Syllabus

PROJECT I

FOUNDATION STUDIO
2023–2024 fall

FACULTY OF
ARCHITECTURE

İTÜ

PR 1
SECTION 5

MIM-SBP-PEM

tes111e

PROJECT I

Section 5

2023-2024 fall
Monday - Thursday 08:30-12:30

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PROJECT I

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PR 1
SECTION 5

COURSE OBJECTIVE and DESCRIPTION

TES111E Project I is a studio course with the main objective to enable first year students to recognize, explore, analyze, conceptualize, interpret, and critically approach the fundamental ways in which humans, objects, spaces and the environment are interrelated. Students are expected to gain dexterity in creative problem solving and in using the basic terminology of different design disciplines. By the end of the course, students will be able to develop design alternatives for a given brief in a natural, cultural and conceptual context, and by considering the structural, material, and constructional parameters related to the scale of the given design problem. Providing a venue to acquire skills in analysis and synthesis in design, the course also aims at informing the students on theory and practice of creativity, general design principles, basic design elements, and key issues in design, helping them to effectively employ basic verbal and graphic communicative skills to receive and convey ideas. By the end of the course, students are expected to exhibit skills to gather, assess, record, apply and comparatively evaluate information relevant for their design processes.

COURSE CONTENT

This course consists of 4 modules (1 introductory series, 2 short projects and 1 final project module). The assessment of each project is executed separately. The projects are expected to touch to the complementary themes. The students will gain skills in developing design alternatives in relation with the natural, cultural and conceptual context and by taking into consideration the structural, material, construction parameters related to the design's scale. This project provides the students to understand basic understanding of a design process as a system with user, built structure, location and environment as main components of any spatial design, represent their research and design their works by verbal, written, visual techniques.

MODULE 1: [ENCOUNTERS] | WEEKS 1-2

The first module executed as a whole section to be able to increase interactions in the section. The encounters module aims to introduce basic elements of spatial design and give opportunity to the students to experience design process as a group. This module consists of three courses:

Encounter 1: **A Design Machine**

Before studio: Students are expected to bring 5 materials, which has load-bearing features and/or act as surface (pipes, sticks, sheets etc.)

Studio work: Students are divided into 5 groups with 12 students for each. They put all materials they bring together on tables. Each student starts producing a 3d physical model that has to carry itself and not exceeding the width, length and height of 30 cm. They give the model to other student next to them when they hear the whistle in each 5 minutes. In approximately 3 hours, a model orbits 3 times from starting point.

Outputs: forming a design system, getting to know material features, model-making

Encounter 2: **Atmospheres**

Before studio: Students are expected to bring 5 materials, which has load-bearing features and/or act as surface (pipes, sticks, sheets etc.) Each group, formed with 6 students, are expected to bring one middle sized cardboard box (koli) and one light source to studio. A reading is given before studio.

Studio work: Each student designs a physical model, which should be able to transmit light and not exceeding the width, length and height of 30 cm. After designing, each student will place their models to cardboard box, Project the light source on the model and create lights & shadows. This process is recorded with mobile phones.

Outputs: getting to know the atmospheric and phenomenological features of an object / a space, getting to know material features

Encounter 3: **Spatiality of Actions**

Before studio: Each student are expected to bring materials that are able to be shaped easily and supporting materials (wire, pipe, rope, fabric, needle etc). A reading is given before studio.

Studio work: Students are divided into 10 groups with 6 people for each. In each group, there are 3 body performances being created by 2 students for each, lasting 1 minute. These performances are recorded by drawing or by mobile phones. Each 1-minute performance is divided into 8-10 sequences. Students make the model of sequences that should be showing the fluidity of sequences and the scanned space / sphere by the actions.

Outputs: getting to know anthropometry, sphere, scale, material.

MODULE 2: [MY PERSONAL SPACE THING] | WEEKS 3-5

This module aims to provoke imagination, create experience of body and senses, learn human scale and actions, be able to use design strategies, and be able to represent in precision by using related techniques.

Input: Introduction, what is personal space, what is a personal space expected to be here, definitions and precedents, design strategies, creativity.

Task:

1. Dream of a space 16 sq. cubes max, and describe it using 3 of the concepts chosen from the list below:
   heavy/light, still/moving, closed/open, thick/thin, warm/cold, hard/soft, smooth/textured, resonant/muffled, luminous/dark, opaque/transparent, colored/pale, …

2. Build your space/spatial thing by translating your ideas into physical form by using one of the cases below that make up a personal space:
   w/ wall as border – inside-outside, private-public, personal-common, ...
   w/ niche of your own – for leisure time, listening music, reading, watching film, meditating, ...
   w/ roof over your head / under cover – protection from sun, rain, feeling safe, ...
   w/ deep under – immersing / burying yourself
   w/ in sky – freeing yourself from ground
3. Use one of the strategies below to design:
   Fold, carve, iterate, combine, explode, scatter, evolve, weave, ..

Output: 100 words text + diagram of body-space relation + 1/5 scale model, material determined by the student. Material wholeness important.

Presentation: 5 minutes' presentation in class.

Evaluation criteria: Clarity of purpose, ability to imagine space and spatial elements, ability to use a number of experiential input, have knowledge of human body and scale, show evidence of experimentation and research, dexterity in production techniques and use of materials, precision of the model/output.

Reading:

B. Tschumi, "Space", Architecture and Disjunction.

S. E. Rasmussen, "Scale and Proportion." Chapter 5 in Experiencing Architecture.

S. E. Rasmussen, "Rhythm in Architecture." Chapter 6 in Experiencing Architecture.

B. Munari, Design as Art.

P. Zumthor, Atmospheres.

U. Eco, On Beauty: A History of a Western Idea.

U. Eco, ed., On Ugliness.

C. Alexander, The Nature of Order.

E. Yi-Luen Do, M. D. Gross, Thinking with Diagrams in Architectural Design.

C. N. Schulz, Genius Loci: Towards a phenomenology of architecture.

J. Hill, Immaterial Architecture.

K. Fijalkowski, "Un salon au fond d'un lac, The domestic spaces of surrealism", Surrealism and Architecture, ed. T. Mical.

S. Phillips, "Introjection and projection, Frederick Kiesler and hid dream machine", Surrealism and Architecture, ed. T. Mical.

MODULE 3: [SURFACE AS PLACE] | WEEKS 5-8

The third project module of this semester is defined as “Surface as place” which refers to a design method starting from an abstract surface generation to concrete spaces via modifying a surface and especially topography itself.
The aim of this module is to explore nature, variations and dynamics of surfaces, transformation and interaction methods of surfaces between 2D to 3D, natural to artificial, open to semi open places, improve design skills on surfaces via creating/modifying/integrating natural and artificial surfaces.
Input: Definitions and main characteristics of surfaces, surface creation and transformation methods and modules, surface-space-structure-use-user.
Tasks:

1. **Surface experiences:** Define at least one module and generate at least two alternative surfaces via geometric modification tools (multiply, cut, fill, rotate, scale, fold, mirror, stretch, array, move, etc.) which can be fit in the 25(w)x40(l)x30(h) cm volume.
2. **Surface transitions:** Select a surface and apply suitable modifications/transformation rules to generate alternative forms.
3. **From abstract to concrete:** Define material, structural features, dimensions and layers of the surface and apply modifications.
4. **Surface as place:** Create an artificial surface as if it is a 1000m2 and 1/100 scaled real land in the world. Define a scenario which requires open and semi open spaces (user, activity, location, natural characteristics of a land such as topography, rocks, water surfaces, vegetation, etc.). Transform the land (your surface) to a designed place that answers your scenario.

Output: Representation of the four stages of the “surface as place” project with drawings (sketches, photos of solid models, plan, section, elevation drawings, etc.) and solid models.
Presentation: 5 minutes presentations in class
Submission format: 2 A2 size posters and solid models
Evaluation criteria: Applying modules and transformation rules to generate alternative surfaces, use of material and structure to create alternative places. Ability to adapt/modify/transform the surface to alternative places that answers compulsory requirements/minimum standards of the spaces in the scenario. Quality of the technical representations of design. Unity/continuity of a project process from abstract surface generation to the designed places.
Readings:
Hensel, M., et al. (2006). Techniques and technologies in morphogenetic design, Wiley-Academy London.
Hensel, M. and A. Menges (2008). "Versatility and Vicissitude: An Introduction to Performance in Morpho-Ecological Design." Architectural Design 78(2): 6-11.
Sharky B G 2014 Landscape Site Grading Principles Grading with Design in Mind John Wiley Sons
Treib, M. (2008). Representing landscape architecture. London, Taylor & Francis.
Seidel, M. and D. Sturge (2009). Tensile Surface Structures. A Practical Guide to Cable and Membrane Construction : Materials, Design, Assembly and

Erection. Hoboken, GERMANY, Wilhelm Ernst & Sohn Verlag fur Architektur und Technische.
Transmaterial: A Catalog of Materials, Products and Processes that are Redefining Our Physical Environment
Untermann, R. K. (1973). "Grade easy: An introductory course in the principles and practices of grading and drainage."
Prominski, M., et al. (2012). River. Space. Design : Planning Strategies, Methods and Projects for Urban Streams. Basel/Berlin/Boston, SWITZERLAND, Walter de Gruyter GmbH.
Menges, A., et al. (2017). Fabricate: Rehinking design and construction. London, UCL press.
Juracek, J. A. and P. Pennoyer (2005). Architectural surfaces: details for artists, architects, and designers. Hong Kong, Phaidon press.
Lastra, A. (2022). Architectural Form-Finding Through Parametric Geometry, Springer.
Strom, S., et al. (2013). Site Engineering for Landscape Architects. Somerset, UNITED STATES, John Wiley & Sons, Incorporated.

MODULE 4: [X-CART – MOBILE PUBLIC REALM CATALYST] | WEEKS 9 - 14

X-Cart Project focuses on the interplay between architectural space, natural and built environment. The project consists of the design process of a single module, with a specific consideration to the 4 components of “space/movement/activity/atmosphere”, and its integration to urban life. The X-Cart is a mobile unit designed to generate activities that enrich the public realm experience.
The X-Cart is a mobile unit and it is expected to be adaptable to more than one site. The design of X-Cart and the activities it introduces should be determined with reference to environmental, social and other determinants of specific project sites selected from the study area. Instead of being an enclosed, isolated space, X-Cart embraces public life by creating closed, semi-closed, and open spaces that revolve around it. X-Cart is not just a static form and function, but it generates dynamic, adaptable, and reproducible experiences and creates a distinctive site-specific atmosphere through its spatial organization and interaction with its environment.

Input: Urban analysis, minor interventions and tactics in public space, everyday life, public realm, public space, temporary mobile architecture

Tasks:
1. Overall analysis of the study area using various analysis and representation technics including site sections. Exploring the environmental, spatial, social, cultural and other features of the site, in order to guide the site selection and design process.
2. Selection 3 project sites and identify site features that would guide the design process of the X-Cart.
3. X-Cart system and its components; determination of users, movements, activities, different levels of publicness and spatial requirements

4. X-Cart design; developing the X-Cart design representing the activities it produces, its users, its interaction with the built and the natural environment and atmosphere it creates. The representations should be site-specific for selected sites and various methods should be used such as technical drawings, solid models, sketches, collage works etc.

Output: Posters consisting of inputs used for the Project and that come from the natural and built environment, social structure, everyday life / X-Cart design representations (plan, section, elevation drawings, solid models, sketches etc.)

Presentation: 5 minutes presentations in class

Submission format: 2 A2 size posters and solid models

Evaluation criteria: Clarity of purpose, to be able to analyze and make inferences on an urban scale, understanding the multidimensionality of space, be able to analyze interactions and relationships between different scales, ability to imagine space and spatial elements, have knowledge of human body and scale, representation skills

COURSE LEARNING OUTCOMES

Students, who passed the course satisfactorily, increase their:

1) Design skills.
2) Critical thinking skills.
3) Research and analytical problem-solving skills on a given planning or design problem.
4) Graphical representation and form generating skills learned in visual communication courses.
5) Team-work skills.
6) Use of precedents

WEEKLY SCHEDULE

W	DATE	PROGRAM	PRESENTATION Keywords & Basic Principles	CRN Section CRN (S) Tutor CRN (T) Rotated Tutor (R)	Course learning outcomes
	2-Oct-23	**ORIENTATION**		Faculty	
1	5-Oct-23	Introduction **Encounters 1:** A Design Machine	**Encounters**	**(S)**	1,3,5
2	9-Oct-23	**Encounters 2:** Atmospheres		**(S)**	1,3,5
	12-Oct-23	**Encounters 3:** Spatiality of Actions		**(S)**	1,2,5,6
3	16-Oct-23	**My personal space thing**	Personal space, archetypes, precedents	(T)	1,2,3,6
	19-Oct-23	**My personal space thing**		(T)	1,2,3,6
4	23-Oct-23	**My personal space thing**		**(R)**	1,2,3,4,6
	26-Oct-23	**My personal space thing**		(T)	1,2,3,4,6

5	30-Oct-23	**Surface As place:** surface experiences **Submission of "my personal thing"**	**Surface as place**	08:30-11:30 (T) 11:30-12:30 (S)	1,3,4,6
	2-Nov-23	**Surface As place:** surface transitions		(T)	1,3,4,6
6	6-Nov-23	**Surface As place:** from abstract to concrete	**Topography and grading**	08:30-11:30 (T) 11:30-12:30 (S)	1,2,3,4
	9-Nov-23	**Surface As place:** concrete design development		(T)	1,2,3,4,6
7	13-Nov-23	**Surface As place:** concrete design development		(T)	1,2,3,4
	16-Nov-23	**Surface As place:** concrete design development		**(R)**	1,2,3,4
8	20-Nov-23	**Surface As place:** concrete design development		(T)	1,2,3,4
	23-Nov-23	**Surface As place:** concrete design development		(T)	1,2,3,4
9	27-Nov-23	**X-Cart :** Introduction, Urban analysis, Site selection **Submission of "Surface as Place"**	**Urban Analysis**	08:30-10:00 (S) 10:00-12:30 (T)	2,3,4,5,6
	30-Nov-23	**X-Cart :** Urban analysis, Site selection, / Field Trip		(T)	2,3,4,5,6
10	4-Dec-23	**X-Cart :** Urban analysis, Site selection	**Temporary/ mobile architecture**	08:30-10:00 (S) 10:00-12:30 (T)	2,3,4,5,6
	7-Dec-23	**X-Cart:** System and its components		(T)	1,2,3,4,6
11	11-Dec-23	**X-Cart:** System and its components		**(R)**	1,2,3,4,6
	14-Dec-23	**X-Cart:** Design process		(T)	1,2,3,4,6
12	18-Dec-23	**JURY and Exhibition**		(T)	1,2,3,4,6
	21-Dec-23	**X-Cart:** Design process		(T)	1,2,3,4
13	25-Dec-23	**X-Cart:** Design process		(T)	1,2,3,4
	28-Dec-23	**FINAL JURY**		(T)	1,2,3,4
14	1-Jan-24	**Holiday**			
	4-Jan-24	**X-Cart:** Design process		(S)	1,2,3,4,6

STUDIO PROCESS and SUBMISSIONS

STUDIO HOURS and USE

The course will be held **in class** during the hours announced in the weekly program [Monday/Thursday, 08.30–12.30]. Course instructors and students will meet in the allocated studio(s) unless specified otherwise by the course instructors. Each student will have a designated work area during the studio hours. General assemblies or presentations related to the course may be held in the studio using a virtual platform or in one of the conference rooms in Taşkışla.

It is of utmost importance that students keep their working areas clean while in the studio and speckless at the end of the course. **The studio space will be used by another class after ours so it is courteous to evacuate on time with all belongings and trash.**

Please know and comply with TES Studio Principles.
(https://tes.mim.itu.edu.tr/studio-principles/)

Submission date and time interval will be announced for all studies. Making submission on time is compulsory. Especially for the final submission, late submissions will not be accepted **(even few minutes delay will not allowed)!** The official final submission interface for TES courses is hand in submission of hard copies and scanned digital versions for submission via ninova.itu.edu.tr.

ATTENDANCE

It is important that students attend all studio sessions. This means being on time and actively participating in the activities held during the course hours under the direction of the studio instructors. There will be a variety of interactive formats so timeliness is essential for efficient planning and individuals' maximum benefit from peers and instructors. **A minimum of 80% attendance is mandatory for a passing grade in studio courses according to ITU Undergraduate Education Regulation Article 23 (Amended: RG-17/6/2021-31514). Please note that the designated 20% is reserved for sickness (including health reports) and other unforeseen circumstances.**

STUDIO TECHNOLOGY

Digital platforms will be used profusely during and outside of studio hours to communicate, conduct research, produce and share work. **Ninova (Section's common CRN)** will be used for announcements access to live or recorded Zoom sessions, and digital submissions. Additionally, instructors may designate other platforms for announcements and sharing work. We also plan to use supporting platforms such as Google Drive and Google Jamboard to share work within the class community and collaborate. It is highly advised that each **student has a laptop computer with the necessary equipment/hardware**. Students are advised to use a computer with access to Wi-Fi, a camera, basic word and picture editing software, and sound features.

All work is to be produced in accordance with the media, material and format requirements set forth by the instructors in the class or in the announcements made through **Ninova** or other designated platforms.

All participants are expected to adhere to the codes of ethical conduct.
(https://odek.itu.edu.tr/en/code-of-honor/ethics-in-university-life)

DISCUSSIONS and JURY ASSESSMENT

Student works are commonly put under the spotlight for discussion. These discussions serve the purpose of articulating the assessment criteria and conveying suggestions for students to develop their proposals. In these open discussions, students are expected to develop critical perspectives and proactively voice them in the course.

The students are expected to express their works in front of jury. Juries compose of course instructors and invited jury members.

EXHIBITIONS and EXCURSIONS
A selection of student projects will be exhibited both during and at the end of the semester on suitable platforms.
Excursions to study areas, seminars, and webinars are encouraged, requiring full attentiveness, critical engagement and post-reflection.

JOURNAL
Students are expected to keep a written and visual log of their studio-related processes in a journal that includes sketches, notes and evolving design ideas for their projects. Students are encouraged to use various techniques (drawings, diagrams, collages, writing etc.) in representing their ideas and observations.

ANNOUNCEMENTS

All announcements will be made on the Ninova class interface. Ninova (Section's common CRN) will be used for announcements, access to live or recorded Zoom sessions, and digital submissions. Additionally, instructors may designate other platforms for announcements and sharing work.

EVALUATION

The requirement for active participation in the course is 80%. This includes **both** physically attending classes and regularly completing the in-term assignments/projects throughout the semester. Students who do not meet these conditions will get VF and cannot make final submission.

	Activities	Quantity	Effects of Grading
ASSESSMENT CRITERIA	Projects	4	% 60
	Final Submission	1	% 40

RECOMMENDED READINGS

1. Alexander, C. (1977). A pattern language: towns, buildings, construction, Oxford university press.
2. Alexander, C. (1979). The timeless way of building, Oxford University Press New York.
3. Francis D.K. Ching, *Mimarlık ve Sanatta Yaratıcı bir Süreç: Çizim*; çev. Çelen Birkan, YEM, 2003
4. Francis D.K. Ching, 1984, Architectural Graphics, Architectural Press
5. Francis D.K. Ching, 1979, *Architecture, Form, Space & Order*
6. David A. Davis, 2000, Theodore D. Walker, *Plan Graphics*, Wiley
7. Duvshani, G., 2010, Foundation Design Studio, Berlin : E. Wasmuth
8. Şahinler,O., Kızıl,F., 2004, *Mimarlık'ta Teknik Resim*, YEM
9. John Berger, J., 1995, *Görme Biçimleri*, Metis Yayınları
10. Andrea Deplazes (ed.), 2005 *Constructing Architecture: Materials, Processes, Structures, a Handbook*, Birkhäuser
11. Robert Harbison, Thirteen Ways: Theoretical Investigations in Architecture, MIT Press, 1997

12. Shepheard, P., 1994, What is Architecture? An Essay on Landscapes, Buildings, and Machines, MIT Press, 1994
13. Zevi, B., 1990, (çev. D. Divanlıoğlu), Mimariyi Görmeyi Öğrenmek, Birsen Yayınları
14. Le Corbusier, Mimarlık Öğrencileriyle Söyleşi, YKY, 2007
15. Giritlioğlu, C., Şehirsel Mekan Öğeleri ve Tasarımı, İ.T.Ü Mimarlık Fak., İstanbul 1998
16. Demirel, E., 2017. Strüktür neden gereklidir. İstanbul, Janus yayıncılık.
17. Laseau, P., 2001, Graphic Thinking for Architects and Designers, NewYork: Van Nostrand Reinhold, (Other References)
18. Reid, G,W.,1993, From Concept to Form in Landscape Design, Van Nostrand Reinhold, NewYork
19. Moughtin, C., 1992, Urban Design: Street and Square, Butterworth-Heinmann, İngiltere
20. Vandyke, S.,1990, From Line to Design, Design Graphics Communication, 3. Edition, New York: Van Nostrand Reinhold Company
21. Joseph De C., Lee E. K.,1984, Time-Saver Standards for Site Planning, New York: Mcgraw- Hill
22. Tschumi, B. 1996., *Architecture and disjunction*. MIT press.
23. Yürekli, F., 2010, *Mimarlık Mimarlığımız*, YEM Yayınevi.
24. Karatani, K., Kohso, S., & Speaks, M., 1995., Architecture as Metaphor, Language, Number, Money.
25. Merleau-Ponty, M.,2005, Algılanan Dünya, Çev. Ömer Aygün, İstanbul: Metis
26. Pallasma, J.,2011, Tenin Gözleri, Transl. by Aziz Ufuk Kılıc, YEM yayın.
27. Calvino, I., 1990, Görünmez Kentler, çev. Işıl Saatçioğlu, Remzi Kitabevi, İstanbul
28. Borges, J. L. Ficciones, 2010, Hayaller ve Hikâyeler, Çev. Özgüven, F. Uyar, Tomris
29. Tufte, E. R., 1991, Envisioning information. Optometry & Vision Science, 68(4), 322-324.
30. Wong, W., 1993, Principles of Form and Design, John Wiley and Sons Inc.
31. Lauer, A.D., Pentak, S., 2011, Design Basics, 8th Edition, Wadsworth Publishing.
32. Samara, T., 2008, Design Evolution A Handbook of Basic Design Principles, Rockport Publishers Inc.