TERM PROJECT

Title: Urban Longevity: Architecture of Ageing, Health, And Care

Location: Madrid, Spain

Population ageing, changing models of care, and the growing demand for accessible, community-based health services are reshaping the relationship between dwelling, care, and the city. Assisted senior living can no longer be understood only as institutional accommodation; it is a complex living environment in which autonomy, dignity, privacy, social interaction, wellbeing, and access to care must coexist.

This studio explores **Architecture of Ageing, Health, and Care** as both a spatial and an urban question. Students will investigate how residential, communal, therapeutic, and health-related environments can support different levels of independence while remaining connected to everyday urban life. Particular attention will be given to universal accessibility, gradients of privacy and collectivity, orientation and legibility, daylight and environmental comfort, landscape and open-space relationships, and opportunities for social interaction across generations.

The studio **is vertically differentiated by programmatic complexity.** ARCH 301 students will focus on the assisted senior living component, while ARCH 401 students will address the same residential program together with an additional primary healthcare facility. The two levels therefore share a common architectural theme and site while engaging the problem through different scales of programmatic integration.

IMPORTANT NOTE!

This studio project has been adapted from **a draft brief prepared for an architecture student competition.** Participation in the competition **is not a requirement of the studio.** Students who wish to do so may, after the completion of the semester, further develop their studio projects for participation in the competition, whose submission deadline falls after the end of the studio, under the guidance of the studio instructors. Detailed information regarding the competition, participation conditions, and submission process will be provided during the studio.

URBAN CONTEXT: MADRID NUEVO NORTE

Madrid Nuevo Norte (MNN) is one of Europe's largest urban regeneration projects, designed to transform a 5.6-kilometre-long strip of underutilized land and former railway yards into a sustainable extension of Madrid. Central to its vision is the remodelling of Chamartín Station as a major high-speed rail hub, surrounded by new residential, commercial, public, and open-space programs.

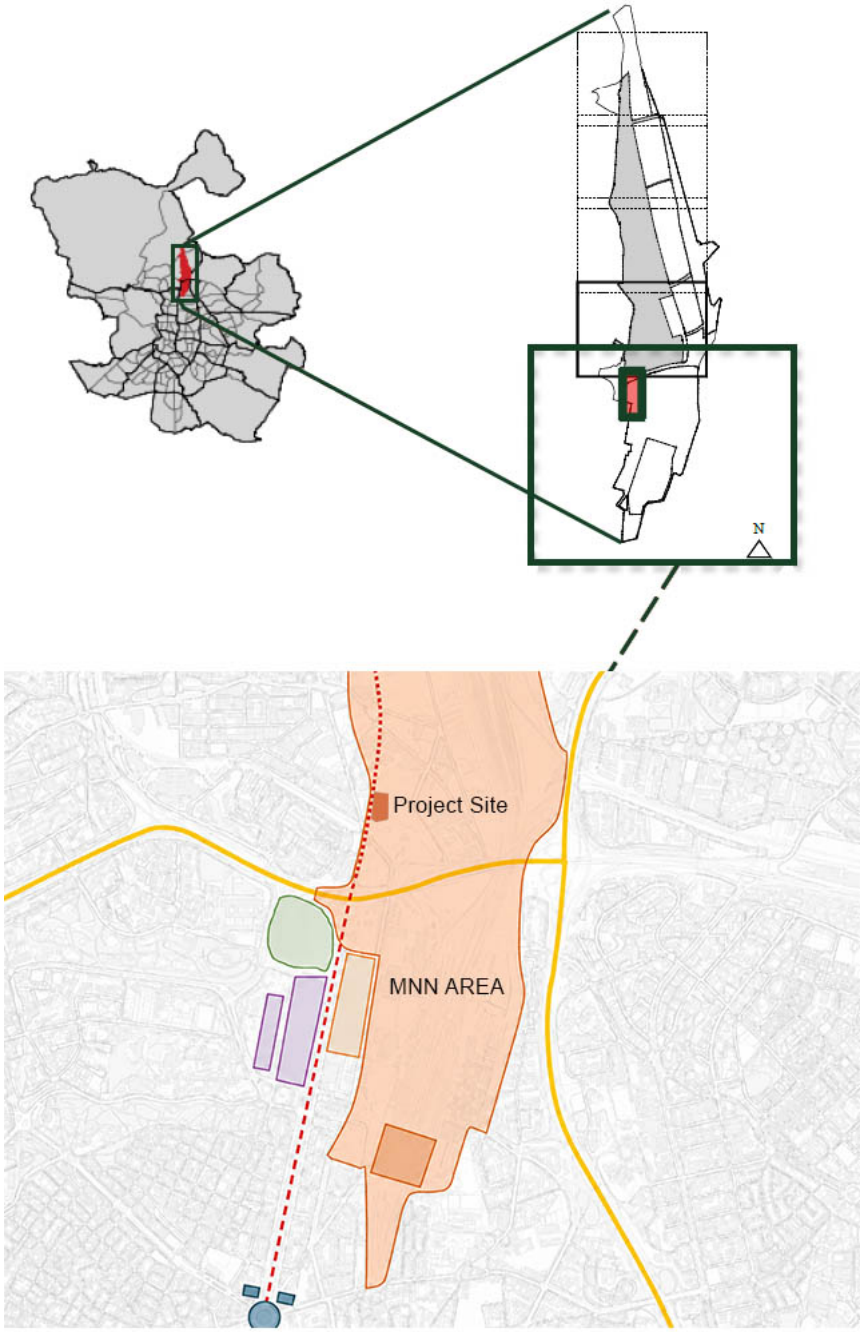


Figure 1: Madrid Nuevo Norte (https://creamadridnuevonorte.com/en/)

The project is a pioneer in sustainable urbanism, having received pre-certification for both LEED and BREEAM Gold standards. It prioritizes a "15-minute city" model where 80% of journeys are made by public transport, foot, or bicycle, effectively reconnecting northern neighbourhoods that were historically separated by railway tracks. Beyond its economic role as a new engine for the Spanish capital, MNN places a profound emphasis on nature and social well-being. The development will create over 400,000 square meters of green space, including a 14.5-hectare «Central Park» flagship built directly over the covered rail tracks and a green axis that links the city to the El Pardo regional park.

This "Smart City" pilot is committed to the UN Sustainable Development Goals (SDGs), integrating innovative water management, energy-efficient buildings that exceed nearly-zero energy standards, and inclusive public spaces designed for accessibility and safety. With a

planned 10,500 new homes (20% of which are reserved for public housing), it serves as a future-proof laboratory for healthy, resilient urban living.

THE PROJECT SITE

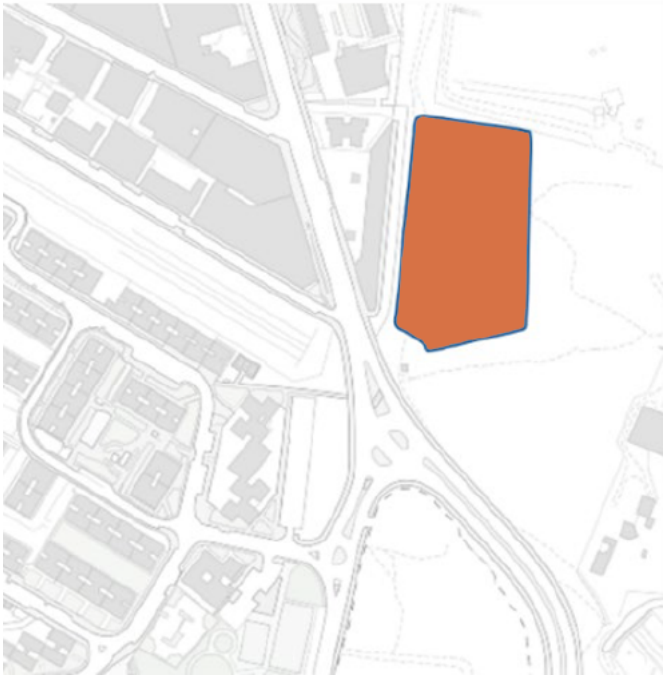


Figure 2: New construction site at the start of the Madrid Nuevo Norte development

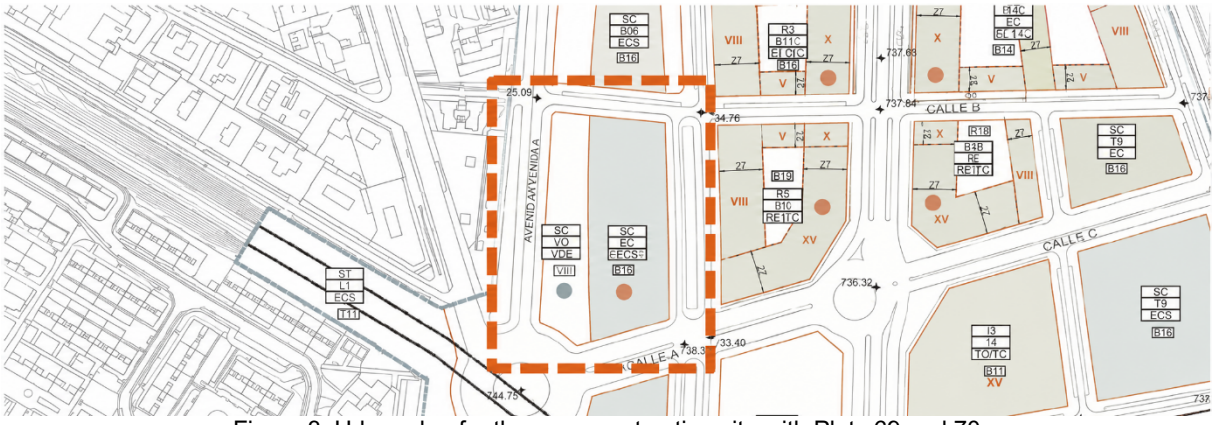


Figure 3: Urban plan for the new construction site with Plots 69 and 70

At present, the site is undeveloped and consists of a vacant plot with spontaneous vegetation. It is partially used as an informal parking area and, in some sections, as a dumping ground for construction waste. The site is bounded to the west by a high-rise residential building with ground-floor premises accommodating commercial activities and municipal services. To the south, it is bordered by a relatively busy roadway, while its northern and eastern boundaries are not currently clearly defined. The total site area is 10,532 m², comprising two plots defined within the Madrid Nuevo Norte planning framework. Block 69 (6,657 m²) is classified as Common Services (SC) and allocated for primary healthcare and assisted senior living uses. The adjoining Block 70 (3,875 m²) is designated as a non-buildable Basic Green Zone (VB) for neighbourhood- and district-level public open space.

Detailed Information
Plot 69 constitutes the main intervention area for both studio levels. The assisted senior living program is common to ARCH 301 and ARCH 401. ARCH 401 students will additionally incorporate the primary healthcare program within the same overall architectural proposal.
Students may propose a single building, a group of buildings, or a connected ensemble, provided that the architectural organization emerges from a consistent concept and establishes clear relationships among dwelling, care, shared life, circulation, landscape, and the surrounding urban context.

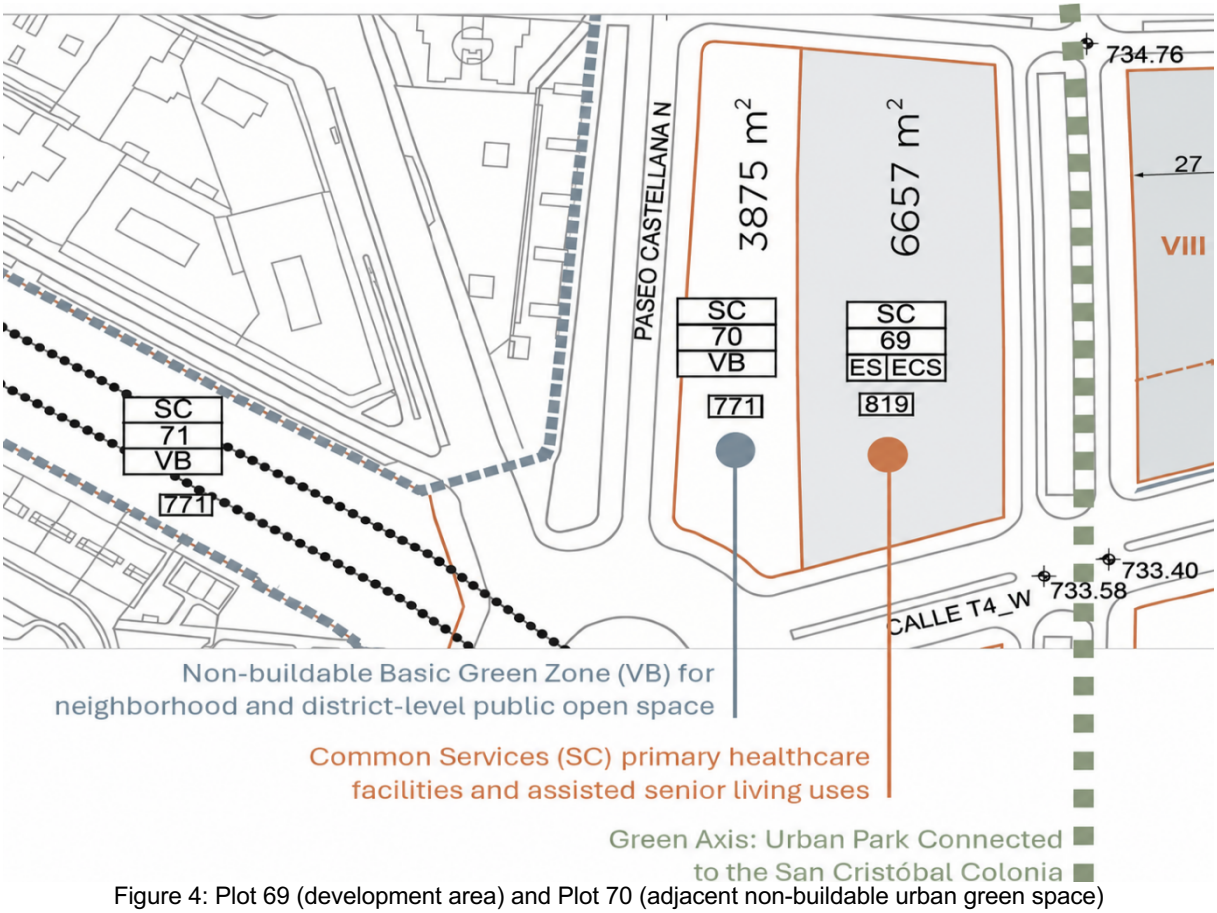


Figure 4: Plot 69 (development area) and Plot 70 (adjacent non-buildable urban green space)

The project should respond to the adjacent Plot 70 as a significant open-space condition and develop an appropriate relationship between the building, landscape, entrances, accessible routes, and outdoor communal spaces. [1]

STUDIO SCOPE BY LEVEL
ARCH 301: ASSISTED SENIOR LIVING (Residential Project + Specialized Living)
ARCH 301 students are required to design the assisted senior living component on the given site, with an approximate gross floor area of 6,500–7,000 m². The project should respond to different levels of care while creating a residential environment that supports autonomy, dignity, social interaction, accessibility, and a strong relationship with shared indoor and outdoor spaces.

[1] The separate design of the Green Connection Axis from the original competition brief is not required within the studio but students should be aware of the fact that in the scope of the competition green axis should be designed.

ARCH 401: ASSISTED SENIOR LIVING + PRIMARY HEALTHCARE (Civic Project + Healthcare)

ARCH 401 students are required to develop the same 6,500–7,000 m² assisted senior living program and, in addition, a 3,000–3,500 m² primary healthcare facility. The resulting proposal will therefore comprise approximately 9,500–10,500 m² of gross floor area. The healthcare and residential components should not be treated as two unrelated buildings; students are expected to investigate meaningful programmatic, spatial, and urban relationships while maintaining appropriate distinctions in access, privacy, circulation, servicing, and levels of publicness.

For ARCH 301, the central design question is how assisted senior living can operate as an urban residential environment rather than an isolated institution. For ARCH 401, the added healthcare component introduces a second layer of publicness and complexity, requiring a coherent dialogue between residential life, everyday care, community health services, and the surrounding city.

Both studio levels are expected to establish a considered relationship with the adjacent Plot 70 and the surrounding public realm through landscape, accessible outdoor spaces, entrances, thresholds, and pedestrian connections. The renovation of Colonia de San Cristóbal and the separate Green Connection Axis task included in the original competition brief are outside the scope of this studio. Comfort conditions related to the nearby road and railway infrastructure should nevertheless be considered as part of the architectural response.

OBJECTIVE OF THE PROJECT

The project investigates how architecture can support a continuum of ageing and healthcare while preserving the qualities of home, community, independence, and urban belonging. Proposals should integrate accessible residential environments, shared social spaces, landscape, and supportive services into a coherent architectural system.

Key design challenges and opportunities include:

- Responding to the emerging scale and character of Madrid Nuevo Norte while establishing a human-scaled environment for everyday living and care.
- Addressing climate adaptation, environmental comfort, daylight, shading, and the relationship between interior and exterior spaces.
- Creating universally accessible, inclusive, legible, and age-sensitive environments that support different levels of mobility and independence.
- Developing clear gradients between private, shared, semi-public, and public spaces while integrating the project with the existing urban fabric and transportation networks.

ARCHITECTURAL PROGRAM

ARCH 401: Primary Healthcare Program

The primary healthcare component is required **only for ARCH 401** and must have a total area of approximately **3,000–3,500 m².** The following functional components are indicative and should be developed into a coherent program by each student:

- **Clinical, Medical, and Nursing Care:** approximately 30–35 consultation rooms for family medicine, nursing care, paediatrics, specialized consultations, health prevention, vaccination, health education, and community care.
- **Emergency / Out-of-Hours Care:** a fast-track treatment area with approximately 5 consultation/treatment rooms for immediate medical response.

- **Basic Diagnostic Area:** approximately 3 specialized rooms for diagnostic tests, imaging, and sampling.
- **Administration and Patient Services:** entrance lobby, reception and admissions, patient service points, waiting areas, and administrative offices.
- **Staff, Teaching, and Training:** staff coordination, changing and support areas, meeting/training spaces, and related professional facilities.
- **Clinical Support and General Services:** storage, pharmacy and utility spaces, clean/dirty supply rooms, accessible circulation, naturally lit waiting areas, public sanitary facilities, and other service requirements.

ARCH 301 & ARCH 401: Assisted Senior Living Program

The assisted senior residential use is conceived as a **6,500–7,000 m²** living environment accommodating an indicative program of approximately **80–85 units,** structured according to different levels of care. The distribution below is intended as a framework; individual unit mixes and supporting shared spaces may be refined in response to each student's concept and user scenario.

Care Level	Text Description	Spatial Allocation	Target Unit Count (Total: 80–85)	Estimated Total Area Allocation
High-Care *(25%)*	Intensive medical support, nursing care, hospital room layout.	**25m² Medicalized Rooms** (Intensively assisted living)	~20–21 units	~500–525 m² *(pure net unit area)*
Medium-Care *(30%)*	Compact, self-contained dwellings, nursing support.	**50m² Private Apartments** (1 resident or compact 2-person)	~24–25 units	~1,200–1,250 m² *(pure net unit area)*
Low-Care *(30%)*	Fully independent units, basic shared services.	**70m² Private Apartments** (Spacious 2 residents)	~24–25 units	~1,680–1,750 m² *(pure net unit area)*
Ground Floor & Day Care *(15% + remaining)*	Shared amenities, social spaces, interaction zones. Also accounts for building circulation (corridors, lifts, technical shafts, and structural thick walls)	**Day-Care spaces (non-overnight stays), non-medical care, community hubs.**	Centralized facilities	~350–500 m² *(plus circulation and structural margins)*

Figure 5: Areas and unit numbers are approximate and may vary within the stated overall area range depending on the architectural proposal.

SITE ALIGNMENT AND PLOT REGULATIONS

When designing proposals on the assigned plot, both ARCH 301 and ARCH 401 students must respond to the mandatory urban alignment percentages indicated on the site plan. These percentages define the relationship between the building footprint, facades, and property boundaries:

• 100% Alignment (North and South Boundaries): The building's exterior facade must occupy the total linear length of these perimeters. No setbacks, open plazas, or gaps are permitted along these fronts; the architectural volume must form a continuous edge from corner to corner.

• 70% Alignment (East Boundary): The facade tracking this perimeter must maintain direct alignment with the property line for a minimum of 70% of its total length. Students are encouraged to use the remaining 30% of this boundary flexibly to create architectural setbacks, such as main entrance plazas, emergency vehicle drop-off zones, or landscaped transitions.

PROGRAM DEVELOPMENT APPROACH

The studio establishes mandatory area ranges and core functional components, but the detailed architectural program is considered part of the design process. Students are expected to research, develop, and justify the spatial organization of their proposals through:

- Research on ageing, assisted living, care models, and relevant architectural typologies.
- Development of user profiles, daily-life scenarios, care requirements, and degrees of independence.
- Precedent studies of senior living, healthcare, community-care, and mixed-use projects.
- Analysis of the provided site documentation, urban context, climate, access, mobility, landscape, and surrounding uses.
- Investigation of universal accessibility, wayfinding, privacy, social interaction, environmental comfort, and the relationship between indoor and outdoor spaces.

Program development is not a preliminary exercise separate from design. Students must demonstrate how research and programmatic decisions inform spatial organization, architectural form, circulation, open-space relationships, and the overall concept of ageing and healthcare.

METHODS OF LEARNING

Critics, project development sessions, desk critiques, juries, independent design work, readings, precedent studies, seminars, and visual expression exercises constitute the main learning methods of the studio. As a vertically arranged studio, ARCH 301 and ARCH 401 students will share the same thematic framework and will have opportunities to discuss and compare design approaches across different levels of programmatic complexity.

SEMINARS AND THEMATIC INPUTS

Two seminars are planned as part of the semester program:

Week 1: Introductory Seminar: Assoc. Prof. Dr. Ekrem Bahadır Çalışkan
Introduction to the studio framework, project theme, Madrid Nuevo Norte context, and key design questions.
Week 3: Ageing, Care and Architecture: Res. Assist. Büşra İnce
Seminar on ageing, models of care, assisted senior living, user needs, and their spatial and architectural implications.

Note: *Additional seminars, invited lectures, or thematic inputs may be planned during the semester in response to studio progress and emerging design issues.*

OUTCOMES

The following outcomes are common to ARCH 301 and ARCH 401 students. By the end of the semester, students will be able to:

- synthesize site analysis, research, user needs, program, and architectural ideas within a complex urban context.
- develop inclusive and age-sensitive environments that support accessibility, autonomy, dignity, wellbeing, and social interaction.
- translate different levels of care, privacy, collectivity, and support into coherent spatial and circulation strategies.

- integrate environmental, social, and economic sustainability considerations into architectural and open-space decisions.
- use architectural drawing, modelling, digital tools, and visual communication techniques effectively to develop and present design ideas.
- develop individual design responsibility while contributing to a shared vertical-studio learning environment.

ARCH 401 students will additionally demonstrate the ability to coordinate residential and healthcare programs, resolve their distinct circulation and access requirements, and create meaningful synergies between care, health, and urban life.

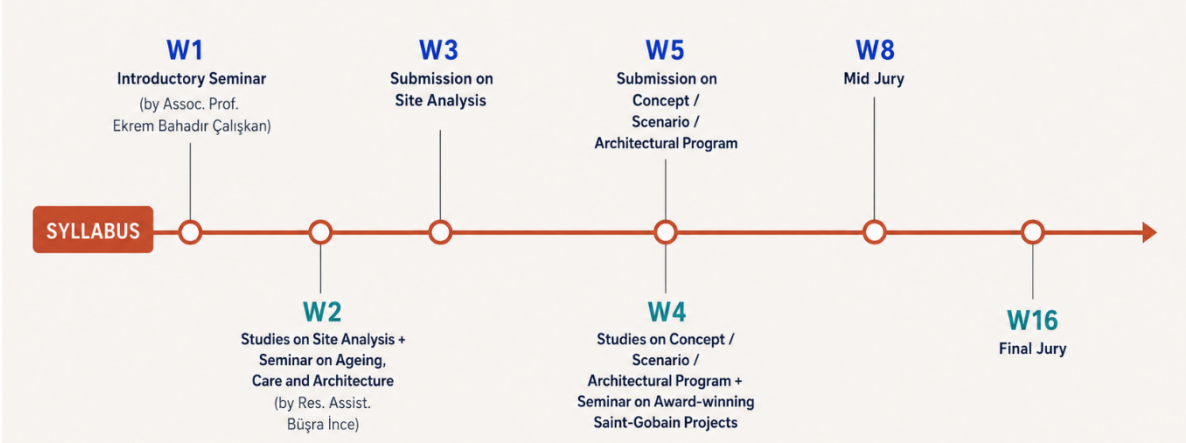
CRITERIA OF EVALUATION

The following criteria will be evaluated throughout the semester in relation to the projected learning outcomes and review phases:

- Conceptual clarity and the strength of the architectural response to the theme of care, ageing, health, and urban living.
- Programmatic clarity, functional organization, user scenarios, and the spatial translation of different levels of care.
- Quality of universal accessibility, wayfinding, circulation, privacy gradients, shared spaces, and indoor–outdoor relationships.
- Relationship with Madrid Nuevo Norte, the immediate urban context, Plot 70, landscape, public realm, access, and mobility.
- Environmental and spatial quality, including daylight, comfort, climate responsiveness, material/structural thinking, and sustainability.
- For ARCH 401, the quality of integration between assisted senior living and the primary healthcare facility, including public/private interfaces and service organization.
- Architectural representation, drawing and model quality, visual communication, and the ability to clearly present and defend the project.
- Consistency of semester-long research and design development, responsiveness to critiques, attendance, and active participation in studio sessions, discussions, seminars, and juries.

EVALUATION PHASES

- Mid-term Jury: 30%
- Assignments and Attendance: 20% (assignments and project process throughout the semester)
- Final Jury: 50%


W1
Introductory Seminar
(by Assoc. Prof.
Ekrem Bahadır Çalışkan)
W3
Submission on
Site Analysis
W5
Submission on
Concept /
Scenario /
Architectural Program
W8
Mid Jury
SYLLABUS
W2
Studies on Site Analysis +
Seminar on Ageing,
Care and Architecture
(by Res. Assist.
Büşra İnce)
W4
Studies on Concept /
Scenario /
Architectural Program +
Seminar on Award-winning
Saint-Gobain Projects
W16
Final Jury