Fan name	Dendrology in Landscape Architecture (ECTS 4)
Subject/module code	BIT 1404
Science teachable semesters	4 semester
Attached teacher	Associate Professor B. Bobobekov
Education language	Uzbek
Science type	Mandatory
Study hours (including independent learning)	**Total hours - 120.** **Auditory training hours - 48.** Lecture session hours -24 Practical study hours - 24 **Independent education -72 hour**
ECTS	4
Aims and objectives of science / learning outcomes	**The purpose of the discipline** is to demonstrate the inextricable link between the socio-economic development of society and the architecture of residential and public buildings. To achieve this goal, the following tasks are set: **The task of the subject -** In the process of training for the specialty of Architecture, great attention is paid to teaching the typology of residential and public buildings, which is the most important part of the science of architecture. In the process of teaching the subject, students are required to organize the types of buildings, study them systematically, and teach them their role in urban planning, constructive solutions, socio-economic principles, artistic and architectural solutions, the classification of building types, norms and room categories. **Learning outcomes:** 1. Knows the basic concepts, principles, and development patterns of building and structure typology. 2. Be able to classify the main types of residential, public, administrative, educational, healthcare, cultural and educational, sports, commercial, transport and industrial buildings. 3. Can analyze the functional structure of various buildings and structures, the composition of rooms, and the functional relationships between them. 4. Can evaluate the volumetric and planning solutions of buildings and structures based on typological requirements. 5. In practice taken information analysis do to take and main mechanisms understanding
Course content (topics)	**I. Lecture (L) sessions are topics covered in the standard curriculum of the subject.** 1. General information about buildings - a construction object consisting of above-ground and, in some cases, underground parts, intended for people to live, work, study, relax, use services, or carry out various production processes. 2. Morphology of buildings in steel, reinforced concrete, stone, wood - light, strong and allows to close large gaps. Mainly used in industrial, sports, commercial and exhibition buildings. Morphologically characterized by open, light and voluminous forms. 3. Structural typologies involving large spans: arches, cable structures, suspended structures, spatial truss structures - are structural systems used to reduce the number of supports in the span and cover large volumes of free space. They are used in sports facilities, stadiums, exhibition halls, airports and other large public buildings. 4. Structural concept of supporting structures and floor structures and classification (classification) of residential buildings - buildings intended for permanent or temporary residence of people. They are classified according to several characteristics.

5. Low-rise residential buildings - usually 1-3 stories high, they are buildings intended for permanent residence of residents.

6. Medium-rise residential buildings are multi-apartment residential buildings, usually 4–9 stories high. They are used for relatively dense population settlements in cities.

7. Multi-storey residential buildings are multi-apartment buildings, usually 10 or more stories high, containing many apartments. They are mainly built in cities to accommodate more people without increasing population density.

8. High-rise residential buildings are multi-story buildings with great height and designed to accommodate a large number of apartments. They are mainly used in large cities and densely built-up areas.

9. Classification and structural elements of public buildings - buildings intended to provide educational, medical, cultural, sports, commercial, administrative and other services to the population.

10. Buildings of educational and training institutions are public buildings intended for the population to receive education and develop professional knowledge and skills.

11. Higher education institutions and scientific research institutions are public buildings intended to provide students with higher education, train specialists, and conduct scientific and pedagogical activities.

12. Cultural and entertainment buildings are public buildings designed for the population to enjoy cultural leisure, gain knowledge, engage in art and creativity, and participate in various performances and events.

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)

1. Drawing floor plans of civil buildings;
2. Structural concept of support structures and floor structures;
3. Construct a facade composition based on the building's floor plans;
4. Draw a roof plan;
5. Draw a pitched roof plan;
6. Drawing the floor plan;
7. Determining and drawing the dimensions of stairs and landings;
8. Drawing knots;
9. Compile a list of doors and windows;
10. Development of interior decoration schedule;
11. Creating a room register;
12. Calculation of technical and economic indicators of civil buildings.

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. The history of the development of the typology of buildings and structures.

	2. Typology of modern residential buildings. 3. Planning features of low-rise residential buildings. 4. Modern solutions for multi-storey residential buildings. 5. Architecture of high-rise residential buildings. 6. Classification and development trends of public buildings. 7. Typological characteristics of modern school buildings. 8. Functional structure of buildings of higher education institutions. 9. Typology of buildings of scientific research institutions. 10. Architectural solutions for theaters and performance buildings. 11. Typology of modern cinemas. 12. Functional structure of museum and exhibition buildings. 13. Typology of sports facilities and sports complexes. 14. Classification of hotel buildings. 15. Modern types of commercial and service buildings. 16. Typology of medical institution buildings. 17. Typological characteristics of airport, train station and bus station buildings. 18. Typology of modern office and administrative buildings. 19. Architecture of multifunctional public buildings. 20. The role of large-span structures in building typology. 21. Morphological characteristics of steel structure buildings. 22. Typology of reinforced concrete buildings. 23. Modern buildings with wooden structures. 24. Ecological and energy-efficient residential buildings. 25. Inclusive environment and universal design principles. 26. Functional zoning in modern buildings. 27. The importance of natural lighting in buildings and structures. 28. The influence of climatic conditions on building typology. 29. Typology of historical buildings and their modernization. 30. Typological analysis of public buildings in the city of Jizzakh.
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 course of Typology of Buildings and Structures, students are assessed 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. Sh.Kh.Yunusov, Typology of buildings and structures. Textbook. – Tashkent: “Science and Technology”, 2018. 184 pages. 2. XMUbaydullayev, MMInogamova, Textbook. – Typological foundations of the design of residential and public buildings "Voris" 2009. 383 pages. **Additional literature** 1. D. Askarova, M. Miryusupova. Small architectural forms. Tashkent: 2007. 2. ASO'rolov, AQRahimov, BASaidova, Fundamentals of Architectural Design and Composition. Samarkand: 2005. 3. Kh. Pulatov and others. Fundamentals of architectural composition. Textbook Tashkent: 2005. 4.MMVahitov, Architecture Part II-III. Industrial Buildings (textbook), “Tafakkur” Tashkent. 2010 **Information sources** 1.www.lex.uz – National database of legislative documents of the Republic of Uzbekistan. 2.https://didattica.polito.it/pls/portal30/gap.pkg_guide.viewGap?p_cod_ins=01VQDWH&p_a_acc=2027&p_header=S&p_lang 3.https://www.polito.it/ 4.www.msus.org