

Istanbul Technical University – Department of Architecture

## MIM 484E – Construction Project, 24403

Course Syllabus | 2025-2026 Spring Semester

Course Day and Hour : Tuesday 13:30-17:29 Thursday 08:30-12:29
Course Room :
Course Credit : 5
Course Web Site : <a href="https://ninova.itu.edu.tr/">https://ninova.itu.edu.tr/</a>

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### Construction Project Studio Description

The objectives of the Construction Project Studio are:

- to gain the ability to find holistic, ready for construction, architectural solutions considering constructional and technological factors, legislative factors (codes, standards, etc.) and aesthetic criteria in the process of design, development, and integration of building sub-systems taking user requirements and environmental factors into account
- to gain the ability to generate and integrate building elements and their details in the context of a comprehensive design
- to gain the ability to select proper building materials and to select and arrange structural system components in the context of a comprehensive design
- to gain the ability to select or to generate passive and active environmental control systems considering energy efficiency and sustainability criteria and to integrate those systems with other building sub-systems in the context of a comprehensive design
- to gain the ability to prepare drawings and other related documents (specifications, etc.) for each design stage according to the relevant national and/or international legislation and drawing principles in the context of a comprehensive design

The content of the Construction Project Studio is:

- research and material selection and decision-making on; building construction type and environmental control systems, structural system arrangement in comprehensive building design
- preparation of projects for all design stages (preliminary, developed, construction) according to building regulations (i.e. earthquake directive, thermal insulation directive, noise control directive, fire protection directive)
- integration and coordination of building sub-systems (building elements, structural, service) with other building components
- preparing documents for each design stage according to the relevant national and/or international legislation and drawing principles.

The topic is **a single-family detached house**. All architectural design, development, modeling, and construction documentation work in this course must be completed using **Autodesk Revit** as the **sole software** platform.

## Construction Project Studio Structure and Plan

WEEK	DATE	TOPIC
01	10 February 2026	Introduction: Design Brief and Process
	12 February 2026	Preliminary design studies: Architectural program, Building Codes and Standards
02	17 February 2026	Preliminary design studies, Scale: 1/100
	19 February 2026	Preliminary design studies, Scale: 1/100
03	24 February 2026	Preliminary design studies, Scale: 1/100
	26 February 2026	Preliminary design studies, Scale: 1/100
04	<b>03 March 2026</b>	<b>PRELIMINARY DESIGN SUBMISSION</b>
	05 March 2026	Design development: Structural system, Scale: 1/50
05	10 March 2026	Design development: Structural system, Scale: 1/50
	12 March 2026	Design development: Structural system, Scale: 1/50
	<b>17 March 2026</b>	<b>TERM BREAK</b>
	<b>19 March 2026</b>	
06	24 March 2026	Design development: Sanitary system, Scale: 1/50
	26 March 2026	Design development: Sanitary system, Scale: 1/50
07	31 March 2026	Design development: Heating system, Scale: 1/50
	02 April 2026	Design development: Heating system, Scale: 1/50
08	07 April 2026	Design development: Lighting system, Scale: 1/50
	09 April 2026	Design development: Lighting system, Scale: 1/50
09	<b>14 April 2026</b>	<b>DEVELOPED DESIGN SUBMISSION</b>
	16 April 2026	Sub-system integration (Section detail), Scale: 1/20
10	21 April 2026	Sub-system integration (Section detail), Scale: 1/20
	<b>23 April 2026</b>	<b>PUBLIC HOLIDAY</b>
11	28 April 2026	Sub-system integration (Section detail), Scale: 1/20
	30 April 2026	Sub-system integration (Stair systems), Scale: 1/20
12	05 May 2026	Sub-system integration (Stair systems), Scale: 1/20
	07 May 2026	Sub-system integration (Wet space), Scale: 1/20
13	12 May 2026	Sub-system integration (Wet space), Scale: 1/20
	14 May 2026	Sub-system integration (Construction details), Scale: 1/5
14	<b>19 May 2026</b>	<b>PUBLIC HOLIDAY</b>
	21 May 2026	Preparation of construction documents (Schedules)

## Recommended Readings

- Bovill, C., 1991. Architectural design: Integration of structural and environmental systems. New York: Van Nostrand Reinhold.
- Ambrose, J., Tripeny, P., 2012. Building structures. Hoboken, N.J.: Wiley
- Hegger, M., Auch-Schwelk, V., Fuchs, M., & Rosenkranz, T., 2006. Construction materials manual. Basel: Birkhäuser
- Lechner, N., 2015. Heating, cooling, lighting: Sustainable design methods for architects. Hoboken, N.J.: Wiley
- Rich, P., Dean, Y., 1999. Principles of Element Design. Oxford: Architectural Press.
- Wienand, N., 2008. Materials, Specification and Detailing: Foundations of Building Design. Abingdon: Taylor & Francis.
- Binalarda Enerji Performansı Yönetmeliği (2008, 5 Aralık). Resmi Gazete, Sayı: 27075
- Binaların Gürültüye Karşı Korunması Hakkında Yönetmelik (2017, 31 Mayıs). Resmi Gazete, Sayı: 30082
- Binaların Yangından Korunması Hakkında Yönetmelik (2007, 19 Aralık). Resmi Gazete, Sayı: 26735
- İstanbul İmar Yönetmeliği (2018, 20 Mayıs). Resmi Gazete, Sayı: 30426
- Türkiye Bina Deprem Yönetmeliği (2018, 18 Mart). Resmi Gazete, Sayı: 30364
- TSE, 2013. TS825: Binalarda Isı Yalıtım Kuralları. Ankara: TSE.
- TMMOB, MO, 2015. Mimari Proje Çizim ve Sunuş Standartları. İstanbul: TMMOB, MO, İstanbul Büyükşehir Şubesi.
- TMMOB, MO, 2015. Ulaşılabilirlik Kılavuzu. İstanbul: TMMOB, MO, İstanbul Büyükşehir Şubesi.

## **Project Studio Assessment**

Students are required to attend at least 80% of the classes. Active participation in studio sessions, seminars, and research activities is expected throughout the semester. Students must submit all required project work, including preliminary design, developed design, and the final construction project.

All submissions will be evaluated based on architectural and construction quality, completeness and clarity of construction drawings, and the effective and correct use of Autodesk Revit. This includes the accuracy and consistency of the 3D model, appropriate use of Revit tools and families, and the generation of drawings directly from the Revit model.

Project submissions during the semester account for 40% of the final grade, and the final construction project submission accounts for 60%. The minimum mid-term success grade is 40 out of 100 points, calculated as the weighted average of work completed during the semester. Students who fail to meet this requirement are deemed not to have fulfilled the course requirements to make the final submission, and their end-of-year grade is evaluated as VF.

### Requirements of Preliminary Design Submission

The preliminary design submission aims to demonstrate the overall architectural concept, spatial organization, and initial design decisions.

- Scenario
- Architectural Program
- Site Plan & Site Section (1/200)
- Architectural Floor Plans (1/100)
- Schematic Sections & Elevations (1/100)
- Mood board illustrating design intentions, including references to images, color, textures, and overall atmosphere

### Requirements of Developed Design Submission

The developed design submission focuses on resolving architectural, structural, and building system decisions in a coordinated manner.

- Site Plan & Site Section (1/200)
- Architectural Floor Plans, Sections & Elevations (1/50)
- Structural Plans & Sections (1/50)
- Heating System Plans (1/50)
- Sanitary System Plans (1/50)
- Lighting System Plans (1/50)
- Material Descriptions

### Requirements of Final Submission

The final submission requires a fully coordinated construction project, demonstrating technical resolution and construction readiness.

- Site Plan & Site Section (1/200)
- Architectural Floor Plans, Sections & Elevations (1/50)
- Structural Plans & Sections (1/50)
- Sanitary System Plans (1/50)
- Heating System Plans (1/50)
- Lighting System Plans (1/50)
- Section Detail (Plans, Section & Elevation) (1/20)
- Wet Area Details (Plan & Sectional Views) (1/20)
- Stair Details (Plans, Section & Elevation) (1/20)
- Construction Details (1/5)
- Door & Window Schedule
- Room Schedule
- Material Descriptions
- A3 Posters supported by 3D views