

Identification	Subject	ARCH 301, Architectural Design 3, 8AKTS
	Department	Architecture and Design Department
	Program (Undergraduate, Graduate)	Bachelor
	Term	Fall 2027
	Instructor	Sevinj Hasanova
	Email:	hasanova.sevinj@khazar.org
	Classroom/hours	Khazar University, Neftchilar campus
Prerequisites	ARCH _ Architectural design 3	
Language	English	
Compulsory/Elective	compulsory	
Textbooks and course materials	1. “Azərbaycan Respublikasının Şəhərsalma Və Tikinti Məcəlləsi” Azərbaycan Respublikasının Qanunu. (Essential for local legal setbacks, boundary limitations, and master planning parameters in Baku). 2. Neufert, Ernst, and Neufert, Peter. “Architects’ Data”, Wiley-Blackwell. (Fundamental reference for anthropometrics, spatial clearance, structural grids, and specific public facility dimensions. <i>[Open-access full PDF available online]</i>). 3. Buxton, Pamela. “Metric Handbook”: Planning and Design Data, Routledge. (Comprehensive manual detailing vehicle tracking, emergency egress widths, structural spans, and architectural layouts for cultural institutions. <i>[Open-access full PDF available online]</i>). 4. Newhouse, Victoria. “Towards a New Museum”, Monacelli Press. (Focuses on spatial complexity, double-height volumes, and flexible gallery programming). 5. Kwok, Alison G., and Grondzik, Walter T. “The Green Studio Handbook:” Environmental Strategies for Schematic Design, Routledge. (Guides the technical integration of daylighting, acoustic isolation, and natural ventilation).	
Course description	This course focuses on the spatial synthesis of active workspaces and public presentation zones for third-year architecture students, addressing the programmatic and structural requirements of multifunctional architecture. By analyzing user demographics, contextual streetscapes, and microclimate patterns, students learn to transition from single-purpose structures to multi-layered urban interventions. The project's preparatory phase emphasizes teamwork, utilizing digital technologies, physical models, and functional site zoning. Through this process, students learn to resolve structural grids, manage vertical and horizontal circulation vectors, and integrate active building envelopes without compromising their core conceptual ideas.	

	SEMESTER PROJECT BRIEF • Project Title: Cultural Edge: Contemporary Community and Creativity Center • Context: A dense, active urban center in Baku, Azerbaijan. • Main Objective: Students are to design a medium-scale public facility that moves beyond passive reading rooms (traditional libraries) or retail logistics (shopping malls). The project requires organizing an active production environment integrated with public display areas. Key architectural challenges involve resolving a dual structural system (combining regular structural columns with long-span roof systems), designing separate circulation networks for visitors and service staff, and responding to urban site constraints. • Program Requirements: — Active Production Zone: Visual arts studios, digital fabrication labs (3D printing/modeling), coworking spaces, and acoustic music rehearsal rooms. — Exhibition and Public Performance Zone: A flexible, double-height contemporary art gallery, a 150-seat multi-purpose auditorium, and an outdoor amphitheater integrated into the landscape. — Civic and Social Zone: Public entrance foyer, multi-purpose community meeting hall, and rooftop café terrace. — Support Center: Administrative offices, specialized art storage, loading docks, and building utility rooms.
Course objectives	• Mastering the process of translating numerous complex project requirements (such as room schedules and functional needs) into a systematic and intelligent architectural plan (or scheme) without creating confusion. • Developing a clear understanding of how to integrate standard structural systems with long-span spatial systems. • Learning how to separate conflicting acoustic and functional zones within a unified building volume. • Conducting rapid, multi-variant testing using physical massing models alongside digital environmental modeling, enabling students to produce professional-grade presentation drawings, master plans, and construction-ready physical scale models.
Learning Outcomes	By the end of this course, students will be able to: • Develop a multi-level architectural plan that effectively separates active production workshops from public viewing galleries. • Create a clear structural grid that supports standard modular rooms and facilitates column-free public spaces. • Design horizontal corridors, vertical staircases, and emergency exits in strict compliance with public safety regulations. • Configure the building envelope and layout to optimize natural daylighting. • Produce professional site plans, sections, elevations, and 3D visualizations using standard software (AutoCAD, Revit, 3ds Max). Demonstrate the ability to defend a resolved architectural proposal before an academic jury using clear graphics, technical details, and a physical scale model.

Teaching methods	Case analysis		x
	Group discussion		x
	Lecture		x
	Simulation		x
Evaluation Criteria	Methods	Date/deadlines	Percentage (%)
	Research		10
	Quiz -1		5
	Quiz-2		5
	Attendance		5
	Activity		10
	Midterm exam		30
	Final exam		35
	Total		100
Class Policy	Research Phase (Project-Specific Research): Students must conduct targeted, comprehensive research specifically tailored to the "Cultural Hub: Contemporary Community and Creative Center" typology. The research must cover the following mandatory aspects: Typology and Reference Project Analysis: A detailed architectural analysis of at least two national and two international contemporary cultural/creative centers. Students must examine how the studied buildings balance public accessibility with private production zones. Spatial Anthropometry and Creative Ergonomics: Investigation of precise room dimension standards using *Neufert* (T2) and *Metric Handbook* (T3). This includes determining dimensions for visual arts studios, spatial requirements for digital fabrication laboratories, and acoustics/clear heights for music rehearsal spaces. Exhibition and Meeting Hall Dimensions: Research and design of column-free roof systems for the 150-seat hall to ensure unobstructed views of the stage. Placement of emergency exits and escape routes in compliance with safety regulations and legal standards. Circulation and Structural Plan: Preparation of circulation flow diagrams that clearly delineate operational zones separating visitors from service personnel. Contextual and Microclimate Analysis: On-site environmental mapping within a dense Baku urban hub. Students are required to map concentrations of local pedestrian traffic, vehicular access routes, shading vectors for protection against intense solar radiation, and aerodynamic layouts responsive to the local north wind (*Khazri*). Quiz 1 and Quiz 2: These are in-class tasks assigned by the instructor to be completed within a specific time during the lesson. - Quiz 1 is held before the midterm exam, and - Quiz 2 is held before the final exam. Each quiz is graded out of 5 points. Students must submit their term projects by the final examination date, after which a department-appointed committee conducts the assessment.		

Activity:

The activity is designed to monitor the progress of the project that the student must work on during the semester. Each student must come prepared to class every week during the semester and present the current state of the project to the instructor. If there is sufficient progress in the project, the activity is evaluated with 1 point for the current week. It encourages the student to constantly work on the project during the semester, and the parallel application of the learned knowledge on the project ensures the consolidation of these principles and skills.

Attendance:

The maximum score for attending classes is 5 points. The number of points is based on: if the student attends all classes of the subject during the semester, she/he is given 5 points; **1 point is deducted for every 2 classes not attended.** If the total number of lessons missed during the semester for the subject is more than 25% of the norm (illness, family situation, etc.), the student is not admitted to the exam session, and a decision is made about it.

Mid-term Exam:

Students are required to deliver a digital presentation for the mid-term jury. The project proposals must be presented as a compiled multi-page **PDF document projected via a digital projector.** The presentation must demonstrate the master plan, conceptual volume studies, initial floor layouts, and baseline building sections produced via AutoCAD, Revit, or 3ds Max. No physical printouts are required at this stage.

The submitted project must be prepared using AutoCAD, 3ds Max or Revit software.

Final exam:

For the final examination, students must deliver a full physical presentation. The completed architectural project must be professionally printed and arranged on **50x70 cm presentation boards**, accompanied by a neat, monochrome physical scale model (1:100 or 1:200). Late physical or digital submissions are subject to immediate point deductions unless backed by an official medical excuse.

Note: Late submissions will not be accepted unless officially excused.

Important: All tasks must be scanned and submitted via the Teams assignment section one day before the exam date.

Completion of 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 can take this subject again in the next semester or the next year.

Rules of conduct for students:

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

Tentative Schedule

Week	Date/Day (tentative)	Topics	Textbook/Assignments
1		<u>Introduction to Community and Creative Typologies.</u> Breaking down the programmatic requirements of the hub. Researching international open-studio layouts and multi-tier public art spaces.	T2 (Neufert): pp. 452–458 (Exhibition buildings and spatial flow). T4 (Newhouse): pp. 15–48 (Evolution of open public art spaces).
2		<u>Program Matrix and Circulation Logic.</u> Establishing relationships between noisy production areas (workshops) and quiet spaces (offices). Mapping visitor vs. artist pathways.	T3 (Metric Handbook): Chapter 22, pp. 22-1 to 22-18 (Museums, Art Galleries, and Studio layouts). <i>Assignment:</i> Programmatic bubble matrix draft.
3		<u>Site Investigation and Urban Mapping.</u> On-site mapping in Baku. Documenting adjacent street views, public transportation nodes, vehicular traffic, and solar tracking.	T1 (Urban Code): Sections on urban building line setbacks and density limits. <i>Assignment:</i> Contextual site analysis sheets.
4		<u>Baseline Concept Development.</u> Translating the site data and program into initial schematic diagrams. Orienting the art studios to capture constant northern daylight.	T2 (Neufert): pp. 26–32 (Basic anthropometrics and lighting angles). T5 (Green Studio): pp. 42–60 (Daylighting strategies for studios).
5		<u>Volumetric Massing Explorations.</u> Creating dynamic volumetric iterations. Testing 3 to 4 distinct form variants using blue foam/cardboard and quick digital software models.	T3 (Metric Handbook): Chapter 2, pp. 2-5 to 2-14 (Site constraints and building massing). <i>Assignment:</i> Volumetric alternative reviews.
6		<u>Resolving the Structural Grid.</u> Aligning repetitive load-bearing structural columns of the workshop zones with the open, column-free spaces of the main exhibition gallery.	T2 (Neufert): pp. 38–44 (Structural grid coordination and dimensions). <i>Assignment:</i> Structural grid overlay plan submission.
7		<u>Horizontal and Vertical Circulation Systems.</u> Sizing public foyers, arranging fire escape stairs, and mapping service loading bays according to building codes	T3 (Metric Handbook): Chapter 3, pp. 3-1 to 3-22 (Egress widths, stair calculations, and public building flows).

8		<u>Midterm Exam</u> Formal review of the architectural scheme. Evaluation focuses on master planning, structural viability, and zoning.	Materials to be submitted: A comprehensive presentation featuring the master plan, detailed floor plans, and key sections.
9		<u>Post-Midterm Integration and Large-Span Systems.</u> Addressing jury feedback. Designing long-span roof systems (trusses/space frames) over the 150-seat auditorium hall.	T2 (Neufert): pp. 460–468 (Theatres, auditoriums, and stage sightlines). T3 (Metric Handbook): Chapter 21 (Auditorium dimensions).
10		<u>Studio Ergonomics and Acoustic Isolation.</u> Detailed floor plan planning of workshop interiors. Isolating the noisy digital labs and music rooms from quiet administrative spaces.	T2 (Neufert): pp. 320–328 (Office layouts, workspace clear spans, and acoustic barriers). <i>Assignment:</i> Detailed interior plans at 1:50.
11		<u>Passive Environmental Strategies.</u> Designing solar shading louvers for the large south-facing glass facades. Incorporating cross-ventilation patterns through the central atrium.	T5 (Green Studio): pp. 112–145 (Passive cooling, facade louvers, and natural ventilation stacks).
12		<u>Master Plan and Landscape Optimization.</u> Finalizing outdoor circulation. Designing the civic plaza, pedestrian access lanes, emergency vehicle paths, and service parking.	T1 (Urban Code): Regulations regarding public green spaces. T3 (Metric Handbook): Chapter 4 (Vehicular parking turns).
13		<u>Technical Cross-Sections.</u> Drafting building sections to showcase the double-height gallery spaces, structural depth changes, and light monitors.	T3 (Metric Handbook): Chapter 22, pp. 22-25 (Sectional light management in gallery design). <i>Assignment:</i> Sections at 1:100
14		<u>Final Model Building & Layout Assembly.</u> Preparing the final presentation drawings. Aligning line weights, checking annotations, and building the physical scale model.	Studio workshop: Assembly of the monochrome physical prototype model (1:100/1:200 scale).

15		<u>Post-Production & Portfolio Preparation.</u> Rendering generations, final layout checks, and text formatting on presentation boards.	<i>Requirement:</i> All digital assets must be uploaded to the Teams assignment folder 24 hours before the jury.
Final Exam			

