Fan name	Architectural design 4.1 (ECTS 6))
Subject/module code	AL1606
Science teachable semesters	6 semester
Attached teacher	E. Kuldashev, associate professor, etc.
Education language	Uzbek
Science type	Mandatory
Study hours (including independent learning)	**Total hours - 180.** **Auditory training hours - 72.** Lecture session hour -0 Practical study hours - 72 **Independent education -108 hour**
ECTS	6
Aims and objectives of science / learning outcomes	**The purpose of teaching science** – to form knowledge, skills and competences in students about the stages, factors, methods, and types of architectural design, to design and implement it in practice, to supervise, to conduct productive creative activities, and to acquire the necessary professional and personal skills related to construction in general and architecture in particular; **The task of science** – to teach students the characteristics of mastering the architectural design process, as well as to acquire a solid understanding of the fundamentals of architecture, the ability to use appropriate technical tools, and the ability to form, model, analyze, design, and use architectural systems.
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 *Medium multi-storey stay place buildings . (Project implementation)*** 1. ***Middle multi-storey residential buildings . To give an assignment on the topic of*** medium -rise residential buildings. To conduct a scientific-analytical dialogue, to familiarize with literature and methodological works. 2. Architectural analysis of the site, environment, building, and territorial location. 3. Technological connection schemes of rooms in medium-rise residential buildings. Proper use of stairs in building designs and fire prevention measures... 4. Study the design and construction of building systems. 5. Methodological analysis of project elements, standards, and facility designs. Work on a sketch idea on the topic. Sketch variations.

	6. Taking into account functional processes in the sketch idea. Methodological analysis of the sketch. Preparation for the final conclusion. 7. Methodological implementation of the sketch idea. Formation of the concept of the idea. Formation of a solution for building designs. 8. Analysis and discussion of the final conclusion. Scaling the project. Finalizing the development of the project idea. 9. Compose the project on a scale. Analysis of the constructive solution. Formation of the style, style and its elements on a scale. 10. Execute project model development at scale. 11. Execute and complete the project model development at scale. 12. Drawing up dimensions and notes in the building design. Working on the entourage part in stylistic and perspective views. 13. Graphic design of the project. 14. Perform color graphics of the style and perspective parts of the building in the project. Perform and complete graphic modeling. 15. Perform and complete graphic modeling. **III. 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. The history of the formation and development of medium-rise residential buildings.) 2. Typological characteristics of medium-rise residential buildings.). 3. Organization of functional and planning solutions in mid-rise residential buildings. 4. The composition of rooms in residential buildings and their functional interrelationships. 5. Volumetric and spatial solutions of medium-rise residential buildings. 6. Principles of apartment planning in mid-rise residential buildings. 7. Planning features of one-, two- and multi-room apartments. 8. Organization of vertical and horizontal communications in medium-rise residential buildings. 9. The role and design solutions of stairs and elevators in residential buildings. 10. Organization of natural lighting and ventilation in mid-rise residential buildings. 11. Ensuring insolation and aeration requirements in residential buildings. 12. Facade and architectural-compositional solutions of mid-rise residential buildings. 13. Use of balconies, loggias and terraces in residential buildings. 14. Territorial planning and improvement of mid-rise residential buildings. 15. Establishment of playgrounds and recreation areas in residential complexes. 16. Organization of car storage and parking areas in mid-rise residential buildings. 17. Creating a comfortable environment for persons with disabilities in residential buildings. 18. Fire safety and evacuation solutions in mid-rise residential

	buildings. 19. Structural systems of residential buildings and their typological characteristics. 20. The use of monolithic reinforced concrete structures in medium-rise residential buildings. 21. Energy-efficient architectural solutions in mid-rise residential buildings. 22. Using ecological and "green" architectural principles in residential buildings. 23. The use of modern building materials in mid-rise residential buildings. 24. The architectural and aesthetic role of mid-rise residential buildings in the urban environment. 25. Reconstruction and modernization of mid-rise residential buildings. 26. Modern architectural trends of mid-rise residential buildings. 27. The influence of local climatic conditions on the architecture of mid-rise residential buildings. 28. Sanitary and hygienic requirements in the design of medium-rise residential buildings. 29. Noise protection and acoustic comfort in mid-rise residential buildings. 30. Development of a sketch-project for a modern mid-rise residential complex. 31. Development of a functional layout of a mid-rise residential building. 32. Development of a planning solution for a 2–3-room apartment. 33. Development of a floor plan of a mid-rise residential building in sketch options. 34. Creating sketch options for the facade composition of a residential building. 35. Development of a master plan and functional zoning solution for a residential complex.
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. SAQodirova, MTAbdujabborova. “Design of residential and public buildings” textbook. - Tashkent.: Nizamiy State Technical University, 2019. – 300 pages. 2. AOXasanov, “Architectural Design” textbook. - Tashkent.: “Architectural Innovation Center”, 2019. – 140 pages. **Additional literature** 1. SAQodirova. Design of public buildings. Textbook. - Tashkent. "Architecture Innovation Center", 2015 , 140 pages. 2. MTAbdujabborova. Design of residential buildings. educational manual. Tashkent . “Architectural Innovation Center” . 2015 . 154 pages 3. XMUbaydullaev, TAXidoyatov, YIAbdurakhmanov, GIKorobovsev, Ya.M.Mansurov. Architectural design. Textbook. - Tashkent.: “Architecture is innovative Center”, 2012. – 180 pages. 4. BIInogomov. Design of modern buildings and structures. Textbook. - Tashkent.: “Architecture is innovative center”, 2010. **Information sources** 1. www.ima.uz (Intellectual Property Agency of the Republic of Uzbekistan) 2. www.academy.uz (Academy of Sciences) 3. www.ziyo.net 4. https://didattica.polito.it/pls/portal30/gap.pkg_guide.view Gap?p_cod_ins=01VQDWH&p_a_acc=2027&p_header=S&p_ lang