Architectural design vii
2018-2019 spring
belkıs uluoğlu
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c o u r s e   s y l l a b u s

RESEARCH & DEVELOPMENT BUILDING

:: aim ::

The aim of this studio is to emphasize the conception of order and the search for wholeness in designing complex systems like architecture. It is mostly problematic for students to shape the architectural product, since those which gives shape to the building are greatly underestimated. To point out to those qualities of an architectural product, a building typology which needs great attention for the design of its spaces is chosen: an R & D building with web services. While dealing with such a typology, the content will also allow us to reflect theories/ideas about order at a grand scale, theories that define the order of the universe at large.

:: method ::

The studio will be based on four parts, following each other, and when necessary in a cyclic order:
Research, readings & seminar, precedent study, design.

We will be working in relationship with an academician from the field of physics, Prof. Dr. Emrah Kalemci, Sabancı University, Faculty of Engineering and Natural Sciences. We will be also visiting the nanotechnology lab of Sabancı University (SUNUM).

:: spaces / program ::

We are living in an information age and a new mode of information controls the medium. Just like the industrial revolution, information age and the network society have introduced change in every field of our lives. Technological, economic, business, spatial, and cultural media have been transformed with this information revolution. Again, as has been with the industrial revolution, new building types have emerged with the introduction of the information society. Data centres, call centres, clean rooms, virtual studios, and intelligent spaces, are some of these new building types. The relation of these buildings with the site and choices concerning their location have also broken our past conventions. They have raised ethical issues like environmental consciousness and sensitivity.

Research and technology (R&D) buildings are gaining more importance with intellectual labour taking control of occupations in today's information society. These spaces are expected to nourish creativity to enhance efficiency in knowledge intensive works.

Research requires teamwork as well as individual study. Individual study demands private space, while successful teamwork depends on social interaction; both need spaces, which

boost and stimulate researchers' creativity. Spaces of different character and scale are needed for researchers whose numbers are ranging from individuals to small groups, and further to large group meetings. Also, spaces, which enforce social interaction, are needed, which are expected to vary according to their intentions of being formal as well as informal. Spaces for games, sports or meditation; spaces for quiet study or interactive work; spaces for conversations and meetings on differing degrees of communication are needed in R&D buildings with varying degrees of formal and informal organizations.

Differing degrees of communication means;

a)   "shared space" for people to join the conversation and communicate knowledge and ideas; and

b)   individual study stations or office cells in relation with these shared spaces.

Executives may need privacy, yet they do not need to be at a remote place; on the contrary, they should be reached easily.

A warm and secure atmosphere should be created for most crazy ideas to be outspoken easily and at any hour. Researchers may have individual working hours; spaces need to be adaptable to day and night working hours supported by all kinds of activity and necessary auxiliary spaces.

High technology buildings consume a considerable amount of energy. It becomes an ethical issue as well as an economical issue, for architects and designers of such buildings to design energy efficient buildings, even buildings that generate energy themselves. Conservation and enhancement of nature and natural sources are thus very critical issues and need to be considered as design parameters here.

One last issue is that technological spaces need to be designed with specific standards, including cabling, service spaces, security (conservation of data from hazards as well as computer/data security), climatic criteria, and construction details (please refer to the reading list).

The designed spaces will include;
- researchers' areas,
- data center,
- computer lab,
- common spaces,
- conference room and meeting spaces,
- technical units,

mainly. The program will be developed by the student.

:: sources ::

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:: site ::

:: Quality of work ::

1.   STRENGTH AND MATURITY OF ORDERING CONCEPTS
Development of new design ideas with a future vision that entails the form of developments thought to take place in the chosen part of the city/settlement. Interpretation of the various possible relations of the Program (as cross-section of practices) + Building + Site (understood as part of a settlement texture). Development of themes like building/work space, internal/external space, closed/open space, equipment/people, and ideas/their realization. Within this context, meanings assigned to Program, Building, and Site and their revelation.

2.   LEVEL OF INTEGRITY OF THE PROPOSED IDEA WITH THE EXISTING ENVIRONMENT
a)   SITE WITHIN THE ENVIRONMENTAL CONTEXT IN GENERAL
The level of consciousness, concerning the impact of the complex structure of settlements and of that specific part of the city at large. Systematic of the scenarios developed with emphasis on the interpretation of the program. The relationship of the new proposal with the existing place. The handling of boarders/boundaries, closed/open spaces, safe/open zones relationships, character of the built environment, and other spatial themes that are considered.

b)   SITE-BUILDING/SETTLEMENT RELATIONS
The relation of the building(s) to its immediate surrounding and to the city/settlement at a larger scale, its impact on this environment as a life-form, the change or the life it has introduced to this place.

3.   SPATIAL QUALITY
a)   IN THE SETTLEMENT AS A WHOLE
Care for spatial organization principles like boundaries, continuity, orientation, meaningfulness, conceivability, scale, etc.; appropriateness of the organization of practices/events; sensitivity to relations of building/ground, open/close spaces, buildings/landscaping, hard/soft elements; use of imagery.
b)   IN INDIVIDUAL SPACES AS PART OF A WHOLE
Coherency of individual spaces with the ordering concepts of the design as a whole; convenience of spaces; organization of that specific space; use of furniture and experiment equipment; ergonomic – anthropometrical requirements; use of imagery; user capacity; flexibility.
c)   IN THE ORDERING OF SPACES
Coherency of the ordering of spaces with the general design concept; relation of spaces with each other (adjacency/separateness); hierarchy of spaces; use of spaces; organization of spaces (architectonically); use of imagery; flexibility; safety.
d)   IN THE INTEGRATION AND APPROPRIATENESS OF SPATIAL/FUNCTIONAL/CONCEPTUAL ISSUES
Appropriateness and coherency of space-event/activity-general design concept.
e)   IN THE SERVICES
Care for health conditions, fire safety, security, power sources, communications; transportation; flexibility.
4.   QUALITY OF OTHER SYSTEMS THAT MAKE UP A BUILDING
a)   STRUCTURAL QUALITY (Spatial-Structural appropriateness)
b)   CLIMATIC QUALITY
c)   LIGHTING QUALITY
d)   APPROPRIATENESS OF CHOICES MADE CONCERNING THE BUILDING ELEMENTS AND MATERIALS
e)   QUALITY OF OTHER TECHNOLOGICAL INPUTS

5.   QUALITY OF COHERENTNESS (1 & 2 & 3) AND INTEGRITY (2 & 3 & 4) OF THE SYSTEMS

:: Submission Requirements ::

At mid-term review :   March 21st, 2019
Research findings. Interpretation of order in architecture.
Analytical/mapping work & concept development (in the form of drawings, models, schemes, etc.) - 1:2000 (if necessary other scales, e.g. 1:5000) to conceive the place within a general context.
Proposals concerning basic design decisions – 1:500.
Plan schemes, sections and 3-d's – 1:500

Final week review (same for final submission): May 16th, 2019
1)   DESIGN INTENT
Ordering concepts / Basic premises – approach / Settlement decisions – environmental design characteristics / spatial organization – formal composition / Supporting systems: To be represented in written and/or graphical format.
2)   ENVIRONMENTAL ANALYSIS
1:1000 and 1:2000 – 1:5000 (depends on your choice), connections and relation with the urban/settlement texture & systems; approach to the place (site), roads; characteristic

environmental data; evaluation of its past and projections to the future (flexibility of development): To be represented in the form of sketches, photographs, models, maps; etc.

3)   SITE PLAN/SECTION

1:500

. Orientation, scale; entrances, services, areas, and related zones to be specified; elevations.

. Section taken from an area characteristic of the site and its surroundings.

4)   PLANS / SECTIONS / ELEVATIONS

1:200 (+ 1:100 – 1:50)

. Plans: voids and fills, module/axis/pattern/structure system, chimney/shafts should be clearly shown; names of spaces and when necessary materials should be specified; hierarchy of lettering should reflect the hierarchy of spaces; elevations should be shown; ground floor should include its near surrounding.

. Sections: should cut from characteristic areas that reflect the spatial structure; floor-roof system, relations with the ground, etc. should be readable; names of spaces and elevations should be specified.

. Elevations: front/rear standing elements, voids, curvilinear surfaces, etc. should be recognizable; detachment, toning, shading, and similar techniques can be used.

5)   Structural, mechanical, and other decisions – SCHEMES/DETAILS

6)   SKETCHBOOK (notes taken throughout the semester)

7)   SUPPORTING MATERIAL

. Interior and exterior perspective drawings; other 3-D representations; photographs & collages; details; day/night appearances of the building(s); etc.

. Notes, sketches chosen from your sketchbook and among your other drawings that are thought to reflect your design process or your critical points of decision can be presented in a special format.

8)   MODEL

1:500 / 1:200

Supporting models in different scales can also be submitted.

■TO BE REPRESENTED ON STANDARD SHEETS – SAME DIMENSIONS.

■MODELS SHOULD BE DURABLE, MATERIALS ON THEM SHOULD NOT STAIN.

■ALL REPRESENTATIVE MATERIAL SHOULD REFLECT THE BASIC CONCEPT/STATEMENT OR CHARACTER OF THE BUILDING.

:: Evaluation ::

1.   STRENGTH AND/OR ORIGINALITY OF THE CONCEPT (architectonically and conceptually)

2.   THE LEVEL OF CONCRETIZATION OF IDEAS IN THE FORM OF AN ARCHITECTURAL PRODUCT OR THEIR ABILITY TO RESPOND TO PROBLEMS STATED WITHIN A CONSTRUCTED REALITY OR A SCENARIO.

3.   THE LEVEL OF DEVELOPMENT/FULFILLMENT OF THE ARCHITECTURAL CONCEPT

4.   THE LEVEL OF REPRESENTATIONAL QUALITY

5.   PARTICIPATION (student's contribution to class meetings, to other students), ENTHUSIASM (felt for work)

6.   ATTENDANCE

:: Grading standards ::

A.. will be given for performance that is either a strong and/or an original concept, and which demonstrates both a mastery of the content discussed and its realization.

B.. will be given to studies that shows a good understanding of the required content, and in which minor deficiencies are present.

C.. will indicate that performance is at an acceptable professional level, although some deficiencies are evident.

D.. will be given to studies with serious deficiencies, which is passable but not professionally acceptable.

F   will mean that performance is insufficient or inadequate, and does not demonstrate an understanding of the basic content of the course.

:: Studio Policies ::

■You are expected to attend all scheduled studio sessions and to participate in group reviews, crits, and discussions.

■You are expected to work in the studio.

■Work must be presented or handed in on time.

■Unexcused failure to display work at project reviews will be grounds for failure of the course.