Fan name	Renovation in Architecture (ECTS 8)
Subject/module code	AR2608
Science teachable semesters	6 semester
Attached teacher	Assistant M. Makhamatov and Assistant L. Abdusamatova
Education language	Uzbek
Science type	Mandatory
Study hours (including independent learning)	**Total hours - 240.** **Auditory training hours - 96.** Lecture session hour -0 Practical study hours - 96 **Independent education - 144 hour**
ECTS	8
Science goals and objectives / learning outcomes	**the subject - "** Renovation in Architecture" - is to teach students to comprehensively analyze urban development projects. Based on today's requirements in the field of architecture and urban development, to introduce tools and computer programs involved in the process of designing cities into educational processes, and to provide information about the activities of urban planners. In this regard, it is necessary to train young urban planning specialists - architects in a new way. Taking into account the richest experience of urban planning of the past years with its positive and negative aspects, it is necessary to explain to students that their professional skills and abilities are a unique tool for implementing the new urban planning strategy of Uzbekistan in a market economy. **The task of the discipline** - the task of the course "Renovation in Architecture" - embodies a comprehensive approach to the renovation of buildings and structures, combining the following aspects: • Respect the original architecture and its values, preserving original elements, materials and structures. • Adapting the building to modern requirements for comfort, safety, energy efficiency, and changing needs. • Creating a modern and contemporary design that combines historical features and modern trends. • To introduce students to the concept of renovation in architecture, its history, modern trends, and practical aspects. • Develop skills in critical analysis and evaluation of renovation projects. • To teach students to apply knowledge of renovation in practical design tasks. The course includes a consistent introduction of students to the basics of Urban Planning; in the form of lectures, the ability to apply the basic concepts, principles, norms, calculations and skills in the use of modern telecommunications tools in their professional activities. **Learning outcomes:** 1. Dendiralogy in landscape architecture - an idea of the functional purpose of objects, sociological scientific research of applied architecture; 2. Depending on the objects, the division of dendritic science into several types in landscape architecture, social structure and process; 3. Types of dendritic arboretum in landscape architecture and the social requirements for its formation; 4. Must know the basic concepts and principles of dendritic design in landscape architecture and have the skills to use them; 5. In landscape architecture, dendritic science must have the skills to apply methods of analysis of design processes and to adopt solutions to its problems. 6. In practice taken information analysis do to take and main mechanisms

	understanding
Course content (topics)	**I. Lecture (L) sessions are not included in the standard curriculum for the subject.** **II. Practical for training instructions and recommendations** The teacher's preparation for a practical session begins with studying the initial documents (curriculum, thematic plan, etc.) and ends with the development of a lesson plan. The teacher should have an idea of the goals and objectives of the practical session, as well as the amount of work that each student must complete. Methodological guidelines are the teacher's main methodological document in preparing and conducting practical classes. The goal of practical training is to understand theory and acquire skills. Its conscious application in educational and professional activities consists in developing the ability to confidently formulate one's own point of view. **Recommended practical topics** : **Practical training** ***(A) "Public buildings and structures" within the framework of the Renovation program. The purpose of the subject "Renovation in architecture" is to develop students' independent creative activity and to develop practical skills in applying the acquired creative knowledge.*** 1. Introduction. Facility design processes: Introduction to the meaning of design activities, project program. Assignment on the topic "Public buildings and structures". Conducting a scientific analytical dialogue, introduction to literature and methodological works. 2. Familiarity with the situation and topographic basis. 3. Overview of the methodology. Preliminary research, historical study, analysis of the current situation. 4. Philosophical foundations of conservation and restoration, restoration theories… 5. Indicate the nature, technology, territorial location, and architectural and structural requirements of the object on the topic. Sketch the project. 6. Explain the stages of designing a renovated facility. Information about new ideas for project facilities, representation of modern technological processes in project sketches. Execution of the sketch. 7. Development of architectural solutions. 8. Complete the first clause on the topic in A3 format. 9. Analysis of the first clause, methodological analysis of project elements, standards, object designs. Work on the idea of a sketch on the topic. 10. Sketching. Taking into account functional processes in the sketch idea. Preparing for the final conclusion. 11. Analysis of the sketch. Methodological implementation of the sketch idea. Formation of the concept of the idea. Execution of the final clausula in A3 format. 12. Develop a project outline in several options, from the general

organization to the dimensions of the building project and write notes. Work on the entourage part in stylistic and perspective views. From the moment it is completed to the final M - 1/100, 1/50, 1/20 clear and graphic images.

13. Initial analysis of the primary creative task. Finalization of the project idea, implementation of the project by composing it at scale.
14. General construction of the project through scale models.
15. Implementation and completion of the project model development at scale. Analysis of the project solution - work on technical and economic indicators. Selection of the project schedule.
16. Entering dimensions and writing notes in the building design. Working on the entourage part in stylistic and perspective views.
17. Comparison of the project from an artistic-figurative, economic, and efficiency perspective. Viewing the adopted option from an analytical-synthetic perspective.
18. Graphic design of the project. Execution of the stylistic and perspective parts of the building in the project in color graphics. Processing of the first plan and elements of the building.
19. Heritage and Energy Presentation of heritage buildings with improved energy efficiency, proposed solutions...
20. Project Discussion and Project Defense.

IV. Independent study and independent work.

Independent learning competence serves to support students' independent self-development and increase the effectiveness of professional activities. Students perform independent work on their mobile devices under the guidance of a teacher in a traditional or electronic form.

Recommended topics for independent study:

1. Analyzing major renovation projects: Local experience.
2. Analysis of renovation projects based on foreign experience,
3. Classification of renovation projects.
4. "Fundamentals of Design of Public Buildings and Structures."
5. Design of "Public Buildings and Structures" based on foreign experience.
6. Renovation and historical solutions for "Public buildings and structures".
7. Using "green" technologies in renovation.
8. Applying energy efficiency principles in renovation.
9. Using environmentally friendly materials in renovation.
10. Using digital technologies in renovation.
11. Use of 3D modeling and intelligent building management systems in renovation.
12. Analyze the advantages and disadvantages of different renovation approaches.
13. The current state of "Public Buildings and Structures".
14. The current state of "Public buildings and structures" in cities and villages in the Republic of Uzbekistan.
15. The influence of the center in the structural and functional transformation of modern sustainable "Public Buildings and Structures".
16. Improving the efficiency of renovation and use of living areas of "public buildings and structures".
17. Based on renovation: Study the characteristics of existing buildings in cities and villages, their provision with infrastructure.
18. Based on renovation: In the process of urban renovation, the reorganization of urban green areas.
19. Reorganization of green areas during the reconstruction of cities and villages.

	20. Urban Planning Features of Historical Cities of Uzbekistan. 21. Creative research being conducted by a foreign state in the application and repair of new technologies in "Public Buildings and Structures". 22. Features of Architectural Renovation of Historical Cities of Uzbekistan. 23. The importance of transportation and engineering systems and their improvement in the process of renovating the area. 24. Reconstruction of central squares of cities and villages. 25. Characteristics of existing village buildings being renovated. 26. Conservation of protected areas, architectural monuments and their significance in urban planning. 27. General Principles of urban center renovation and planning. 28. Creating a comfortable environment for people with disabilities during the renovation process. 29. Improve access to buildings and public spaces. 30. The effectiveness of the renovation program in the process of designing cities and villages of the Republic of Uzbekistan. 31. The goal of reconstruction of rural residential areas. 32. The concept of urban reconstruction. 33. Principles of urban center renovation and planning. 34. Landscape organization in urban renovation. 35. The goals and objectives of urban reconstruction. 36. Reconstruction of the center of rural settlements.
Student assessment	Assessment of student knowledge is based on the mastery of teaching materials (tests, assignments, written and oral work results) during the semester and final examination. During the physics course, students are evaluated on a 100-point system. Of these, 50 points are allocated to the current and intermediate results (60% of the 50 points are current control, independent study and 40% intermediate control), and 50 points are allocated to the final control result. Students whose total score of current and intermediate points is less than 30 points are not admitted to the final control exam. A student who scores 30 or more points in the final control is considered to have mastered the subject.
Exam requirements	The student must have fully mastered the theoretical and practical concepts of the subject, be able to correctly reflect the results of the analysis. The student must have completed the tasks assigned in the independent work, current and intermediate forms of assessment. At the same time, he must have received the necessary points from the current, intermediate, independent education and final tests in the relevant subject within the specified time. A student who has not submitted current control, intermediate control, and independent learning assignments, as well as who has scored less than 30 points for these assignments and control type, will not be included in the final control type. Also, a student who misses 25 percent or more of the classroom hours allocated to a subject without an excuse will be expelled from that subject, will not be allowed to take the final exam, and will be considered to have not acquired the appropriate credits in that subject. A student who fails a final exam or scores between "0-29.9" on this type of exam is considered an academic delinquent.
Recommendation literature	**Main literature:** 1. Janizakov AE Analysis of building structures. Textbook. Jizzakh, JizPI Publishing House, 2026. –243 pages. 2. KDRakhimov "Renovation in Architecture" textbook Samarkand Turan Publishing House 2025 440 pages 3. SR Khalikov. Foreign modern architecture. Textbook. Jizzakh: Publishing house of the state institution "JIZAKH STATE

	PEDAGOGICAL UNIVERSITY", 2026. – 304 pages. 4. Janizakov AE Architectural construction. Textbook. Jizzakh, JizPI publishing house, 2024. –277 pages. 5. Bobobekov BQ, Usarov JT Fundamentals of architectural design: a textbook. – Jizzakh: "JizPI Typography" publishing house, 2026. – 250 p. – ISBN 978-9910-251-10-8. 6. "Reconstruction in cities and villages" DUI Samukhamedova Textbook. Tashkent 2018. 231 p. **Additional literature** 1. Isamukhamdova.DU, Mirzayev.M.K. "Theory of Modern Urban Planning". Textbook, Tashkent, 2015. 2. Architectural graphics. XMUbaydullayev. VMMakhmudov. BIInogomov. Textbook. Tashkent 2012. 89 p. 3. Robin Beaver. 100 More of the World's Best Houses. 2005. **Internet resources** 1. www.gov.uz 2. www.lex.uz 3. http://www.arhitekto.ru 4. http://www.glazychev.ru 5. http://www.natlib.uz 6. http://www.archunion.com 7. www.archi.ru 8. https://uclouvain.be/en-cours-2025-licar2831?utm_source=chatgpt.com