

## Course/studio syllabi

### 1. Data on the study programme

1.1 Institution	Technical University of Cluj-Napoca
1.2 Faculty	of Architecture and Urban Planning
1.3 Department	<b>Urban Planning</b>
1.4 Domain	<b>Architecture</b>
1.5 University level	Licence and master's degree
1.6 Study programme/Qualification	Architecture
1.7 Form of studies	IF – on-site full-time studies
1.8 Course / studio code	<b>38.00</b>

### 2. Data on the course

2.1 Name of the course	<b>DETAILS IN ARCHITECTURE 2</b>				
2.2 Course/ Studio Head	<b>Lecturer Silviu Virgil ALDEA</b>				
2.3 Head of seminary/ laboratory/ studio	<b>Lecturer Silviu Virgil ALDEA</b>				
2.4 Study year	<b>2</b>	2.5 Semester	<b>2</b>	2.6 Type of evaluation	<b>Exam</b>
2.7 Course /studio regime	Formative category: fundamental (DF)/ linked to the domain (DD)/ specific (DS)/ complementary (DC)				<b>DD</b>
	Compulsory (DI)/ Optional/ (DOP)/ Voluntary (DFac)				<b>DI</b>

### 3. Total estimated time

3.1 Number of hours/week	<b>4</b>	out of which:	3.2 Course	<b>2</b>	3.3 Seminary	<b>2</b>	3.3 Laboratory	<b>0</b>	3.3 Project	<b>0</b>
3.4 Number of hours/semester	<b>56</b>	out of which:	3.5 Course	<b>28</b>	3.6 Seminary	<b>28</b>	3.6 Laboratory	<b>0</b>	3.6 Project	<b>0</b>
3.7 Distribution of time (hours)/ semester for:										
(a) Individual study supported by course textbook, course text, bibliography, and notes										<b>36</b>
(b) Supplementary study in the library, online, and on site										<b>4</b>
(c) Preparation for seminars/ laboratories/ assignments, reports, portfolios, and essays										<b>4</b>
(d) Tutoring										
(e) Examination										
(f) Other activities										
3.8 Total hours of individual study (sum (3.7(a)...3.7(f)))					<b>44</b>					
3.9 Total semestrial hours (3.4+3.8)					<b>100</b>					
3.10 Number of credits					<b>4</b>					

### 4. Preconditions (where applicable)

4.1 curriculum preconditions	Not applicable
4.2 competence preconditions	Passing the exam Details of architecture 1

### 5. Conditions (where applicable)

5.1. for the course	On site, in the allocated classroom (according to the faculty schedule). Attendance is a condition for examination. See also „10. Assessment method”.
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5.2. for the seminary	Seminar consists of different practical work carried out according to schedule and within the allocated timeframe.
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## 6. Specific competencies

	<p>Students accumulate knowledge related to the application of construction techniques and building materials in architectural design.</p> <p>After completing the subject, students will acquire knowledge, skills and competences in the following groups, cf. HG 469/2015:</p> <ul style="list-style-type: none"> <li>a) the ability to design architectural projects that meet both aesthetic and technical requirements;</li> <li>b) adequate knowledge of the history and theories of architecture, as well as related arts, technologies and human sciences;</li> <li>c) knowledge of fine arts as factors that can influence the quality of architectural design;</li> <li>d) adequate knowledge of urban planning, planning and techniques applied in the planning process;</li> <li>e) the ability to understand the relationships between people and architectural creations on the one hand, and architectural creations and their environment on the other, as well as the ability to understand the need to harmonise architectural creations and spaces according to human needs and scale;</li> <li>f) the ability to understand the architectural profession and its role in society, in particular by designing projects taking account of social factors;</li> <li>g) understanding of the methods of research and preparation of building design;</li> <li>h) knowledge of structural and construction design and engineering issues associated with building design;</li> <li>i) appropriate knowledge of physical problems and technologies and of the function of buildings,</li> <li>j) the technical ability to design buildings to meet the requirements of users while respecting the limits imposed by budget and building regulations;</li> <li>k) adequate knowledge of the industries, organizations, regulations and procedures involved in the process of realizing building projects and integrating plans into overall planning." </li></ul>
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## 7. Objectives of the discipline

7.1 General objective of the discipline	<ul style="list-style-type: none"> <li>• To familiarize students with the main construction elements and specific details in their realization, as well as the optimal use of construction techniques and materials in the implementation of constructions.</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li>• Students will learn how to represent specific technical projects, architectural details at different scales and in different projections: section, view, plan, axonometry, etc.</li> <li>• Knowledge of the different types of finishing materials and the correct ways of applying them;</li> <li>• Knowledge of structural, waterproofing and thermal insulation requirements and highlighting the sensitive points of a construction in relation to these requirements.</li> <li>• Knowledge of the various technologies required for execution and their suitability under site conditions;</li> </ul>

## 8. Content/Syllabi

8.1 Course	No. of hours	Teaching methods	Notes
1. Review of the knowledge acquired in the previous semester. Presentation of course content and method of work	2	Lectures accompanied by drawings made during the course and projections with explanatory images	
2. Wooden constructions. Wood construction culture. Generalities and evolution. Industrial wood processing, typical sections, specific aspects of timber construction.	2		
3. Relation to foundations, bonding footings, moisture and fire protection. Level access to timber construction.	2		
4. Main structural elements: columns, beams, bearing walls, non-bearing walls, bracing	2		
5. Wooden floors, wooden stairs, cantilevers, balconies.	2		
6. Contemporary timber frame constructions. Timberframe system, insulated panels. Framing systems.	2		
7. Contemporary wooden constructions. Load-bearing wooden diaphragms, CLT. Beams and lamellar elements.	2		
8. Metal constructions. Generalities and evolution of structural systems. Rolled profiles, extruded profiles, pressed profiles. Corrosion protection, fire protection.	2		
9. Bearing elements, Partition elements. Pillars, beams, bracing, tie rods, gussets, trusses, lightweight walls.	2		
10. Metal floor, hybrid concrete-metal floor, plywood and concrete slabs. Brackets, balconies.	2		
11. Metal facades. Sandwich panels, industrial constructions, plastered facades on metal structure. Hybrid wood-metal-concrete systems, Terrace roofing	2		
12. Glazing and joinery. Curtain wall, single vent, double vent. Air cushion systems with solar protection.	2		
13. Complex details 1. Contemporary examples, case studies.	2		
14 . Complex details 2. Contemporary examples, case studies... Free discussion on the topics studied, presentations at the initiative of the students	2		
<p><b>Bibliography</b></p> <ol style="list-style-type: none"> <li>1. Course Support</li> <li>2. Tugui, Emilia (ed.): Romanian Architecture in Details. Housing. Ozalid Publishing House, Bucharest, 2012.</li> <li>3. Tugui, Emilia (ed.): Romanian Architecture in Details. Transformations. Ozalid Publishing House, Bucharest, 2012.</li> </ol> <p>Watts, Andrew: The Modern Construction Handbook. Walter de Gruyter GmbH, 2019</p>			

8.2 Seminary / laboratory / project	No. of hours	Teaching methods	Notes
Seminar. Designing a small-scale architectural project on a hybrid wood-metal structure. Drafting specific PT and DDE phases. Drafting of 1:20 beam details, drafting of 1:10 node details.	28		
Bibliography Course Support			

**9. Harmonizing the content of the discipline with the expectations of the epistemic community, the professional associations, and representative employers**

<ul style="list-style-type: none"> <li>- Development and acquisition of skills in elaborate, complex design activities in architecture - construction, in order to achieve a correct execution of future buildings;</li> <li>- Development of skills in translating new architectural design ideas into an elaborate, comprehensible framework in accordance with existing design rules and regulations;</li> <li>- Development of realistic thinking in accordance with the techniques and principles of project implementation;</li> <li>- Knowledge of building materials and finishes, how to represent them in projects;</li> <li>- Knowledge of new techniques and technologies in the field of construction;</li> </ul>
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**10. Assessment**

Type of activity	10.1 Evaluation criteria	10.2 Assessment method	10.3 Calculation of final grade
10.4 Course	Written exam - elaboration of details drawings, exam duration is 4 hours.	Each exam topic will be marked from 1 to 10. The condition for passing the exam is that each subject must obtain a minimum mark of 5.00.	<b>50%</b>
	According to the ECTS/UTCN Regulations, art. 6.4, the Faculty Council has decided that attending courses is compulsory in a percentage of at least 50%. The situation of attendance will be updated weekly on the Teams channel dedicated to the course. Students who have not attended 50% of the courses will not be able to participate in the final exam and will need to recontract the course.		
10.5 Seminary/Laboratory	Correctness and accuracy of the drawing, compliance with the principles studied in the course, correct marking of construction materials and layering specific to each detail	Promotion of the work with a minimum mark of 5.00. Prerequisite for access to the exam	<b>50%</b>

Date :	Head of course	Title, Name, Surname	Signature
29.06.2023	Course	Lecturer. PHd. arch. Silviu Virgil ALDEA	
	Seminary/Lab	Lecturer. PHd. arch. Silviu Virgil ALDEA	

Date of validation by the Department Council:  _____	Chief of Department Prof. PhD. arch. Virgil POP
Data of approval in the Faculty Council:  _____	Dean Associate professor. PhD. arch. Dragoş Şerban Ion ȚIGĂNAŞ