

Istanbul Technical University – Department of Architecture
MIM 204E – Arch. Building Element Design, CRN22116
Course Syllabus | 2019-2020 Spring Semester

Course Day and Hour : wednesday, 09.30-12.30, 13.30-15.30
Course Room : -
Course Credit :3+2
Course Web Site :-

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Course Description

Analysis, design and integration of building elements with pre-defined design criteria and constraints: external wall systems, window and door systems, floor systems, vertical circulation systems, roof systems, partition systems. Integration of building materials and assemblies in building element design. Interaction of building design with the building element design process in the context of external envelope, intermediate floor, stair and partition systems. Integration of building element systems with each other and the structural system. Making technical drawings and preparing models of designed building elements and assemblies. Lectures and studio work.

Course Objectives

1. Understanding of building element systems through precedent analysis and integration of knowledge into design
2. Gaining the ability to design building element systems with prior criteria
3. Gaining the ability to Integrate building element systems with each other and the structural system

Course Structure and Plan

Course Plan

WEEK	DATE	TOPIC
1	12.02	introduction, building elements, methods for building element analysis
2	19.02	basics of building element design
3	26.02	roof systems analysis
4	04.03	roof systems design
5	11.03	roof systems design & integration
6	18.03	external wall systems analysis
7	25.03	external wall system design
8	01.04	mid-semester break
9	08.04	external wall system design & window syst. integration
10	15.04	floor systems analysis
11	22.04	floor systems design
12	29.04	floor systems design & integration
13	06.05	stair systems analysis
14	13.05	stair systems design
15	20.05	system integration

Recommended Readings

Blanc, A., 1996. Stairs, Steps and Ramps. Oxford: Butterworth Architecture.
Brock, L., 2005. Designing the Exterior Wall. Hoboken, N.J.: John Wiley & Sons.
Hausladen, G., Tichelmann, K., 2010. Interiors Construction Manual. Basel: Birkhäuser.
Moro, J.L., 2016. Flooring: Function, Technology, Standards, Solution Principles, Materials. München: DETAIL.
Patterson, S., Mehta, M., 2001. Roofing Design and Practice. Upper Saddle River, N.J.: Prentice Hall.
Reichel, A., Schultz, K. (eds), 2010. Open / Close: Windows, Doors, Gates, Loggias, Filters. Basel: Birkhäuser.
Rich, P., Dean, Y., 1999. Principles of Element Design. Oxford: Architectural Press.

Course Assessment

Midterm work: %40 (=analysis, presentations%20, studio design work%20)

Final work: %60 (=final submission %40, individual summative assessment %20)