General Information	Subject name, code and number of credits	**ARCH 211 Architectural Construction, 6 ECTS**
	Department	**Architecture and Design Department**
	Program	Bachelors
	Academic semester	Winter semester of the 2024/2025 academic year
	Subject teacher(s	**Sevinj Hasanova**
	E-mail:	Hasanova.sevinj@khazar.org
	Telephone:	
	Lecture room/Schedule	Khazar University, Neftchilar campus
	Counseling hours	At times agreed upon with students
Prerequisites	-	
Language of instruction	English	
Type of subject (compulsory, elective)	Compulsory	
Textbooks and additional literature	**1.** "Building design and construction handbook" ,Frederick S. Merritt editor ,Jonathan T. Ricketts, editor.— 2000 **2.** "Building Structures"-From concepts to design. Second Edition Malcolm Millais. New York-2005 **3.** "Structure as architecture" A source book for architects and structural engineers. Andrew W. Charleson - 2005 /British Library **4.** "Building construction handbook" R. Chudley and R. Greeno, sixth edition-2006 **5.** "The construction of buildings" Robin Barry, seventh edition -1958 **6.** "Building Construction Illustrated" Francis D.K. Ching/ fifth edition-2014 **7.** Vitruvius : "The ten books on architecture" by Vitruvius Pollio -1914 **8.** Muradov V., Səmədov R. Birmərtəbəli sənaye binalarının memarlıq konstruksiyaları. Bakı, 2015. **9.** Muradov V.H. Mülki binaların memarlıq konstruksiyaları. Bakı, 2013. **10.** Казбек-казиев З. А. Архитектурные конструкции. М., 2006 **11.** Маклаковой Т. Г. Конструкции общественных зданий, М., 2000	
Course description	Construction is a general term meaning the art and science of forming objects, systems, or organizations.Structural elements taken into account in the design of architectural buildings according to their purpose. Single module system. By developing the structural perception of architect students during design, mastering knowledge about constructive connections and constructive elements, which are an integral element of architecture, and applying free and correct solutions in constructive requirements at the design stages.	
Course objectives	The course objectives for architectural designing vary based on the specific program and educational institution. However, here are common objectives that many architectural design courses aim to achieve: **1.** To acquire theoretical and practical knowledge on the use of modern constructions along with traditional and advanced technologies during the general design methodology of buildings and in this process to get acquainted with construction norms and rules and constructive elements of the project and their purpose, role and requirements.	

	2. Develop Projecting Skills: To cultivate the ability to think creatively, critically, and spatially, enabling students to develop design solutions for various architectural challenges. **3.** Acquire Building Technology Knowledge: To impart knowledge of construction materials, structural systems, and building technologies, enabling students to design structures that are functional, safe, and sustainable.		
Results of teaching (learning).	Studying the structural elements of a building and knowing the purpose and purpose of each architectural element is essential for every architectural student. Some of the key outcomes expected from a successful architectural design course are: **1.** To get acquainted with the theoretical and practical foundations of architectural constructions. **2.** Technology-based knowledge of construction, materials and structures. Construction technology includes various technical knowledge, methods, materials, systems and practices used in the design, construction and maintenance of buildings and other built structures. **3.** Understand the main structural systems, technologies and methods which are being used in building construction. **4.** Be familiar with the factors impacting the choice of the structural system; physical properties, cost and durability and materials characteristics responding to the sustainability issues. **5.** Ability to design architectural projects that meet both aesthetic and technical requirements.It involves the application of engineering principles, architectural practice, and advances in materials science, construction techniques, and sustainable practices to create safe, functional, efficient, and aesthetically pleasing spaces. **6.** Concepts about the architectural - constructive elements of the building. Students acquire knowledge about architectural and structural elements (foundations, walls, columns, beams and girders, trusses, arches and covering panels, etc.) to be considered during design, and become free, confident and accurate in space planning, structural integrity, material selection during design. they will be able to find solutions.		
Teaching methods	**Lecture**	A lecture is given to the students about the topic.	
	Group discussion	In order for students to better understand and remember the topics covered, discussions are held regularly.	
	Practical exercises	Practical exercises are done to improve the knowledge and skills students have learned during lectures.	
	Analysis of a practical issue	Discussions are held periodically based on question-and-answer, quick-solve small-scale tasks to understand the extent to which students have mastered the topics theoretically and at what level they can practically perform the task given by thinking like an architect.	
	Components	**Date/deadline**	**Components**
	Presentation (research)		10
	Attendance		5

Assessment	**Activity**		15
	Midterm exam		30
	Final exam		40
	Conclusion		100

Rules (Teaching policy and conduct)

Presentation

The student should search based on the topics surrounding the topic, and the topic should be analyzed in depth. A presentation should be prepared based on the conducted research. Sources cited in the analysis should be listed accordingly in the reference list. The presentation should be in the Word program, the tasks related to the project should be prepared in the AutoCad program or with hand graphics.

The assignment must be submitted by the student.

The purpose of this task is to form and develop the skills of future architects to conduct small studies, design and present architectural and construction projects taking into account the main architectural elements and basic architectural solutions to be considered during the design.

Duration:

Presentations must be made during each training session. Each student is given 10 minutes for the presentation.

Midterm exam

Test questions and graphic assignment based on the topics taught during the semester.

Exception: If the student informs the dean of the faculty in advance that he/she will not be able to participate in the exam due to valid reasons (related to family status and health) or submits any related documents (application or reference), only in this case the student can take the exam again.

Attendance

The maximum score for class attendance is 5 points. The number of points is based on: if the student attends all classes in the subject during the semester, he is given 5 points. If the total number of lessons missed during the semester for the subject exceeds the prescribed limit of 25% (illness, family situation, etc.), the student is not admitted to the exam session and a certain decision is made about it.

The procedure for completing the course

The student's knowledge is evaluated with a maximum of 100 points. an overall success rate of 60% and above is considered to complete the course. A student with a deficit can take this subject again in the next semester or the next year.

Violations of examination rules

During mid-term and final exams, students are prohibited from disrupting the course of the exam and making transfers. The exam work of the student who does not follow this rule will be canceled and the student will be excluded from the exam with a grade of 0 (zero).

Rules of conduct of the student

A student is not allowed to violate the University's internal disciplinary rules and use a mobile phone.

	Note: The topic will be held in the form of lectures and exercises. In each lesson, students will be given theoretical information about design theory, types of buildings and facilities, types of buildings, etc. - architectural construction and architectural elements in project design, and discussions will be held on the topic. - In each class, the student will be required to present research and design according to the given task, and based on this, the student will be evaluated with 1 point each time, and at the end of the semester (assignment), he will receive a full point - 15 points as an activity score. Otherwise, the student will be given 0 points for each unprepared class day.

Table (subject to change)

Week	Date	Topics of the subject	Tutorial/Assignments
1.	18.09.2004 18.09.2004	**General information about buildings and structures.** 1. Classification of buildings according to their purpose. 2. Basic requirements for buildings. 3. Structural elements of the building rules of attachment to division axes. Questions and discussions based on the lecture topic. Research assignment.	**1. "Building design and construction handbook"** Frederick S. Merritt, editor, Jonathan T. Ricketts, editor.—6th ed.2001 / **page 1.4 to 2.32** **2."Buıldıng constructıon** handbook" Sixth edition,R. Chudley and R. Greeno -2006 **page 2 to 60** **3. Lecture**
2.	25.09.2024	Review and discussion of research and obtained data based on the lecture topic and assigned task. Work on the project.	
3.	02.10.2025 02.10.2024	**The main structural elements of buildings and their purpose.** 1. Basic constructive elements 2. Carrier and protective structures. 3. To the load-carrying basket, which ensures the spatial rigidity and stability of the building. 4. Modern construction methods affecting the building and its constructive solution importance Verification of knowledge and research based on lecture and assignment material.	**1."Building Structures"** From concepts to design. Second Edition Malcolm Millais. New York-2005 **page 1 to 12** **2."Building Construction Illustrated"** Francis D.K. Ching fifth edition-2014 / **part 1÷2.** **3. Lecture**

4.	09.10.2024	Drawing floor plans taking into account the main structural elements of the building.	
5.	16.10.2024 16.10.2024	**Basics and foundations.** 1. General information about soils. 2. Basic requirements for the foundations. 3. Natural and artificial bases. 4. Types of foundations, constructions. 5. Waterproofing of foundations and basement walls. --- Verification and discussion of acquired knowledge about structural elements that ensure spatial rigidity and stability of the building, load-bearing and protective structures.	**1.“Buıldıng constructıon handbook”** Sixth edition,R. Chudley and R. Greeno -2006 **page 183 to 205** **2.“The construction of buildings”** seventh edition, Robin Barry. **page 1 to 38** **3.“Building Construction Illustrated”** Francis D.K. Ching fifth edition-2014 / **part 3.** **4. Lecture.**
6.	23.10.2024	Verification of knowledge and research about the types of foundations and their basic requirements. Preparation of the cross-section of the project, showing the constructive elements.	
7.	30.10.2024 30.10.2024	**Walls and separate supports.** 1. Classification of walls, requirements for them. 2. Masonry systems of walls. Architectural and structural elements of the building. 3. Deformation seams. Also supports. Finishing works of wall surfaces. 4. Balcony, loggia, bay windows --- Drawing the structural scheme of load-bearing walls.	**1.“The construction of buildings”** seventh edition, Robin Barry. **page 40 to 146.** **2.“Building Construction Illustrated”** Francis D.K. Ching fifth edition-2014 / **part 5.** **3. Lecture.**
8.	06.11.2024	**Midterm exam**	

9.	13.11.2024 13.11.2024	**Coverings and floors.** 1. Types of coatings and their requirements. 2. Beamed and beamless coverings,structural elements. 3. Rules for providing sound insulation in coverings. 4. Requirements for floors, their types. --- Drawing of the constructional cover plan and section of the project according to its purpose.	**1.“The construction of buildings”** seventh edition, Robin Barry. **page 156 to 189.** **2.“Building Construction Illustrated”** Francis D.K. Ching fifth edition-2014 / **part 4÷6÷7.** **3. Lecture.**
10.	20.11.2024	Checking of knowledge and presentations about the main constructional elements of architectural buildings.	
11.	27.11.2024 27.11.2024	**Moisture and thermal protection.** **Roof systems.** 1. General information about roofs, requirements for them. Types of roofs. Sloping shapes of roofs. 3. General information about attic and mansard. 5. Covers of pitched roofs, their details. 6. Structures of ventilated and non-ventilated roofs. Internal and external the organization of the survey. --- Structural drawings.	**1.“The construction of buildings”** seventh edition, Robin Barry. **page 197.** **2. “Buıldıng Constructıon Handbook”** R. Chudley and R. Greeno **page 434.**
12.	04.12.2024	Drawings of constructive elements and connections of the task project.	
13.	11.12.2024 11.12.2024	**Stairs.** 1. Classification of stairs, requirements for them. 2. Elements of stairs, their constructive solution. 3. Constructions of stairs with small and large elements. 4. Wooden stairs. Ramp, lift, escalators. --- Constructional solution of stairs.	**1. “Building Construction Illustrated”** Francis D.K. Ching fifth edition-2014 / **part 9.** **2. “Buıldıng Constructıon Handbook”** R. Chudley and R. Greeno **page 597.** **3. Lecture.**
14.	18.12.2024	Constructional solution and drawing of the assignment project based on the type and purpose of the staircase	

15.	25.12.2024 25.12.2024	**Doors and wındows.** 1. Requirements for windows. 2. Window elements of different materials. 3. Structural details of windows. 4. Types and structural details of doors. Constructive details of doors and windows.	**1.“Building Construction Illustrated”** Francis D.K. Ching fifth edition-2014 / **part7÷8.** **2.** “Buıldıng Constructıon Handbook” R. Chudley and R. Greeno **page 339 ÷ 369.** **2. Lecture.**
Final exam			

Təsdiq edir: Dos. Abbasova Ş.A._____
Memarlıq və dizayn departamentinin rəhbəri