**SYLLABUS**

1. **Information about the program**

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| **1.1** Higher education institution |  Universitatea Politehnica Timisoara  |
| **1.2** Faculty[[1]](#footnote-2) / Department[[2]](#footnote-3) |  Constructii / CCI  |
| **1.3** Field of study (name/code[[3]](#footnote-4)) |  Inginerie Civila / 10  |
| **1.4** Study cycle | Master  |
| **1.5** Study program (name/code/qualification) |  ADVANCED DESIGN OF BUILDINGS – PROIECTAREA AVANSATA A CLADIRILOR / 10 / Master  |

1. **Information about discipline**

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| **2.1** Name of discipline/The educational classe[[4]](#footnote-5) | Rehabilitation concepts for historical monuments (Noțiuni de reabilitare a monumentelor istorice) / DCAV  |
| **2.2** Coordinator (holder) of course activities |  Conf. dr. ing. Cosmin Al. DĂESCU |
| **2.3** Coordinator (holder) of applied activities[[5]](#footnote-6) |  Conf. dr. ing. Cosmin Al. DĂESCU |
| **2.4** Year of study[[6]](#footnote-7) |  2  | **2.5** Semester |  3  | **2.6** Type of evaluation |  E  | **2.7** Regime of discipline[[7]](#footnote-8) |  DO  |

1. **Total estimated time** (direct activities (fully assisted), partially assisted activities and unassisted activities[[8]](#footnote-9))

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| **3.1** Number of hours fully assisted/week | 4 ,of which:  | course | 2  | seminar/laboratory/project | 2  |
| **3.1\*** Total number of hours fully assisted/sem. | 56 ,of which:  | course | 28  | seminar/laboratory/project | 28  |
| **3.2** Number of on-line hours fully assisted/sem | 32 ,of which:  | course | 16  | seminar/laboratory/project | 16  |
| **3.3** Number of hours partially assisted/week | 0 ,of which:  | project, research | 0  | training | 0  | hours designing M.A. dissertation | 0  |
| **3.3\*** Number of hours partially assisted/ semester | 0 ,of which:  | project of research | 0  | training | 0  | hours designing M.A. dissertation | 0  |
| **3.4** Number of hours of unassisted activities/ week | 6.71 ,of which:  | Additional documentation in the library, on specialized electronic platforms, and on the field | 1.71  |
| Study using a manual, course materials, bibliography and lecture notes | 2.5  |
| Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays | 2.5  |
| **3.4\*** Total number of hours of unasssited asctivities/ semester | 94 ,of which:  | Additional documentation in the library, on specialized electronic platforms, and on the field | 24  |
| Study using a manual, course materials, bibliography and lecture notes | 35  |
| Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays | 35  |
| **3.5 Total hrs./week**[[9]](#footnote-10) | 10.71 |
| **3.5\* Total hrs./semester** | 150  |
| **3.6 No. of credits** | 6  |

**4. Prerequisites** (where applicable)

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| **4.1** Curriculum | * Not necessary.
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| **4.2** Competencies | * Knowledge in engineering sciences, related to structural design and evaluation.
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**5. Conditions** (where applicable)

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| **5.1** of the course | * Medium capacity room, video projector
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| **5.2** to conduct practical activities | * Medium capacity room, video projector, computers
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**6. Specific competencies** acquired through this discipline

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| Specific competencies | * Understanding the ways of evaluating historical monument buildings, based on specific provisions.
* Integration within a working group to fulfill the tasks reserved in the design team.
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| Professional competencies ascribed to the specific competencies | * ensure compliance with security legislation; provide instructions to staff; adhere to legal regulations; supervise construction projects; provide construction counseling; apply health and safety standards; use measuring tools; manage engineering projects; draft technical reports; supervise personnel; conduct sample analysis; adapts existing projects to new circumstances;
 |
| Transversal competencies ascribed to the specific competencies | * manage financial and material resources; oversee quality control; apply scientific, technological, and engineering knowledge; work in teams; train others; use equipment, tools, or technological equipment accurately
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**7. Objectives of the discipline** (based on the grid of specific competemcies acquired)

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| **7.1** The general objective of the discipline | * Accumulating knowledge related to the principles of rehabilitation of historic buildings and their application in a specific project.
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| **7.2** Specific objectives | * Based on the information received, the student needs:  - to carry out a complete diagnosis of a building.  - to be able to assess the vulnerability of the building, for different types of actions.  - identify and apply specific rehabilitation techniques.  - to carry out an intervention project, at the level of detail.
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**8. Content**

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| **8.1** Course | Number of hours | Of which online | Teaching methods |
|  Introduction to the topic of historical buildings |  2  |  Max 60%  |  Presentation on the whiteboard, with video projector, consulting, explanations, examples  |
|  Types of historical buildings  |  4  |   |
|  Structural typologies related to historical buildings |  4  |   |
|  Principles of intervention for historic buildings |  6  |   |
|  Case studies.  |  12  |   |
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Bibliography[[10]](#footnote-11)

- C. Brandi, R. Balaci, D. Mohanu, Teoria restaurarii, Meridiane, 1996

- C. Feiffer, La conservazione delle superfici intonacate: il metodo e le tecniche, 2000

- I. Kisilewicz, Conservarea creatiei: recunoasterea materialelor si cercetarea. Note de curs, Editura Fundatiei Romania de maine, 2017

- Roca, P., Lourenc̦ o, P. B., & Gaetani, A. (2019). Historic Construction and Conservation: Materials, Systems and Damage. Routledge.

- Ghiassi, B., & Lourenc̦ o, P. B. (Eds.). (2018). Long-term Performance and Durability of Masonry Structures: Degradation Mechanisms, Health Monitoring and Service Life Design. Woodhead Publishing.

- Ghiassi, B., & Milani, G. (Eds.). (2019). Numerical Modeling of Masonry and Historical Structures: From Theory to Application. Woodhead Publishing.

- Aguilar, R., Torrealva, D., Moreira, S., Pando, M. A., & Ramos, L. F. (Eds.). (2018). Structural Analysis of Historical Constructions: An Interdisciplinary Approach (Vol. 18). Springer.

- A. Borri (Director științific) (2011) Manuale delle Murature Storiche, Tipografia del Genio Civile, Milano.

- I. Andreescu, M. Mosoarca, D.R. Dinu, ”Reshaping the Villa – Complex intervention in a 1930’s structure: an interdisciplinary approach”, Structural Analysis of Historical Constructions, 2019.

I. Andreescu, V. Gaivoronschi, M. Mosoarca, “ Old and new- the complex problem of integrating new functions into old buildings”, Procedia Engineering, 2016.

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| **8.2** Applied activities[[11]](#footnote-12) | Number of hours | Of which online | Teaching methods |
|  Introduction. Presentation of the project theme and the work team.  |  4  |  Max 60% |  Presentation on the whiteboard, with video projector, on the computer, consultations, explanations, examples  |
|  Case study. Building diagnosis.  |  8  |   |
| Case study. Proposal strategy for rehabilitation, restoration, conservation and/or consolidation.  |  8  |   |
|  Case study. Development of a rehabilitation/restoration intervention project.  |  8  |   |
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|  | Bibliography[[12]](#footnote-13) - Caietele restaurării (2015-2023), Editura Art Conservation Support, București- Crișan R. (2023). Reabilitarea patrimoniului construit. Teorie și tehnică, Editura Ozalid, București.- Ratoiu L.-C. (2021). Restaurarea monumentelor istorice – Concepte. Teorii. Practici, Editura Art Conservation Support, București.  |

**9. Coroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program**

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| * Graduates must acquire knowledge about historical construction materials and techniques, be able to quickly assess the vulnerability of a building, identify the causes of degradation and propose complete restoration and strengthening projects.
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**10. Evaluation**

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| Type of activity | **10.1** Evaluation criteria[[13]](#footnote-14) | **10.2** Evaluation methods | **10.3** Share of the final grade |
| **10.4** Course |  2 theoretical topics or 9 multiple choice short questions.  |  Written examination  | 40%  |
| **10.5** Applied activities  | **S:** Completion of a work that includes a written part and a drawn part, type of intervention project.  |  Defending the work (written and drawn parts).  | 60%  |
|  | **L:**   |   |   |
|  | **P:**   |   |   |
|  | **Pr:**   |   |   |
|  | **Tc-R[[14]](#footnote-15):**  |   |   |
| **10.6** Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified[[15]](#footnote-16) |
| * The final mark must accumulate a minimum score of 5 points out of 10 possible.
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| **Date of completion** | **Course coordinator****(signature)** | **Coordinator of applied activities****(signature)** |
|  18.nov.2024  |  Conf. Dr. Ing. DĂESCU Al. Cosmin  |  Conf. Dr. Ing. DĂESCU Al. Cosmin  |

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| **Head of Department** **(signature)**  | **Date of approval in the Faculty Council [[16]](#footnote-17)** | **Dean****(signature)** |
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1. The name of the faculty which manages the educational curriculum to which the discipline belongs [↑](#footnote-ref-2)
2. The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs. [↑](#footnote-ref-3)
3. The code provided in HG - on the approval of the Nomenclature of fields and specializations / study programs, annually updated. [↑](#footnote-ref-4)
4. The educational classes of disciplines are: thoroughgoing study discipline (DA), advanced knowledge discipline (DCAV), synthesis discipline (DS) or complementary discipline (DC). [↑](#footnote-ref-5)
5. The applied activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr). [↑](#footnote-ref-6)
6. The year of study to which the discipline is provided in the curriculum . [↑](#footnote-ref-7)
7. Discipline may have one of the following regimes: imposed discipline (DI) or compulsory discipline (DOb)-for the other fundamental fields of studies offered by UPT or optional discipline (DO). [↑](#footnote-ref-8)
8. Within UPT, the number of hours from 3.1\*, 3.2\*,…,3.9\* are obtained by multipling by 14 (weeks) the number of hours from 3.1, 3.2,…, 3.9. [↑](#footnote-ref-9)
9. The total number of hours/week is obtained by summing up the number of hours from 3.1, 3.4 şi 3.8. [↑](#footnote-ref-10)
10. At least one title must belong to the department staff teaching the discipline, and at least one title must refer to a relevant work for the discipline, a national and international work that can be found in the UPT Library. [↑](#footnote-ref-11)
11. The types of applied activities are those mentioned in 5. If the discipline containes more types of applied activities then they are marked, consecutively, in the table below. The type of activity will be marked distinctively under the form: „Seminar:”, „Laboratory:”, „Project:” and/or „Practice/Training:”. [↑](#footnote-ref-12)
12. At least one title must belong to the staff teaching the discipline. [↑](#footnote-ref-13)
13. The Syllabus must contain the evaluation method of the discipline, specifying the criteria, the metods and the forms of evaluation, as well as mentioning the share attached to these within the final mark. The evaluation criteria must correspond to all activities stipulated in the curriculum (course, seminar, laboratory, project), as well as to the methods of continuous assessment (homework, essays etc.) [↑](#footnote-ref-14)
14. Tc-R= Homework-Reports [↑](#footnote-ref-15)
15. For this point turn to “Ghid de completare a Fișei disciplinei” found at: <http://www.upt.ro/img/files/2018-2019/calitate/Ghid_de_completare_fisa_disciplinei.pdf> [↑](#footnote-ref-16)
16. The approval is preceeded by discussing the study program’s board’s point of view with redgards to the syllabus. [↑](#footnote-ref-17)