# Course/studio syllabi

**1. Data on the study programme**

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| 1.1 Institution | Technical University of Cluj-Napoca |
| 1.2 Faculty | of Architecture and Urban Planning |
| 1.3 Department | **Urban Planning and Technical Sciences** |
| 1.4 Domain | **Architecture** |
| 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 | **57.30** |

**2. Data on the course**

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| 2.1 Name of the course | **REHABILITATION AND RESTORATION OF HISTORIC STRUCTURES** | | | | |
| 2.2 Course/ Studio Head | **Lecturer Imola KIRIZSAN** | | | | |
| 2.3 Head of seminary/ laboratory/ studio | - | | | | |
| 2.4 Study year | **4** | 2.5 Semester | **1** | 2.6 Type of evaluation | **COL** |
| 2.7 Course /studio regime | Formative category: fundamental (DF)/ linked to the domain (DD)/ specific (DS)/ complementary (DC) | | | | **DD** |
| | Compulsory (DI)/ Optional/ (DOp)/ Voluntary (DFac) | | | | **DOp** |

**3. Total estimated time**

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|---|---|---|---|---|---|---|---|---|---|---|
| 3.1 Number of hours/week | **2** | out of which: | 3.2 Course | **2** | 3.3 Seminary | 0 | 3.3 Laboratory | 0 | 3.3 Project | 0 |
| 3.4 Number of hours/semester | 28 | out of which: | 3.5 Course | 28 | 3.6 Seminary | 0 | 3.6 Laboratory | 0 | 3.6 Project | 0 |

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| 3.7 Distribution of time (hours)/ semester for: | |
| (a) Individual study supported by course textbook, course text, bibliography, and notes | 6 |
| (b) Supplementary study in the library, online, and on site | 10 |
| (c) Preparation for seminaries/ laboratories/ assignments, reports, portfolios, and essays | 6 |
| (d) Tutoring | 0 |
| (e) Examination | 1 |
| (f) Other activities | - |

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| 3.8 Total hours of individual study (sum (3.7(a)…3.7(f))) | **22** |
| 3.9 Total semestrial hours (3.4+3.8) | **50** |
| 3.10 Number of credits | **2** |

**4. Preconditions** (where applicable)

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| 4.1 curriculum preconditions | - |
| 4.2 competence preconditions | Competences and knowledge acquired in fundamental courses such as: *History of architecture, Structural engineering theory, 1,2 and 3, Restoration of historic buildings* may constitute a basis for a good understanding of notions and information discussed in the present course. |

**5. Conditions** (where applicable)

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| 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". |
| 5.2. for the seminary | - |

**6. Specific competencies**

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| | • Ability to act with knowledge of historical and cultural precedents in local and world architecture<br>• Understanding of heritage issues in the built environment.<br>• Technical knowledge of structure, materials, and construction.<br>• Awareness of the impact of geotechnical conditions on construction<br>• Understanding of the impact of climate on urban and architectural design and construction.<br>• Ability to act with innovative technical competence in the use of building techniques and the understanding of their evolution.<br>• Understanding of the processes of technical design and the integration of structure, construction technologies and services systems into a functionally effective whole.<br>• Understanding of services systems as well as systems of transportation, communication, maintenance, and safety. |

**7. Objectives of the discipline**

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| 7.1 General objective of the discipline | • Ability to demonstrate a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture |
| 7.2 Specific objectives | • Understanding of the methods of investigation and preparation of the brief for a design project.<br>• Understanding of the structural design, construction and engineering problems associated with building design.<br>• Adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.<br>• Understanding of professional and disciplinary responsibilities toward human, social, cultural, urban, architectural, and environmental values as well as architectural heritage --including the health, safety, and welfare of the public; and the physiological and psychological aspects of public health and well-being. These responsibilities also include a commitment to equity, diversity, and inclusivity in both the content and the context of architectural instruction.<br>• Knowledge of the means of achieving ecologically responsible design, environmental conservation, and rehabilitation, with a focus on relevant aspects of the 17 United Nations Sustainable Development Goals |

**8. Content/Syllabi**

| 8.1 Course | No. of hours | Teaching methods | Notes |
|---|---|---|---|
| **C1** Defining the course objectives. Presenting specific terminology. Monument, historic monument, historical building, cultural heritage, built/cultural heritage buildings. Types of interventions in terms of national and international legislation and technical regulations. Materials in the composition of historical load-bearing structures. | 4 | Lectures supported by projections, Discussions on the reader of the course and presentations. | Students are encouraged to engage in talks throughout the course and to present the stage of their individual study. |
| **C2** Historic load-bearing structural units<br>– Historic roof structures<br>– Historic slabs and vaults<br>– Historic supporting systems<br>– Historic foundations | <br>4<br>4<br>2<br>1 | | |
| **C3** Historic load-bearing structure assemblies | 1 | | |
| **C4** Types of Interventions, Evolution of the concept, national and international legislative support. | 2 | | |
| **C5** Tools for investigating built heritage, heritage enhancement | 1 | | |
| **C6** Interventions on different types of structural subassemblies – strengthening, restoration, reconstruction, reuse. | 4 | | |
| **C7** Analysis of various types of interventions, valorisation criteria. Complex restoration and strengthening projects. Case studies. | 2 | | |
| **C8** Interventions on ruins. | 2 | | |
| NOTE: the permanent actualization of the course matter might lead to minor changes in its structure | | | |

**Bibliography :**


1. FEILDEN, Bernard Conservation of historic buildings, Amsterdam Heidelberg; Boston, MA : Elsevier:
Architectural Press, 2004, cotă 519.661
2. CHOAY, Françoise: *Alegoria patrimoniului* (București: Simetria, 1998) cotă 493.152
3. CURINSCHI VORONA, Gheorge: *Arhitectură Urbanism Restaurare* (București: Editura Tehnică, 1996) cotă 485.859
Others
1. Evaluation and Strengthening of Existing Masonry structures / Bagneux, Rilem publications SARL, Proceedings (Pro 3), Edited by L. Binda and. C. Modena, 2002
2. SZABÓ Bálint – MANIU, Horia – KIRIZSÁN Imola – KIRIZSÁN Ildikó: Conformarea mecanică a structurilor portante istorice Cluj-N., Ed. Utilitas, 2003
3. SZABO, Bálint – KIRIZSAN, Imola: Dicţionar ilustrat de şarpante istorice Cluj-N., Ed. UTILITAS, 2011
4. Pere ROCA, Paulo B. LORENCO, Angelo GAETANI, Historic Construction and Conservation, ed. Routledge, New York, 2019
5. Lucian-Cristian RATOIU, Restaurarea Monumentelor Istorice; București, Ed. ACS, 2021
A selection of texts can be found in the annex of the course, on the course TEAMS channel.


| 8.2 Seminary / laboratory / project | No. of hours | Teaching methods | Notes |
|---|---|---|---|
| - | - | - | - |

Bibliography

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

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| 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 pf activity | 10.1 Evaluation criteria | 10.2 Assessment method | 10.3 Calculation of final grade |
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| 10.4 Course | - | - | **1 point by default** |
| | Relevance and quality of individual study | Compulsory 2 topics from the list posted. Students will upload an assignment in the respective folder in TEAMS, consisting of a sketches and written part. | max. **2 points** |
| | Envolvement during the course and quality of reports | **Oral assessment.** Getting involved in discussions to present individual studies, reports. | max.4 **points** |
| | Relevance and quality of answers | Oral exam based on the courses. This discussion at the last week will assess the knowledge assimilated, the capacity to interpret examples of heritage structures the point of view of theoretical and practical approaches presented during the course. | max. **3 points** |
| | Calculus of the final grade: as a sum of the points obtained through the evaluation methods described above. | | |
| | 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.<br>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 | - | - | - |
| 10.6 Minimal standard for passing | | | |
| • a grade of minimum 5 | | | |

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

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| Date of validation by the Department Council:<br><br>_____ | Chief of Department<br>Associate professor. PhD. arch. Vlad Sebastian RUSU |
| Data of approval in the Faculty Council:<br><br>_____ | Dean<br>Associate professor. PhD. arch. Dragoș Șerban Ion ȚIGĂNAȘ |