

## 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 and Technical Sciences</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>86.00</b>

### 2. Data on the course

2.1 Name of the course	<b>ADVICE IN TECHNOLOGY AND STRUCTURES</b>				
2.2 Course/ Studio Head	<b>Associate Professor Nicolae SOCACIU, Lecturer Imola KIRIZSAN, Petru RUS, Radu HULEA</b>				
2.3 Head of seminary/ laboratory/ studio	-				
2.4 Study year	<b>6</b>	2.5 Semester	<b>2</b>	2.6 Type of evaluation	<b>COL</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>2</b>	out of which:	3.2 Course	<b>0</b>	3.3 Seminary	0	3.3 Laboratory	0	3.3 Project	2
3.4 Number of hours/semester	28	out of which:	3.5 Course	0	3.6 Seminary	0	3.6 Laboratory	0	3.6 Project	28
3.7 Distribution of time (hours)/ semester for:										
(a) Individual study supported by course textbook, course text, bibliography, and notes										8
(b) Supplementary study in the library, online, and on site										7
(c) Preparation for seminars/ laboratories/ assignments, reports, portfolios, and essays										7
(d) Tutoring										
(e) Examination										
(f) Other activities										-
3.8 Total hours of individual study (sum (3.7(a)...3.7(f)))					<b>22</b>					
3.9 Total semestrial hours (3.4+3.8)					<b>50</b>					
3.10 Number of credits					<b>2</b>					

### 4. Preconditions (where applicable)

4.1 curriculum preconditions	-
4.2 competence preconditions	Competences and knowledge acquired in fundamental courses such as: <i>Structural mechanics, Construction materials, elements, Structural Engineering Theory 1,2 and 3</i> may constitute a basis for a good understanding of notions and information discussed in the present course.

### 5. Conditions (where applicable)

5.1. for the course	-
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5.2. for the seminary	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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## 6. Specific competencies

	<ul style="list-style-type: none"> <li>• Ability to gather information, define problems, apply analyses and critical judgement, and formulate strategies for action.</li> <li>• Technical knowledge of structure, materials, and construction.</li> <li>• Awareness of the impact of geotechnical conditions on construction</li> <li>• Understanding of the impact of climate on urban and architectural design and construction.</li> <li>• Ability to act with innovative technical competence in the use of building techniques and the understanding of their evolution.</li> <li>• Understanding of the processes of technical design and the integration of structure, construction technologies and services systems into a functionally effective whole.</li> <li>• Understanding of services systems as well as systems of transportation, communication, maintenance, and safety.</li> <li>• Awareness of the role of technical documentation and specifications in design realisation, and of the processes of construction, cost, planning and control.</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>• Ability to create architectural designs that satisfy both aesthetic and technical requirements.</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li>• Understanding of the structural design, construction and engineering problems associated with building design.</li> <li>• Understanding of the methods of investigation and preparation of the brief for a design project.</li> <li>• Ability to demonstrate a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture.</li> <li>• Understanding of research and pedagogical methodologies, including those of transdisciplinary knowledge action and knowledge transferability as inherent parts of architectural learning, for both students and teachers.</li> </ul>

## 8. Content/Syllabi

8.1 Course	No. of hours	Teaching methods	Notes
<b>8.2 Seminary / laboratory / project</b>			
Presentation of the architectural solution/variant approved by the pre-diploma committee	-	Individual or group study depending on the architectural programme, with technological and structural guidance provided by a team of	Each student chooses a tutor for this discipline
Site analysis, architectural program.			
Structural system composition, material selection for both superstructure and infrastructure			

Finalizing the construction and structural concept. Preliminary sizing calculations.		engineers from the Department of Urban Planning and Technical Sciences.	
Choosing construction techniques and technologies.			
Implementing the results of the activity plans, sections, and details of construction.			
Bibliography			

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

The competencies achieved across the course contribute to the consolidation of the professional culture necessary for the profession and to the integrated use of theory and practice.

**10. Assessment**

Type of activity	10.1 Evaluation criteria	10.2 Assessment method	10.3 Calculation of final grade
10.4 Course	-	-	<b>1 point by default</b>
	Participation in the consultation and evolution of the concept following discussions	Week 7 will present the completed architectural and construction concept, plan(s) at a relevant scale.	40%
	Correctness of solutions and graphical representation	Week 14 - The check is aimed at - Characteristic plans - basement, ground floor, etc. with marking of load-bearing structure, with axes, dimensions, - sizing of the characteristics of the structural elements	60%
	<p>Calculus of the final grade: as a sum of the points obtained through the evaluation methods described above.</p> <p>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.</p> <p>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.</p>		
10.5 Seminary/Laboratory	-	-	-
10.6 Minimal standard for passing			
<ul style="list-style-type: none"> <li>• a grade of minimum 5</li> </ul>			

Date :	Head of course	Title, Name, Surname	Signature
14.07.2023	Course	Lecturer. PhD. eng. Imola KIRIZSAN	
	Seminary/Lab	-	-

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