Compositional principles
C4  The organic model
C5  The grid pattern
C6  The diagrammatic model
C7  The monumental model
C8  Urban silhouette
C9  Public space: the market
C10 Public space: street
C11 Public space: the park
C12 Urban divisions
C13 The city’s limit
C14 COLLOQUIUM
Evaluation

Written verification during the semester, oral verification, within the course, of individual studies, oral verification at the colloquium of individual studies completed only at the end of the semester

Selected bibliography

- J. GEHL, B. SVARRE, *Cum se studiază viața urbană* (Igloo Media, București, 2015)
- S. KOSTOF, *The City Assembled: Elements of Urban Form through History* (Thames & Hudson, 2005)
## URBAN STRUCTURES

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### Objectives

The course aims to identify and understand the challenges of the architect-urbanist profession in the problems of the dynamics of urban form and structure, to acquire awareness of the importance of the multidisciplinary approach in urban planning and an informed consideration of urban restructuring projects, both in academic urban planning workshops and in future professional work.

### Responsible:

Assoc. Prof. PhD Arch. Vlad Sebastian Rusu

E-mail: vlad.rusu@arch.utcluj.ro

### Lecture / project contents

- **C1** Course Introduction.
- **C2** Urban territory, urbanization process, conditioning and manifestations.
- **C3** The system of urban activities within the city.
- **C4** Urban morphology, morphological methods of analysis, application of methods of spatial analysis.
- **C5** Case study - application of a spatial body analysis method.
- **C7** Urban texture Limits of urban structure. Structures of structural organization.
- **C8** Urban structure limits of urban structure. Structures of structural organization.
- **C9** Case studies on urban structure and approaches.
- **C10** Phenomenon and urban form - definitions, Dynamics of urban form.
- **C11** Urban spatial differentiation - homogeneous space, heterogeneous space, selection in urban space. Case studies.
- **C12** Particular value of urban form - character and specificity. Case Study.
- **C13** Urban Restructuring - Case Studies.
Seminar contents

Evaluation

Written exam

Selected bibliography

Objectives

The course aims providing comprehensive background about the principles, phases, methods and techniques of digital fabrication, in its multiple relations with the field of architecture.

Lecture / project contents

| C1   | Introduction              |
| C2   | Systems, machines and instruments |
| C3   | Algorythms                |
| C4   | Morphogenesis             |
| C5   | Forming                   |
| C6   | Tessalating               |
| C7   | Folding                   |
| C8   | Principles of digital fabrication |
| C9   | Rapid prototyping         |
| C10  | 3D scanning               |
| C11  | Further case-studies      |
| C12  | Theorising digital fabrication |
| C13  | Conclusions               |
| C14  | Colloquium                |

Responsible: to be specified

E-mail: 
Seminar contents

Evaluation

Written exam

Selected bibliography


RESTORATION OF HISTORIC BUILDINGS

Objectives

The course aims the awareness of the importance of protecting and capitalizing on historical monuments. Study of various aspects of restoration of historical monuments, the Assimilation of monument and restoration concepts, knowledge of the factors that can aggravate monuments, knowledge of research undertaken to restore monuments, knowledge of the categories of restoration work, knowledge of constructive systems and traditional building materials, conservation techniques, and repairs needed in historical building interventions, developing of a specific professional culture by analyzing examples of traditional, modern and contemporary practice.

Lecture / project contents

C1 Introduction
C2 The notion of monument and its evolution
C3 The notion of restoration and its evolution
C4 Aggression of the environment on monuments
C5 Human aggression on monuments
C6 Researches related to restoration work
C7 Categories of restoration work: Part I
C8 Categories of restoration work: Part II
C9 Construction systems and historical building materials: masonry and plastering
C10 Construction systems and historical building materials: roofs, floors, exterior pavements
C11 Construction systems and historical building materials: doors, windows, stairs
C12 Construction systems and historical building materials: wooden constructions
C13 Restoration of urban space
C14 Restoration of historic gardens

Responsible:
Lect. PhD Arch. Andreea Milea

E-mail: andreea.milea@gmail.com
Seminar contents

Evaluation

Cours: written verification during the semester, studies developed according to topics announced at the end of each course and presented orally within the time available

Selected bibliography

- F. CHOAY, Alegoria patrimoniului (Simetria, București, 1998)
- G. CURINSCHI VORONA, Arhitectură Urbanism Restaurare (Editura Tehnică, București, 1996)
- J. HÜLSEMANN, Casa țărănească săsească din Transilvania. Ghid pentru restaurarea caselor vechi (Simetria, Sibiu, 2014)
- B. SZABÓ, Introducere în teoria reabilitării structurilor de rezistență istorice (Utilitas, Cluj-Napoca, 1998)
- Caietele restaurării. colecția 2013-2017
STRUCTURAL ENGINEERING THEORY 3

Objectives

The course aims acquiring the knowledge needed to construct bearing structures in terms of mechanical strength and stability, understanding the impact of resistance and stability requirements in architectural design, acquiring compliance and sizing criteria for elements, subassemblies, simple, reinforced and prestressed concrete structure assemblies, metal, wood, masonry, to gain knowledge of the behavioral particularities of the bearing structure in frames, diaphragms or dual structures. It is followed to gain mastery of specialized terms and representations, to master simple methods of pre-dimensioning structural elements and acquisition of specific properties of different materials used in bearing structures and assimilation of technologies for carrying the load bearing structures.

Lecture / project contents

C1 Recapitulation / Introduction
C2 Roof structures. Underbody assemblies.
C3 Planing subassemblies. Flat planes.
C4 Carrier support subassemblies.
C5 Foundation subassemblies. Foundations, Elevations
C6 Steps of structural structure synthesis.
C7 Upper and large openings ground floor assemblies
C8 Bottom grounded structures
C9 Hinged Structure Assemblies
Recapitulation
Seminar contents

S01 - Construction systems of roofs, roof structures
S02 - Systems of floor plans
S03 - Constructive systems of support subassemblies
S04 - Presentation of simple methods of pre-dimensioning of the floors and the roof
S05 - Starting from the architectural part of a building simple, small, it is proposed to design the appropriate resistance structure, using masonry, wood and / or concrete materials, taking into account site conditions.
S06 - Structural interventions on existing buildings. Warehouse issues.

Evaluation

Cours: Final written and oral examination (minimum grade 5)
Seminar: Continuous tests. (minimum mark 5)

Selected bibliography

-V. GIONCU, Teoria structurilor. Note de curs ed. I.P. Timişoara 1979;
-M. MIHAILESCU, Construcții din beton armat și precomprimat ed. I.P. Cluj-N. 1983;
-F. CHING, A visual dictionary of Architecture, Van Nostrand Reinhold New York, 1994;
-B. SZABÓ, Teoria structurilor. vol. I. Elemente structurale; ed. Utilitas Cluj-N. 1997;
-M. CRISAN, Statica formelor construite. Note de curs 2009-2010, ed. UAIM, Bucureşti, 2010
-B. SZABO, Elemente și structuri de beton armat ed. I.P. Cluj-N., 1985
-R. CRIŞAN, Constructii din lemn, ed. UAIM, Bucureşti, 2003
-R. CRIŞAN, Constructii din oţel, ed. UAIM, Bucureşti, 2003
PHYSICS OF CONSTRUCTION AND URBAN ENVIRONMENT

Objectives

The course aims the developing skills in the areas of hygrothermics, acoustics and natural lighting in support of professional training, the assimilation of the theoretical knowledge regarding the basic notions in the field of building physics and the ability to perform preliminary calculations in the areas of hygrothermics, acoustics and natural lighting.

Lecture / project contents

C1 Introduction. Overview - Objectives of the course and course.
C2 Current issues of hygrothermics, acoustics and natural lighting
C4 Practical course: .
C5 Practical course: Verification of the degree of thermal protection.
C6 Practical Course: Calculation of water vapor diffusion
C7 Practical course: The annual heat demand of a building Q.
C9 Sound insulation. Materials and structures.
C10 Indoor and outdoor acoustic protection. Examples.
C11 Natural light in architecture.
C12 Shadow diagram. Projection chart. The shadow mask.
C13 Selective comfort of the sun, made with the projection diagram and the shadow mask.
C14 Complex examples: Intelligent constructions. Intelligent enveloping elements.
Seminar contents

Evaluation

Written test and support
-Solving three theory points
-Solving a calculation example

Selected bibliography

- *Standarde, normative si reglementari tehnice specifice.*
SPECIALISED DESIGN - URBAN PLANNING 2

Objectives

It is aimed to acquire the knowledge, skills, abilities and skills necessary for the architect whose professional activity is also exercised in the field of urban planning, to familiarize through the project with the methods, conventions and normative acts involved in the design of residential areas at the PUZ level (Zonal Urban Plan), to elaborate of the urban planning project of a residential area at differentiated scales: 1: 2000 - 1: 500, to relate to the existing normative framework on urban planning and its application within the project, to familiarize with the roles of the different actors involved in the elaboration of an urbanistic project.

Lecture / project contents

One semester project in three phases:

Urban Restructuring

Phase 1 - Analysis of the existing situation and making a documentary map
Phase 2 - Designing a guideline scheme and phasing out the intervention
Phase 3 - Detail and completion of the urban planning project
Seminar contents

Selected bibliography

Evaluation

Applications: According to the design theme and the design regulations at the faculty level. Oral support of the project, in its various intermediate phases and in the final one.

Selected bibliography

- MINISTERUL LUCRĂRILOR PUBLICE ȘI AMENAJĂRII TERITORIULUI, Ghid privind reglementarea dezvoltării urbane prin operațiuni de parcelare și repartelare a terenurilor introduse în intravilan, iunie 2002.
**DESIGN SYNTHESIS STUDIO 2**

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**Objectives**

The studios aims to develop students’ competencies in the field of architectural design by applying the design methodology to the themes of plurivalent programs, to elaborate of a complex architectural project, as the final stage of an interdisciplinary process, started with the urbanism project. Detailing the architectural object by enumerating a project concept, establishing neighborhood relations with a proposed urban context, functional, structural and spatial solution according to the design theme and the norms in force.

**Lecture / project contents**

Architectural project: Exposition, applications, individual corrections, corrections in the collective, evaluation with public support of the projects.

Responsible:
Assoc.Prof. PhD Arch. Octav Silviu Olănescu
E-mail: octav.olanescu@arch.utcluj.ro

Prof. PhD Arch. Mihaela Ioana Agachi
Lect. PhD Arch. Silvan Moldovan
Lect. PhD Arch. Silviu Aldea
Teach. Assist. PhD Arch. Rares Drăgan
Teach. Assist. PhD Arch. Alice Oprică
Arch. PhDs Maria Loșonți
Arch. Andrei Bacoșcă
Arch. Csaba Lázár
PhD Eng. Petru Rus
Lect. PhD Eng. Radu Hulea
Seminar contents

Evaluation

Seminar/ architectural project : - According to the design theme and the Regulation for Discipline Design Synthesis IV : - Project Support Assessment

Selected bibliography

# PRACTICAL ACTIVITY 4

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**Objectives**

The course aims to gain the ability to interact with the architect at all levels of the profession, to understand the steps to design a project, to identify the stages of scientific material development and to understand the amplitude of efforts to develop cultural or scientific events.

**Lecture / project contents**

Workshops, working groups, conferences, projects, events. The practical activity provides students with the opportunity of applying and developing the in-school-acquired abilities and knowledge base in the frame of real projects, programmes, workshops, events and/or publications, thus enabling them to develop interaction skills at a diverse range of professional levels.

Updating the student portfolio with the projects elaborated during the previous two semesters.

Responsible:
Assoc.Prof. PhD Arch.
Octav Silviu Olănescu

E-mail: octav.olanescu@arch.utcluj.ro

Prof. PhD Arch. Mihaela Ioana Agachi
Lect. PhD Arch. Silvan Moldovan
Lect. PhD Arch. Silviu Aldea
Teach. Assist. PhD Arch. Rares Drăgan
Teach. Assist. PhD Arch. Alice Oprică
Arch. PhDs Maria Loșonți
Arch. Andrei Bacoșcă
Arch. Csaba Lázár
Evaluation

The evaluation will be based on the degree of involvement in the proposed activities.

Selected bibliography


_Norms regarding the design of civil buildings from the point of view of the safety requirement in operation: Indicative: NP 068-02,_ Bucharest: Fast Print, 2006.


THE CONTEMPORARY CITY

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Objectives

The course aims to give knowledge and understanding of specific concepts, theories and basic methods in contemporary urban planning and their appropriate use in professional communication. Understanding the way of conceiving the contemporary urban space - as a space of a community with specific identity, the result of a historical becoming. Understands how specific historical, geographical, economic, social, and cultural aspects influence the genesis and evolution of the contemporary city, to analyse the elements specific to the existing urban framework and to carry out sequential analysis studies of a street (recognizing the specific human perception of urban space on the pedestrian scale) in the global context of the city.

Lecture / project contents

- C1 Introductory course, presentation of the discipline.
- C2 Ways to analyze urban landscape and qualitative analysis.
- C3 The maps of urbanism and how they have influenced the city’s image.
- C4 Evolution of concepts of spatial organization of cities – examples.
- C5 Urban density issues.
- C6 Utopias and Distopias - The Upper Community Future imagined versus reality.
- C7 High Buildings in the Contemporary City Context.
- C8 Policies for Compact Towns and Mega Cities (Problems and Solutions).
- C9 Functions of the city, central area of the city, iconic landmarks, public space.
- C10 Sustainability, globalization and neoliberalism. The city’s image and its relation to the valuable elements of the context (soil, water, lighting, urban ventilation and urban silhouette).
- C11 Urbanism in free zones or former industrial areas – examples.
- C12 Interventions in areas of historic value.
- C13 Submission of additional topics and Conclusions.

Responsible:
Lect. PhD Arch. Silivan Moldovan

e-mail: silivan.moldovan@arch.utcluj.ro
Evaluation

Written exam with 5 questions, rated from 1 to 9, 1 point ex officio. Points for additional activity, accumulated over the semester, contribute to the final mark.

Selected bibliography
- K. LYNCH, Imaginea Orașului, Registrul Urbaniștilor din România, 2012
- CHOAY F., L’urbanisme - Utopies et réalités, Ed. du Seuil, Paris 1965
- PANERAI Ph., DEPAULE J-C, DEMORGEON M., Analyse Urbaine, Parentheses Editions, 1999
- Hall Peter - Orațele de mâine, Ed. All Educational, București 1999
- BENEVOLO L., Orasul in istoria Europei, Ed.Polirom Iasi 2003
- AGACHI M.I.M., Clujul modern - aspecte urbanistice, UTPress Cluj Napoca 2004
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**Objectives**

O1. Acquiring theoretical knowledge about the existence and role of regional / national / European strategies and planning.
O2. Understanding the impact of implementing a plan over a period of time on a territory.
O3. Identifying bodies responsible for the implementation and implementation of urban strategies and policies.
O4. Identifying good practice in European territory.
O5. Understanding the macro levels of regional, national and European strategic planning and planning.
O6. Developing strategic thinking.

**Lecture / project contents**

C1 Introductory course
C2 Legislative framework
C3 Territorial Development Strategy of Romania
C4 National Planning Plan – PATN
C5 Area Planning Plan – PATZ
C6 Planning of the county territory – PATJ
C7 Urban Strategic Planning
C8 Mobility and urban remodeling – Cluj
C9 European dimension - US space strategy and development policies
C11 Promotion and regional competition - ExpoREAL; Mipim
C12 Urbanization and Quality of Life
C13 Sustainable Urbanization

Responsible:
Teach. Assist. PhD Arch. Rareș Dragan

e-mail: raresv.dragan@gmail.com
Seminar contents

Evaluation

Cours: active presence at the course or written exam - 8-10 questions ability to get a grade during the semester - attention and vision questions at the end of the course.

Selected bibliography

-Strategia de dezvoltare strategică a României, Quattro design, iunie 2014
-Enhanced Spatial Planning as a precondition for sustainable Urban Development, Raport Banca Mondială, 2013
-Legea 350/6 iulie 2001 cu completările ulterioare
-NEGULESCU, M.H., Practica urbanistică de remodelare sustenabilă a mobilității, București, Ed. Universitară Ion Mincu, 2011
-STOIAN I., CALCIU D., Orașul posibil, Ed. Tact, 2012
-MONTGOMERY C., Orașul fericit, trad. M. ZIPIȘI, București, Ed. Igloo, 2017
URBAN STRATEGIES AND POLICIES

Objectives

The course seeks to achieve a comprehensive approach that allows the development of sustainable urban, economic, social, political and spatial urban policies and strategies, general understanding of political theories and possible applications in the context of urban development, the ability to place major development initiatives in different development cultures and socio-economic agendas, understanding the role of public and private actors in formal and informal urban development processes, prospects for substantiating decisions in strategic phases, pre-design for urban development initiatives and the ability to relate urban policies with spatial results at different scales.

Lecture / project contents

C1 Introduction. Motivation, history, concepts, definitions.
C2 Urban strategies and policies in Romania:
C3 Urban strategies and policies in Romania:
C4 Fundamental planning decisions:
C5 Comprehensive planning - top-down and bottom-up approach to urban planning; Communities - Developing the Social Capital Index.
C6 Collaborative planning; Citizens’ participation; Public consultations.
C7 Utilitarianism, Equitable Planning, Egalitarianism, New Realism, Incrementalism.
C8 Strategic Planning - Copenhagen, London, New York; Sustainability.
C9 Principles of the urban economy. Economic impact of patrimony and urban planning decisions.
C10 Fundamental planning decisions. Analysis methods.
C11 Case studies.
C12 Case studies. Recapitulation.
C13 Presentation of essays and open discussions.
Seminar contents

Evaluation

Minimum examination grade 5 and an essay of 5000 words (analytical ability, personal interpretation, originality, creativity)

Written exam + essay

Selected bibliography

- Strategia de dezvoltare teritoriala a Romaniei (sursa: http://www.mdrap.ro/dezvoltare-teritoriala/-2979)
ARTS AND ARCHITECTURE

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Objectives

The course proposes to familiarize with contemporary and contemporary art concepts and personalities selected from the perspective of a significant relationship to the problems of architecture. Without a strictly chronological thread, the course highlights the confluences, both spatially and materially, and conceptually, of the current themes of architectural creation and modern and contemporary artistic creation. The aim is to stimulate the formation of a critical view that will allow the future architect to participate in an informed, responsible and relevant way in the contemporary public sphere, including by collaborating with artists. The case studies discussed highlight the location of architecture in the cultural complex of the present, aiming at sensitizing the students to the other forms of ar-

Lecture / project contents

C1. The painters of the city: a short history of modern painting  
C2. The city of the artists  
C3. Object and space. Object and place  
C4. Beyond the object. Art and ecology  
C5. Action, activism, participation: Dada&Surrealist practices  
C7. Photography and architecture  
C8. Ar[t]hitecture on paper: architectural graphics and utopia  
C9. Virtual reality in contemporary art: augmented reality, smells-capapes, soundscapes  
C10. Memory and public space: contemporary memorials  
C11. Home: contemporary artistic exploration of domesticity  
C12. Workshop, gallery, museum: curatorial practices and institutional critique  
C13. Artist-architect collaborations  
C14. Colloquium

Responsible:  
Assoc. Prof. PhD Arch. Cristina Purcar  
e-mail: cristina.purcar@arch.utcluj.ro
Seminar contents

Evaluation

Evaluation along the way through various methods: short test, case study presentation, dialogue;
Colloquium in the last week of the semester: choice between the written test and the presentation of a case study.

Selected bibliography
PSYCHOLOGY OF FORM

Objectives

The lecture intends working on a relative and volatile consensus about the psyche in general and the human in particular. It develops a series of reflexive considerations of collaboration of human intention with a context considered in its intention (nature), of the continuous repositioning of the human subject in relation to the fragility and transformality of its objectualization. The didactic collaboration circumscribed to the course aims at a nuance of the excessive steep decision of overly technical formal taxation due to the abundance of the computer / computer projection and the revelation of some constants that, have the potential to help configure a place by proposing architectural identity.

Lecture / project contents

C1 Form, formalization; forms: content and periphery / core and contour
C2 Psychic, uniqueness or dispersion
C3 Matter, substance, principle, condition, phenomenon
C4 Dynamics, increases / decreases, dilatations / contractions, scatter / coagulation
C5 Color and shape / shape and (in) light; mental psychological “mimetic realism” or imitative psyche
C6 Space: volume, shape, substance, geometry
C7 Form time, psi. evolutionary / psi. involutive
C8 Psycho-formal travel-psychological geography
C9 Useful and useless / pragmatic and utopian
C10 Psycho-formal / automatism technologies, experiences, norms, laws, rules, standards
C11 Word and form / words and mockings
C12 Beautiful - ugly, good - bad, allowed - prohibited, psycho - formal duplications
C13 Drawing between precision and ephemerality
C14 OM, ephemerism and (or) perenniality, form and (or) life (party)

Responsible:
Lect PhD Art. Leonard Vartic

e-mail: leonardvartic@yahoo.co.uk
Seminar contents

Evaluation

Elaborated work during the semestre - cooperation assumed with the evidence of a specific formal-identifying management and the immanence of its inhibited reactivation in relation to the prescription of a marginality.

Selected bibliography

- J. KRISHNAMURTI, *Unica Revolutie*, Ed. Herald Bucuresti
## CULTURAL ANTHROPOLOGY

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### Objectives

The course of Cultural Anthropology has as its main direction the development of culture and everything it represents. It wants to deepen the knowledge about some areas related to architecture as well as the revelation of the interrelationship between them and a possible innovative architectural expression based on a valid symbolic language. The lectures present lifestyles different than ours, specific to other cultures and their treatment by comparison, highlighting the idea that these lifestyles determine highly different paths for architectural design.

### Lecture / project contents

- **C1** Introductory notions - definition, fields of anthropology examples. Methods and techniques of research
- **C2** Beginnings of cultural anthropology. Culture - Concept and Problem
- **C3** Art Anthropology - visual representations, and their symbolism. Linguistic Anthropology - Language and Culture.
- **C4** Magic. Anthropology of myths and religions.
- **C5** Psychology, sociobiology
- **C6** Categories of society: family, kinship, politics and economics. Issues of race and ethnicity
- **C7** Man and his needs as a principle of the architectural approach
- **C8** Rhythm and measure in architecture
- **C9** Anthropology of space and anthropology of living
- **C10** Vernacular architecture. Rural model and urban model to live
- **C11** The city for people. garden from anthropological perspective
- **C12** Problems and directions in contemporary architecture
- **C13** Student support for the papers and their evaluation

### Responsible:
Assoc. Prof. PhD Arch. Paul Mutica

e-mail: paulmutica@yahoo.com
Seminar contents

Evaluation

Grid type test, 9 questions of 1p, plus 1p ex officio with the possibility of relieving by presenting a report to colleagues.

Selected bibliography

-LEACH, EDMUND, Social Anthropology, 1982, William Collins Sons and Co. Ltd, Glasgow
-C. LEVI-STRAUSS, Antropologia structurala, 1978, Ed.politică, Bucureşti

Internet resources:
https://www.ted.com/talks
MANAGEMENT AND URBAN LEGISLATION

Objectives

Students acquire legislation knowledge specific to the field of architecture and urban planning. The course is aimed at the acquisition of notions on the understanding, the interpretation and the application of law, regulations, guidelines or norms in projects, as well as at the assimilation of urban management concepts.

Lecture / project contents

- **C1**: Introduction. Purpose of the course. - presentation of the idea and the intended path. Key elements addressed during case studies.
- **C2**: Legislation in the field of building authorization I
- **C3**: Legislation in the field of building authorization II
- **C4**: Legislation in the field of building authorization III
- **C5**: Legislation in the field of architecture I
- **C6**: Legislation in the field of architecture II
- **C7**: Legislation in the field of architecture II
- **C8**: Legislation in urban planning I
- **C9**: Legislation in urban planning II
- **C10**: Legislation in urban planning II
- **C11**: Urban management I
- **C12**: Urban management II
- **C13**: Urban management II
- **C14**: Review / Relief Test

Responsible:
Prof. PhD Arch. Adrian Iancu

E-mail: arhimobil@gmail.com
Seminar contents

Evaluation

Written exam (test) - Possibility of assessment during the semester.

Selected bibliography

- Regulamente urbane / Iancu, Adrian, UTPRESS, Cluj-Napoca, 2012
- Urbanism in Cluj-Napoca / Iancu, Adrian, UTPRESS, Cluj-Napoca, 2012
- Codul Civil.
ARCHITECTURAL COMPOSITION

Objectives

The course aims to provide the skills to address a problem of architectural theory from a critical and polemical perspective, to give the ability to formulate original points of view in relation to consecrated themes; the ability to interrogate them, to give the ability to grasp the importance of different cultural phenomena in the process of architectural creation and to develop the capacity to critically evaluate a speech / an architectural work.

Lecture / project contents

C1 Introductory course. Composition - between set of rules and artistic and architectural discours
C2 Modernity and post-modernity. Contemporary context. The themes of contemporary discourse
C3 The theme of memory in architecture. Text studies
C4 The theme of memory in architecture in interviews and exhibitions
C5 The theme of memory in architecture. Examples of projects - case studies
C6 The theme of memory in architecture. Examples of projects - case studies. Interpretations
C7 The theme of nature and ecology. Studies of texts and exhibitions
C8 The theme of nature and ecology. Case Study
C9 Utopia. Text studies
C10 Contemporary Discourse: Phenomenology
C11 Contemporary Discourse: Autonomy of Architecture
C12 Modes of Communication in Contemporary Architecture
C13 Recapitulative course
C14 Discussions. Tests

Responsible:
Lect. PhD Arch. Smaranda Maria Todoran

e-mail: arh.smaranda.todoran@gmail.com
Evaluation

Written test: ability to analyze a given text; the ability to write a synthesis text based on the information received at the course.
Evaluation methods: 60-minute exam.

Selected bibliography
- Convenția privind protecția patrimoniului mondial, cultural și natural, adoptată de Conferința generală a Organizației Națiunilor Unite pentru Educație, Știință și Cultură la 16 noiembrie 1972.
LANDSCAPE ARCHITECTURE

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Objectives

The course aims to integrate the awareness of the importance for man of maintaining the relationship with nature and presence of the areas planted in human settlements. It studies the various aspects of the arrangement of the parks and gardens, in order to raise the awareness of the relationship between the human habitat and the climate, to provide knowledge of representative examples of gardens and parks, international and national, both historical and contemporary, as well as knowledge of component elements and compositional principles of landscaping and to present the peculiarities of representing landscape design.

Lecture / project contents

C1 Getting Started. Human habitat and climate
C2 Historical styles of landscaping gardens and parks: Part I
C3 Historical styles of landscaping gardens and parks: Part II
C4 The appearance of the public park and the definition of green urban space
C5 Green spaces: roles, assignment, types, sizing and organization
C6 Components and principles of composition of landscaping: Part I
C7 Components and principles of composition of landscaping: Part I
C8 Land
C9 Water
C10 Vegetation: Part I
C11 Vegetation: Part II
C12 Circulation
C13 Utility and decorative constructions
C14 Representation of landscape design

Responsible:
Assoc. Prof. PhD Arch. Andreea Milea
e-mail: Andreea.Milea@arch.utcluj.ro
Evaluation

Each student opts for the evaluation method / methods that will apply to him / her.

Selected bibliography

LAE: Landscape Architecture Europe: On Site (Birkhäuser – Publishers for Architecture, Basel, Boston, Berlin, 2009)
NEW TECHNOLOGIES IN ARCHITECTURE

Objectives

The main goal is to understand and form a minimal baggage of technical knowledge about the latest trends in contemporary architecture. Also, the course aims to understanding the sustainable dimension in the architecture of the last decades, to accumulate through case studies innovative constructive examples of state-of-the-art technologies and to create the premises for research and future trends in the field.

Lecture / project contents

C1 Introduction. The Importance of New Technologies
C2 Principles of sustainability, sustainability and flexibility of contemporary architecture
C3 Reinterpretations of vernacular architecture through recent technologies
C4 Special technologies - vertical structures. Skyscrapers
C5 Special technologies - structures with extreme openings
C6 Special technologies - megastructures. Artificial islands, subjugation and use of forces of nature
C7 Special Technologies - Smart House. BMS. From smart building to smart city
C8 Old materials, new technologies I
C9 Old materials, new technologies II
C10 Special materials
C11 Case studies I
C12 Case studies II
C13 Starhitec and development of new design technologies
C14 The Future of Technology in Architecture and Construction

Responsible:
Assoc. Prof. PhD Arch. Paul Mutica

e-mail: paulmutica@yahoo.com
Seminar contents

Evaluation

The test has 9 grid and 1p questions from the office. Also, students can present to colleagues a technology principle and case studies for a maximum of 2p in the final grade.

Selected bibliography

Bauer, Michael; Mösle, Peter; Schwartz, Michael, Green Building - Guidebook for Sustainable Architecture, 2010, London: Springer.
## SPECIALISED DESIGN STUDIO - URBAN PLANNING 3

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### Objectives

Specialized urban planning is a compulsory exercise for understanding the interdependence between buildings - architectural objects and the surrounding environment, the urban context (construction, landscape, society) and for the social and cultural impact of the created ensemble.

Project in 3 phases: Designing a representative urban space in Cluj Napoca:
- Phase 1 - Analysis of the existing situation and presentation of two options. Sc.1: 2000
- Phase 2 - Variants of urban planning
- Phase 3 - The project itself. Urban planning. Sc.1 :1000

### Lecture / project contents

- 

### Responsible:

Assoc. Prof. PhD Arch. Vlad Sebastian Rusu

e-mail: vlad.rusu@arch.utcluj.ro

### Teaching team

Assoc.Prof. PhD Arch. Octav Olănescu
Lect. PhD Arch. Dragoș Dascălu
Assist. Prof. PhD Arch. Mihai Racu
Assist. Prof. PhD Arch. Daniel Șerban
Arch. Florin Dascălu
Arch. Benjamin Kohl
Arch. Nicolae Milășan
Seminar contents

S1  Urban Renovation. Collective work. Duration
S2  Intermediate corrections on students' sketches. Correction to the panel. Interim recording
S3  Phase 2 - Variants of urban planning - two proposals
   Intermediate corrections of sketches made by the student. General panel correction. Interim recording. Identifying completions needed for final project delivery
S4  Phase 3 - The project itself

Evaluation

Phases have different weights. 
Phase 1 - 3 points, Phase 2 - 2 points, Phase3 - 5 points. Each stage is scored from 1 to 9, 1 point is granted ex officio; the notes F1, F2, F3 result.

Selected bibliography

Machedon Florin, Metode de analiza morfologica a tesuturilor urbane, Ed.Univ. „Ion Mincu” Bucuresti, 2006.
Choay Francoise, Pentru o antropologie a spatiului, revista Urbanismul, Bucuresti, 2011.
DESIGN SYNTHESIS STUDIO 3

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Objectives

The course aims at developing students' competencies in the field of architectural design by applying the design methodology to the themes of plurivalent programs and the elaboration of a complex architectural project, as the final stage of an interdisciplinary process, started with the urbanism project. Detailing the architectural object by creating a project concept, establishing neighborhood relations with a proposed urban context, functional, structural and spatial solution according to the design theme and the norms in force.

Responsible:
Assoc. Prof. PhD Arch. Vlad Sebastian Rusu
e-mail: vlad.rusu@arch.utcluj.ro

Teaching team
Assoc. Prof. PhD Arch. Vlad S. Rusu
Assoc. Prof. PhD Arch. Gheorghe Vais
Lect. PhD Arch. Dragoș Dascălu
Assist. Prof. PhD Arch. Mihai Racu
Assist. Prof. PhD Arch. Daniel Șerban
Arch. Florin Dascălu
Arch. Benjamin Kohl
Arch. Nicolae Milășan
Lect. PhD Eng. Petru Rus
Lect. PhD Eng. Radu Hulea
Lect. PhD Eng. Lidia Maria Lupan

Lecture / project contents

-
Seminar contents

Exposition, applications, individual and collective crits, projects evaluation with public support.

Evaluation

Architectural Project: According to the design theme and the Regulation for Discipline Synthesis Design for Year V. Project Support Assessment.

Selected bibliography

URBAN MOBILITY

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Objectives

The course aims at identifying and understanding the challenges of the architect - urbanist profession in the issues of urban mobility. It raises awareness of the importance of urban mobility within the contemporary city and fosters an understanding of the conditioning between mobility and urban development, students gaining knowledge of the general notions of sustainable urban mobility, built on the principles of integration, participation and continuous evaluation, in order to meet people needs in terms of increasing the quality of life in cities and surroundings; students also acquire notions of classifying and arranging urban traffic within the contemporary city.

Lecture / project contents

C1 Mobility and the challenges of urban space
C2 Effective management principles of transport and urban mobility. Integrated transport strategies
C3 Interurban traffic. The Roadway. Railway
C4 Urban traffic. Urban traffic. Urban traffic network
C5 Urban transport systems. Public transport. Classifications
C6 Street, space for coexistence of different types of mobility
C7 Restructuring urban spaces reserved for urban traffic
C8 Intersections and markets. General notions
C9 Organization of movement. Special-purpose traffic squares
C10 Square structure
C11 Urban planning of streets. Ways of approaching urban street space based on the speed of travel
C12 Urban planning of squares, in line with sustainable urban mobility principles
C13 Places of quality, level of detail
C14 Walls and sitting arrangements in accordance with sustainable urban mobility principles

Responsible:
Assoc. Prof. PhD Arch.
Vlad Sebastian Rusu

e-mail: vlad.rusu@arch.utcluj.ro
Seminar contents

Evaluation

Verification of knowledge gained through synthesis topics.

Selected bibliography

URBAN REGULATIONS

Objectives

The course aims for the students to acquire notions of urban regulations, to learn outcomes of understanding, interpreting and applying urban regulations for future architects and to integrate notions on the implementation and / or drafting of urban regulations for future urban planners.

Lecture / project contents

C1 Introduction. Purpose of the course. Key elements addressed through case studies
C2 General Urbanism Regulation (RGU) in conjunction with other legislative acts
C3 Annexes to the General Town Planning Regulation
C4 Percentage of land occupancy
C5 Coefficient of land use
C6 How to draw up Local Urban Planning Regulations
C7 Main elements addressed in the drafting of the Regulations related to the general urban planning plans of the localities
C8 Updating Urban Regulations. Case study for Cluj-Napoca
C9 Urban Specific Regulations. Examples. Problems and applications
C10 Implementation of Urban Regulations in Urban Planning
C11 Involvement of key actors in relation to Urban Regulations
C12 Urban regulations as tools for the management and self-regulation of urban processes
C13 The way of interaction of the local or county administration
C14 Case study for the elaboration of the Regulation for a Territorial Reference Unit
Evaluation

Colloquium - written - Possibility to relieve works during the semester.

Selected bibliography

AESTHETICS IN ARCHITECTURE

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Objectives

The main purpose of the lecture is to understand and develop a value system that can underpin esthetic value judgments of an object of architecture or art. The course is meant to determine the differences between stylistic and beautiful ideals of architecture and the object that transcends the limits of its times, it focuses on the aesthetics of architecture but emphasizing common traits between the interpretation of architecture and other arts and it formulates common language elements with other arts.

Lecture / project contents

C1. Introduction and history
C2. Architecture philosophy and human needs
C3. Psychology of architecture and creativity
C4. Harmony and the theory of chaos
C5. Numerology of beauty
C6. Case studies. From nature to urban tissue
C7. Attitudes and directions
C8. Compositional rules. Proportion and rhythm
C9. Architectural metamorphoses
C10. Beautiful and sublime. The limbic domain
C11. The patrimony problem
C12. Architecture as an anesthetic
C13. The Problem of Architecture and Contemporary Art

Responsible:
Assoc. Prof. PhD Arch. Paul Mutica

e-mail: paulmutica@yahoo.com
Seminar contents

- 

Evaluation

Written test which will have 9 grid and 1p questions from the office. The possibility of increasing the grade through the activity of the course. - Written test

Selected bibliography
## HISTORICAL BUILDING TYPES

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### Objectives

The course aims providing knowledge of the Transylvanian architectural heritage built during the period 1867-1918, to offer notions of the time-specific planimetric composition systems, to explain functional schemes as reflections of institutional organization and to develop knowledge of the architectural language specific to Eclecticism and Secessionism in Transylvania, related to European models.

### Lecture / project contents

- **C1** Modernization of historical Transylvania and new architectural programs
- **C2** Buildings for local government: prefectures and townhalls
  - Administrative buildings: courthouse, financial headquarters
- **C3** Finance buildings: banks, insurance companies
- **C4** Buildings for secondary education: state and confessional curricula for university education
- **C5** Gymnasiums and high-schools
- **C6** Health buildings: comitaten hospitals and national hospitals
- **C7** Library buildings (Library of Transylvania University and Museum in Cluj)
  - Buildings for social entertainment: theaters, Cluj theaters
- **C8** Museum buildings
- **C9** Tourism buildings: hotels and spa facilities
- **C10** Landscape Architecture (Central Park of Cluj)
- **C11** Architects who worked in Transylvania during the studied period
- **C12** Colloquium

### Responsible:
Assoc. Prof. PhD Arch. Gheorghe Vais

e-mail: gheorghe.vais@arch.utcluj.ro
Seminar contents

Evaluation

Final research work (15 pages) on a course topic. Assessment of the work by specific criteria.

Selected bibliography

## Comparative Architecture

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**Objectives**

The main goal of this course is to explore and develop the professional horizon of the students, thus allowing them to enhance their abilities to understand the evolution of the architectural phenomenon through a comparative approach (identifying and comparing common motifs and features from different geographical, cultural and / or historical settings, always relating them to a specific origin, discussing their configuration, spatiality, structure, materials, décor / ornamentations, meaning, symbol, and image). The course will discuss architecture (in general) – and the architectural object (in particular) – linking it to a set of values which surpasses its own social, cultural, political, economic and geographical context, emphasizing its values, meanings, the importance of architectural masterpieces or landmarks, placing them in a single, common framework of world culture.

**Lecture / project contents**

- **C1** An Introduction to Comparative Architecture
- **C2** The Origins of Architectural Comparatism
- **C3** The Main Categories of Comparative Architecture (part 1)
- **C4** The Main Categories of Comparative Architecture (part 2)
- **C5** The Main Categories of Comparative Architecture (part 3)
- **C6** The Main Categories of Comparative Architecture (part 4)
- **C7** The Main Categories of Comparative Architecture (part 5)
- **C8** The Main Categories of Comparative Architecture (part 6)
- **C9** The Main Categories of Comparative Architecture (part 7)
- **C10** The Methodology of the Comparative Approach in Architecture
- **C11** Case Studies of the Comparative Approach in Architecture
- **C12** The Comparative Approach as Means of Scientific Research
- **C13** Architecture and Other Arts. Architecture in Literature
- **C14** Comparative Architecture – a Conclusion
Seminar contents

Evaluation

Written paper (academic argumentative essay) or an architectural model of a literary-architectural experiment, or cumulative argumentative opinions stated during class (minimum 8).

Selected bibliography


### RESEARCH IN ARCHITECTURE

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**Responsible:**  
Prof. PhD Arch. Dana Vais  
e-mail: dana.vais@arch.utcluj.ro

### Objectives

The course aims developing the ability to plan, conduct and pre-sent research in the field of architecture. It discusses the methodology of scientific research, the methodology of architectural and urban planning research as well as research-ethics issues, through theoretical notions and concrete case-studies, engaging student participation.

### Lecture / project contents

**I. Architectural research theory**

- What is architectural research
- Research methods in architecture
- Research and project

**II. The practice of research**

- How to write a research project; how to write a publishable work
- Dissertation thesis in architecture
- Ethics of research

**III. Case Studies**

- Presentations of ongoing research
Evaluation

Exam: research project exercise + ongoing participation. On-going formative assessment and evaluation possibility through student case study presentations in class.

Selected bibliography

MARKETING AND COMMUNICATION IN ARCHITECTURE

Objectives
The course aims developing performative communication in Romanian in a diverse range of professional situations. It addresses the theoretical approach to verbal and non-verbal communication, effective use of language skills. It intends supporting and developing convincing expression of a point of view on a given issue; it fosters individual and team communication skills on different hierarchical levels and the acquisition of techniques for writing texts that highlight the meaning attributed to professional experiences or events.

Lecture / project contents

- Architects and communication
- To whom do we address?
- What do we communicate?
- How do we communicate?
- How do you make a visual communication?
- Personal marketing for architects
- Vision, Mission and Values
- Text communication
- Internet communication
- One-on-one or direct communication
- Start on his own as an architect
- How to avoid errors
- Communication of students

Responsible:
Assoc. Prof. PhD Arch. Șerban Țigănaș

e-mail: dragos.tiganas@arch.utcluj.ro
Seminar contents
1. Communicating architecture
2. Specific discursive structures
3. Models and discourse elaboration phases
4. Presentation as habit
5. Presentation strategies
6. Narrating images
7,8. Oral project presentation
9. Elements of scientific writing
10. Communication and technology mediation
11. Negotiation as communication act
12. Informative and persuasive. Rhetorics
13. Ethical dilemmas in architectural communication
14. Team communication

Evaluation

Methods of evaluation:
Oral support - 50.00 %
Role exercises - 50.00 %

Selected bibliography
URBAN ECOLOGY AND SERVICES

Objectives

The course targets the development of theoretical, methodological and practical skills for an ecological perspective in the field of spatial planning. It also offers theoretical and methodological knowledge from the perspective of urban ecology, in order to generate and develop theoretical and analytical skills for urban and territorial functions from the perspective urban ecology and to familiarize oneself with the specifics of work in inter- and inter-team teams multidisciplinary.

Lecture / project contents

C1 Introduction. The Evolution of the Man-Nature Relationship
C2 Sustainable development
C3 Ecology and built environment
C4 Ecological theories with implications in the built environment
C5 Urban ecosystem
C6 Natural landscape - built landscape
C7 Urban Ecology - Conflicts I
C8 Urban Ecology - Conflicts II
C9 Natural systems in the city I
C10 Natural systems in the city II
C11 Human structures. Green spaces, corridors, systems
C12 Sustainable management of municipal networks
C13 Case Studies. Conclusions
Seminar contents

Evaluation

Written paper – 100 %

Selected bibliography
SPECIALISED DESIGN STUDIO - LANDSCAPE ARCHITECTURE

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Objectives

This project aims at further developing and applying the theoretical knowledge gained in the frame of the Landscape architecture course, during the 1st semester of the Vth year.

Lecture / project contents

Through project work, students practice the particular aspects which interfere in the field of landscape architecture, documenting, analysing and characterising a site in view of developing a landscape design proposal for a specific, real site. The project tackles different scales of landscape design, downscaling the study from the master-plan to the details.

Responsible: Assoc. Prof. PhD Arch. Andreea Milea

E-mail: Andreea.Milea@arch.utcluj.ro
Seminar contents

Starting from a given site within the city for the purpose landscaping, students will go through the following stages in project development:
- documentary + landscape analyses, followed by conclusions on the possibilities of intervention + imagining a fitting concept
- setting up drawings (possibly mock-ups) of the arrangements themselves
- detailing some of the proposed arrangements.

Evaluation

Every stage will receive a vote, from 1 to 10. The final vote of the project will be calculated by the formula: documentary and concept 25%, drafting the project 50%, detail 25%.

Selected bibliography

KOVÁCS, Kázmér: Peisaj cu grădină și casă (Simetria, București, 2011).
## DESIGN SYNTHESIS STUDIO 4

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### Objectives

The project aims at developing student competencies in architectural design, through the synthetic study of urban and architectural solutions for a site located within the protected area of Cluj-Napoca.

### Lecture / project contents

A complex architectural project is elaborated during the entire semester, conditioned by the existence of an architectural and urban heritage, by the creation and presentation of an integrated architectural-urban concept, the graphic representation and the public defense of the project.

**Responsible:**

Assoc. Prof. PhD Arch. Vlad Sebastian Rusu  
e-mail: vlad.rusu@arch.utcluj.ro

**Teaching team**

Assoc. Prof. PhD Arch. Vlad S. Rusu  
Assoc. Prof. PhD Arch. Gheorghe Vais  
Lect. PhD Arch. Dragoș Dascălu  
Assist. Prof. PhD Arch. Mihai Racu  
Assist. Prof. PhD Arch. Daniel Șerban  
Arch. Florin Dascălu  
Arch. Benjamin Kohl  
Arch. Nicolae Milașan  
Lect. PhD Eng. Petru Rus  
Lect. PhD Eng. Radu Hulea  
Lect. PhD Eng. Lidia Maria Lupan
Seminar contents

Architectural project: exhibition, applications, individual and collective crits, public presentation and evaluation.

Evaluation

Final work evaluation with public presentation.

Selected bibliography

Architectural journals from the TUCN library: *El Croquis, The Architectural Review, Detail* a.o.
Internet: Archdaily.com, Architizer.com, Divisare.com a.o.
Objective

Developing skills in architectural design applied to concrete activities in a design office.

Lecture / project contents

Methods specific to each Design Office in which the students operate. Elaborating a project or part of a project for a two-week period. Elaboration of requested materials (memo, written pieces, drawing pieces). Getting familiar with the future activity of an architect, as an employee of a bidding architectural office.

Updating the student portfolio with the projects elaborated during the previous two semesters.
Seminar contents

- 

Evaluation

According to specific requirements to each Design Office and practice regulations from the Faculty of Architecture and Urban Planning.

Selected bibliography

Specific to each activity that students undertake in the design offices.
06th year
1st semester
PRACTICAL ACTIVITY 6

Objectives

Preparing for practice within the frame of a real architecture office.

Updating the student portfolio with the projects elaborated during the previous two semesters.

Lecture / project contents

At the beginning of the internship a Convention for Practical activity is signed by the Faculty of Architecture and Urban Planning, the host architecture office and the student.

The Practical Activity 6 takes place in architecture offices, under the supervision of an architect that must be a member of the Romanian Architects Order (OAR).

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</table>

Responsible: T. Asist. PhD Arch. Teodora STANCIU

E-mail: teodora.balan@arch.utcluj.ro
Seminar contents

At the end of the internship, the students will hand in a file containing:
- Evaluation form, filled-in and signed by the internship supervisor
- Internship notebook, set up by the student
- Portfolio, A4 format, containing the drawn and written work of the student, signed and stamped by the supervisor, specifying the precise role of the student for each included piece of work (drawn, designed etc.).

Evaluation

The grade offered by the practice tutor is only advisory. The final grade will be determined by the evaluation teachers.

Selected bibliography

It will be determined by each office according to the practice theme.
DESIGN SYNTHESIS STUDIO 5

Objectives

Developing competencies in the design of architecture with concrete application for the subject of pre-diploma and dissertation.

Lecture / project contents

Will be set by the diploma tutor and communicated to the student at the beginning of the semester. The design activity goes on under supervision of the selected diploma and dissertation tutor, who will monitor the student’s attendance weekly and his/her progress during the process.

The students will work on:

Elaborating a design brief to support their pre-diploma and diploma projects;

Setting up a documentation file that informs the development of their projects, including at least 20 case-studies, relevant for the chosen topic;

Identifying two adequate sites on which to develop the design brief setup for the pre-diploma;

Developing conceptual projects, according to the same design brief, for each of the two identified sites.

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Responsible: T. Asist. PhD Arch. Teodora STANCIU

E-mail: teodora.balan@arch.utcluj.ro
Evaluation

Architectural project is evaluated by the pre-diploma jury. The jury decides whether and which of the two conceptual solutions may be further developed for the diploma project.

Selected bibliography

Manualul arhitectului: elemente de proiectare si de constructie / Peter si Cornelius Neufert, Lugwig Neff, Corinna Franken – Miercurea Ciuc; Alutus, 2004
Specific for each student, according to the topics chosen for their individual projects.
ENGLISH

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Objectives

The course aims developing the students' oral communication skills within professional technical contexts. The topics include:

- developing specialised lexical, grammar and discoursive skills
- developing the ability of understanding, communicating and evaluating a message within a technical professional context

Lecture / project contents

Conversation
Improvement of writing, reading, speaking and understanding skills
Working in pairs and in teams
Personal coordinates
Curriculum vitae
Professional communication
Personal agenda
Culture and civilisation elements

Responsible:
Assoc. Prof. PhD Sanda Padurețu

E-mail:
Sanda.Paduretu@lang.utcluj.ro
Selected bibliography

**FRENCH**

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**Objectives**

The course aims developing the students' oral communication skills within professional technical contexts. The topics include:

- developing specialised lexical, grammar and discoursive skills
- developing the ability of understanding, communicating and evaluating a message within a technical professional context

**Lecture / project contents**

Conversation
Improvement of writing, reading, speaking and understanding skills
Wroking in pairs and in teams
Personal coordinates
Curriculum vitae
Professional communication
Personal agenda
Culture and civilisation elements

Responsible:
Lect. dr. Aurel Bărbință

E-mail: Aurel.Barbinta@lang.utcluj.ro
Seminar contents

Evaluation

Colloquium.

Selected bibliography

## Objectives

The course aims developing the students' oral communication skills within professional technical contexts. The topics include:

- developing specialised lexical, grammar and discoursive skills
- developing the ability of understanding, communicating and evaluating a message within a technical professional context

## Lecture / project contents

**Conversation**

- Improvement of writing, reading, speaking and understanding skills
- Working in pairs and in teams
- Personal coordinates
- Curriculum vitae
- Professional communication
- Personal agenda
- Culture and civilisation elements

**Responsible:**
Asist. CDA Miruna Opriș

**E-mail:**
Miruna.Opris@lang.utcluj.ro
Seminar contents

- 

Evaluation

Colloquium.

Selected bibliography

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**Objectives**

To be specified

**Lecture / project contents**

To be determined
Seminar contents

Evaluation

Colloquium

Selected bibliography
## ELABORATING THE DISSERTATION

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### Objectives

Elaboration of the dissertation for the final examination.

### Lecture / project contents

Elaboration of an extended research paper, on a topic established together with the student's tutor and connected to the student's diploma project. The dissertation shows the graduating student's ability of conducting research in architecture, of communicating his/her research process and findings through academic writing.

Responsible:
Prof. PhD Arch. Virgil Pop

E-mail:
arh.virgil.pop@gmail.com
Seminar contents

Will be set by the diploma and dissertation tutors and communicated to the supervised students at the beginning of the semester.

Evaluation

The evaluation will be made by the diploma tutor.

Selected bibliography

It will be determined by each tutor according to the subject of the diploma project, together with the student.
ELABORATING THE GRADUATION PROJECT

Objectives

Preparing for the final examination.

Lecture / project contents

Elaboration of a complex architectural project, on a site and theme established together with the student's tutor, validated through the “pre-diploma” defense. The project shows the graduating student's ability of conducting the in-depth fundamentation and elaboration of architectural and urban planning projects, of convincingly communicating their research and design process, as well as results, via a range of project media.

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Responsible:
Assoc. Prof. PhD Arch. Șerban Țigănaș

E-mail: dragos.tiganas@arch.utcluj.ro
Seminar contents

Will be set by the diploma and dissertation tutors and communicated to the supervised students at the beginning of the semester.

Evaluation

The evaluation will be made by the diploma tutor.

Selected bibliography

It will be determined by each tutor according to the subject of the diploma project, together with the student.
ADVICE IN TECHNOLOGY AND STRUCTURE

Objectives

The course seeks to integrate and to apply the already acquired knowledge in structural theory, architectural technology, installations for a concrete (exact) project - the project of the diploma elaborated individually.

Lecture / project contents

Structural and technical elaboration of the diploma project, in consultancy with the structural experts teaching the discipline.

Responsible:
Lect. PhD Eng. Imola Kirizsan

e-mail: Imola.Kirizsan@arch.utcluj.ro
Seminar contents

Presenting the architectural solution approved by the pre-diploma committee.
Analysis of the site, the architectural program through the perspective of architectural and constructive conception.
Elaborating the structural system, choosing the materials in the case of superstructure and infrastructure. Finalizing the constructive and structural concept.
Choosing the execution techniques and technologies. Implementing the results of the activity in plans, sections, details.

Evaluation

The evaluation will be made by the structural consultant.

Selected bibliography

Presenting the architectural and constructive concept (week7). Presenting the plans, the sections (2) and a printed architectural detail.
### Disseration Defence

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#### Objectives

Defense of the dissertation paper, involving the submission of the work, to be read by the dissertation jury prior to the oral presentation.

#### Lecture / Project Contents

An extended research paper, on a topic established together with the student’s tutor and connected to the student’s diploma project. The dissertation shows the graduating student’s ability of conducting research in architecture, of communicating his/her research process and findings through academic writing. It is defended via an oral and visual discourse delivered in front of the jury, as well as via answers to the possible jury questions.

**Responsible:**
Prof. PhD Arch. Virgil Pop

**E-mail:**
arh.virgil.pop@gmail.com
Seminar contents

Evaluation

By the dissertation jury, including external invited members.

Selected bibliography
Project Defence

Objectives

Defense of the diploma project, involving the submission of the work, pre-viewed by the diploma jury prior to the oral presentation.

Lecture / project contents

A complex architectural project, on a site and theme established together with the student's tutor, validated through the “pre-diploma”. The project shows the graduating student's ability of conducting the in-depth fundamentation and elaboration of architectural and urban planning projects, of convincingly communicating their research and design process, as well as results, via a range of project media.
Seminar contents

Evaluation

By the dissertation jury, including external and international invited members.

Selected bibliography
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Assoc. Prof. PhD Arch. Șerban Țigănaș

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