Course title	Urban Planning in Hot, Dry Climate Conditions (ECTS 4)
Subject/module code	QIIShSh2304
Semester(s) in which the course is taught	Semester 3
Assigned instructor	Sagatov Baxodir Uktamovich, PhD in Technical Sciences, Acting Associate Professor
Language of instruction	Uzbek
Course type	Elective
Study hours (including independent study)	**Total hours – 120.** **Contact hours – 36.** Lecture hours – 18 Practical hours – 18 **Independent study – 84 hours**
ECTS	4
Course aim and objectives / learning outcomes	**Course aim –** to develop students' understanding of the theoretical foundations of architectural knowledge; the principles governing the formation of indoor microclimates; the reliability and long-term durability of buildings; and the design of buildings in accordance with current Construction Norms and Regulations, as well as their practical application. **Course objectives –** to provide students with the theoretical knowledge and practical skills required by the course "Urban Planning in Hot, Dry Climate Conditions", to develop methodological approaches to the building design process, and to foster a scientific outlook. **Learning outcomes:** 1. Have an understanding of and knowledge about the types and specific characteristics of various buildings and structures, the requirements applicable to them, the assessment of design and structural solutions, and the norms and regulations governing the design of buildings and structures; 2. Be able to take fire-safety and seismic-resistance requirements into account when designing various types of buildings and structures, and perform thermal-engineering, acoustic and lighting calculations in architectural and building design; 3. Know the fundamentals of building and structural design and their structural elements, the concepts and issues related to buildings and structures, and the principles of architectural and building design; and be able to use standard designs and apply the fundamentals of designing different types of buildings and structures; 4. Be able to select the basic design solutions and structural elements for residential, public and industrial buildings and structures; 5. Be able to use standard designs in the design process and design various types of buildings and structures; 6. Have the skills to perform thermal-engineering, acoustic and lighting calculations in architectural and building design.
Course content (topics)	**I. Main theoretical part (Lectures)** **Topic 1: Introduction to the course "Urban Planning in Hot, Dry Climate Conditions". International experience in urban planning systems. Theories of sustainable, compact and smart cities.** **Topic 2: Climatic and physical-geological data for design.** **Topic 3: Urban planning for the development and construction of settlement territories.** **Topic 4: Urban planning under hot, dry climatic conditions.** **Topic 5: Objects and levels of urban planning design. The demographic composition of the population in urban planning.** **Topic 6: Energy efficiency in urban planning. Energy-efficient solutions envisaged in projects.** **Topic 7: Construction of residential buildings in Uzbekistan.** **Topic 8: Construction of public buildings in Uzbekistan.** **Topic 9: Construction of industrial buildings in Uzbekistan.** **II. Guidelines and recommendations for practical classes**

	The instructor's preparation for a practical class begins with reviewing the initial documents (the curriculum, thematic plan, etc.) and concludes with the preparation of the lesson plan. The instructor should have a clear understanding of the aims and objectives of the practical class and the amount of work each student is expected to complete. Methodological guidelines are the instructor's principal methodological document for preparing and conducting practical classes. The purpose of practical classes is to understand theoretical material, acquire skills, apply them consciously in educational and professional activities, and develop the ability to formulate and substantiate one's own point of view. **Recommended practical topics:** 1. Familiarization with regulatory and technical literature. Calculation of population size. Study of settlement systems. 2. Classification of residential buildings in Uzbekistan. 3. Spatial planning solutions for residential buildings in Uzbekistan. 4. Classification of public buildings in Uzbekistan. 5. Spatial planning solutions for public buildings in Uzbekistan. 6. Classification of industrial buildings in Uzbekistan. 7. Spatial planning solutions for industrial buildings in Uzbekistan. 8. Climatic and physical-geological data required for design. 9. Engineering measures for noise control in urban construction. **III. Independent study and individual work** Independent learning helps students develop themselves autonomously and contributes to improving their professional effectiveness. Students complete independent assignments on their mobile devices, under the instructor's guidance, in either traditional or electronic format. **Recommended topics for independent study:** 1. Preparation of spatial planning solutions for residential buildings. 2. Preparation of spatial planning solutions for public buildings. 3. Preparation of spatial planning solutions for industrial buildings. 4. Preparation of climatic and physical-geological data required for design.
Student assessment	Student assessment is based on the level of mastery of the learning materials during the semester and final assessments (test results, assignments, and written and oral work). Throughout the "Urban Planning in Hot, Dry Climate Conditions" course, students are assessed on a 100-point scale. Of this total, 50 points are allocated to continuous and midterm assessment (60% of these 50 points for ongoing assessment and independent study, and 40% for midterm assessment), while 50 points are allocated to the final assessment. Students whose combined continuous and midterm assessment score is below 30 points are not admitted to the final examination. A student who scores 30 points or more in the final assessment is considered to have passed the course.
Examination requirements	Students must have fully mastered the theoretical and practical concepts related to the topics and be able to present the results of their analyses accurately. Students must complete the assignments set for independent work and the ongoing and midterm assessment components. They must also obtain the required scores in ongoing assessment, midterm assessment, independent study and the final assessment for the relevant course within the prescribed period. A student who has not submitted the ongoing assessment, midterm assessment and independent study assignments, or who has scored fewer than 30 points for these assignments and assessment components, is not admitted to the final assessment.

	A student who, without a valid reason, misses 25 percent or more of the contact hours allocated to the course is removed from the course, is not admitted to the final examination, and is considered not to have earned the corresponding credits for that course. A student who fails the final examination or scores within the "0–29.9" range in this examination is considered to have an academic debt.
Recommended literature	**Main literature:** 1. Berdiyev O.B. "Industrial Buildings". Textbook. Tashkent, 2024. 172 p. 2. Mirzayev Sh.R., Vaxitov M.M. "Architecture", Part II: "Civil Buildings". Textbook. Tashkent, 2010. 255 p. 3. Vaxitov M.M. "Architecture", Part III: "Industrial Buildings". Textbook. Tashkent, 2010. 239 p. 4. Berdiyev O.B. "Architecture of Buildings and Structures". Study guide. Tashkent, 2024. 74 p. 5. Normatova N.A., Xandamqulov Sh.B. "Architecture of Industrial and Civil Buildings". Study guide. Jizzakh, 2024. 218 p. 6. Janizaqov A.E. "Architectural Structures". Jizzakh, 2023. 277 p. **Additional literature** ShNQ 2.08.01–24. Residential Buildings. Tashkent, 2024. ShNQ 2.08.02–23. Public Buildings and Structures. Tashkent, 2023. ShNQ 2.09.02-23. Industrial and Administrative-Service Buildings and Structures of Enterprises. Design Requirements. Tashkent, 2023. ShNQ 2.07.01-23. Urban Planning for the Development and Layout of Settlement Territories. Tashkent, 2023. ShNQ 2.01.01-22. Climatic and Physical-Geological Data for Design. **Internet resources** www.gow.uz – Government Portal of the Republic of Uzbekistan. www.lex.uz – National Database of Legislation of the Republic of Uzbekistan. www.minstroy.uz – Ministry of Construction of the Republic of Uzbekistan. www.gow.uz – Government Portal of the Republic of Uzbekistan.