

DESIGN STUDIO 2: FORM AND MATERIAL

Bachelor in Architectural Studies BAS SEP-2023 DS2- AS.1.S.A

Area Architecture and Design

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Dr. José Vela Castillo (ETSAM-UPM) teaches History and Theory of Architecture and Design Studio at IE School of Architecture and Design (Segovia and Madrid, Spain).

A relevant part of his research focuses on post-war modern Spanish architecture, with particular emphasis on the architecture of the US military bases built in Spain in the 1950s and their infrastructural dimension, but also on the production of architects often neglected or marginalized by the main historical narratives.

On a broader theoretical and philosophical context, Vela Castillo works towards a redefinition of the relationship between fiction, narrative and meaning in the writing of architectural history, and its critical implications for architectural scholarship, both in the practice (of writing) and in theory. This includes from historical-spatial or even typological accounts to specifically fictional narratives, covering a wide range of geographies and time periods.

His research has been published in numerous journals in both Spanish and English, including *Informes de la Construcción*, *Nexus*, *VLC*, *Charrette*, *Architecture and Culture*, *Conditions-Independent Scandinavian Magazine for Architecture and Urbanism* or *Arquitectura*, and presented at various international architecture conferences. He also published chapters in relevant edited volumes and is the author of *De la deconstrucción, la fotografía, Mies van der Rohe y el Pabellón de Barcelona* (Abada, 2010, Portuguese translation 2016) and *Richard Neutra. Un lugar para el orden* (Universidad de Sevilla, 2003).

Recent publications

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(Co-Author: S?la Karata?)

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—(2022) PEÑA BLANCA. O TURBINA (A TALE)

In: VVAA., *Cuánto cuento. Relatos de arquitectos*. Ed. Redfundamentos, Madrid

—(2022) SHAPED FROM ABOVE: CARTOGRAPHIC DOMINATION AND U.S. MILITARY INFRASTRUCTURE IN 1950'S SPAIN

In: Joseph Heathcott, ed., *The Routledge Handbook of Infrastructure Design. Global Perspectives from Architectural History*. Routledge, London

PLS: **Like in an Antonioni movie**

Office Hours

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Schedule TBD at the beginning of the course

SUBJECT DESCRIPTION

CRITICAL INTERFACES FOR REIMAG(ING) SOCIAL INTERACTION

Design Studio 2: Form and Material is the first year/second semester design studio, the second in the Design Studio sequence of the Bachelor in Architectural Studies. It is a propaedeutic subject that keeps developing the work already done in Design Studio 1: Idea and Form. Both subjects together lay out the **FUNDAMENTALS** of Design. They should be understood as a unit, yet at the same time each of them emphasizes distinct aspects of the design process.

Design Studio 2 interrogates the processes through which architectural objects reflect, interact with and transform the existing environment, with emphasis in both the materiality of architecture and in its symbolic (meaningful) capacities. Context, both historical and present, in its wide-ranging definition (social, political, economic, environmental, cultural, physical, etc.) is considered determinant in the design of the architectural object: in fact, any possible divide between an architectural object and the broader context in which it is built will be challenged along the semester. Designing architecture, thus understood, is equal to designing the bigger material and symbolic world in which human (and non-human) habitation takes place, and even more.

It is significant to consider that Idea, Form and Material, the three words that define the first-year studio, are not disconnected concepts stored in separated drawers, but the three interconnected figures through which architecture comes into being: **conception, design and construction**. These three figures coalesce into architectural concepts (or 'ideas'), that provide the backbone of the built environment. An architectural concept is not an abstraction or a Platonic 'ideal' that dwells in a realm beyond the tangible world. Produced by architectural imagination (following K. Michael Hays conceptualization), it has both a 'form', a particular configuration and a 'materiality', a physical reality. This means that architectural concepts come into being simultaneously intermingling these three aspects. A preexisting form cannot be stuffed a posteriori with an idea or a material as much as an idea cannot be later given a particular materiality or a form.

It should be noted that architectural ideas are distinctively architectural, which means that there is a particular type of knowledge to be found in architecture, and only there. But this does not mean that architecture shouldn't establish exchanges with other disciplines in a quest for better understanding, interpreting, and changing (cf. 11th thesis on Feuerbach) the world. Different artistic media and practices (video, cinema, painting, sculpture, dance, music...), social science disciplines (such as sociology, social geography, anthropology or philosophy) and hard sciences (mathematics, physics) need to be engaged in fruitful dialogue with the discipline of architecture, which cannot be isolated in its own autistic autonomy.

Design Studio II: Form and Material (DS2) continues to develop the representational concepts and tools introduced in Design Studio 1 (DS1) Graphic Communication 1 and 2 (GC) and Digital Tools and Operations (DTO), and applies them in broader contexts. Drawings and other representation tools (models, maps, diagrams) are not only systems of re-representation, but also **systems of observation**, and they are consequently key to the whole process of learning how to see, the prerequisite for any design. **Presentation, ideation, and (especially) imagination are the three pillars of observation**. In DS2 we will carefully delineate the differences between mere representation and construction, between a simple rendering of what exists and its production as a meaningful object. The architect uses drawings and other representation tools (models, virtual reality but also writing or cinema) to explore and understand reality in order to change it, not just as a way of describing it. In that sense, representation techniques are also, or even mainly, production techniques: those that enable the architect to produce, present and communicate the embedded design ideas.

FRAMING THE COURSE

The structure of the course follows a rational logic that guides the learning process of the student at every step. Each different assignment is carefully integrated into a logical sequence, and will be introduced with theoretical lectures, analysis of precedents and case studies and hands-on assignments.

Continued work in the studio is deemed necessary to fulfill the different intermediate and final objectives of the course. The physical studio space at the IE University building is not just a given space but a space that you should build to work in and transform into your 'working place.' It is a 'protected environment', a medieval scriptorium in which you and your design engage in productive discussion, pace Antonello da Messina. This is perfectly explained in an all-too-famous quote, yet worthy of being quoted again: 'Inspiration exists, but it has to find you working.' (Pablo Picasso). It cannot be truer.

COORDINATION WITH DESIGN STUDIO 1

As previously stated, Design Studio 1: Idea and Form and Design Studio 2: Form and Material address the FUNDAMENTALS that make up the base of the entire First Year Design Studio sequence for the Bachelor in Architectural Studies.

Design Studio 1: Idea and Form firstly coordinates with Design Studio 2: Form and Material, the second semester/first year design studio. DS2 follows the extended narrative already present in DS1 by moving from the domestic realm to the broader environment of the city. Starting from similar concerns of perception and embodied space, DS2 builds on extended narratives of architecture emphasizing its materiality but also other ways of perceiving. If DS1 explores the ordinary and the everyday life, defining the minimum conditions of inhabitation and underlying the functional dimension of architecture, DS2 expands on the political dimension and its ability to convey meaning and to construct the conditions of inhabitation for a community.

In DS2 the site condition will be set at the start of the studio and will provide a specific existing context in the city in which the project will be produced. An important part of the project to be developed in DS2 will be site-analysis, surveying and mapping.

In DS2 the big question the students will explore, along with observation, is architecture as interface (its ability to create a relationship with society and culture and a coherent narrative meaningful to collective human –and non-human– life).

Hence, DS1 and DS2 explore the relationship of the architectural work with site, function, form and materiality in somewhat opposed yet complementary ways.

COORDINATION BETWEEN DS2 AND GRAPHIC COMMUNICATION (GC)

Graphic Communication 2 explores the graphic representation of complex systems of diagramming and organization that you will gather and process in DS2. It will continue to focus on observation translated into representation through technique. While DS2 will concern itself with the processes of design, Graphic Communication will help you to develop the skills needed to clearly reveal and explain that process.

COORDINATION BETWEEN DS2, DIGITAL TOOLS AND OPERATIONS AND ARCHITECTURAL GEOMETRY 1

Digital Tools Operations focus on 2D and 3D digital drawing and software, and serves also as the basis for Architectural Geometry 1. Both provide the student with the fundamentals of digital representation and descriptive geometry, specifically applied to architecture and urban design. Descriptive geometry deals with the two-dimensional representations of objects in three-dimensional reality, using both analogical and digital tools. It complements and further develops some of the basics learned in GC1 just at the beginning of first semester (linear perspective, orthographic projections, dimensioning, axonometric system). DTO and AG1 teach fundamental digital tools to allow architectural imagination to fully develop spatial intuitions, and in these capacities its teachings will be applied in DS2 to produce substantial designs. These tools provide the student with the vocabulary and the grammar of the language. DS2 will teach how to use them in complex narratives, in the telling of meaningful stories.

LEARNING OBJECTIVES

2.1 BASIC AND GENERAL COMPETENCIES

Per Ministerial Decree EDU/2075/2010, 29 of July; and the official accreditation request for the Bachelor in Architectural Studies, July 2015; see BOCYL, 14 March 2018: p. 10477-10481)

- **CB1:** Students have demonstrated knowledge and an understanding of a given area of study, building upon the foundation of secondary education, supported by advanced texts, and including aspects that engage the latest state of the art in their area of study.
- **CB2:** Students know how to apply their knowledge professionally to their work or vocation and possess the competencies that are often demonstrated through elaboration and defense of arguments and the resolution of problems within their area of study.
- **CB3:** Students can gather and interpret relevant facts (usually within their area of study) in order to make judgments that include reflection on relevant social, scientific, and ethical topics.
- **CB4:** Students can transmit information, ideas, problems, and solutions to both specialized and non-specialized audiences.
- **CB5:** Students have developed the necessary learning skills to continue their studies with a high degree of autonomy.
- **CG2:** Knowledge of the role of the fine arts as a factor that can influence the quality of architectural creation.
- **CG7:** An understanding of the relationship between people and buildings, and between buildings and their contexts, as well as the need to relate buildings and adjacent spaces to needs and to the human scale.

2.2 SPECIFIC COMPETENCIES

Per Ministerial Decree EDU/2075/2010, 29 of July; and the official accreditation request for the Bachelor in Architectural Studies, July 2015; see BOCYL, 14 March 2018: p. 10477-10481)

PREPARATORY MODULE (CE1-11) (W: Workshop Format)

- **CE1:** Ability to apply graphic knowledge to the representation of spaces and objects.
- **CE3:** Adequate knowledge of systems of spatial representation, as applied to architecture and urbanism.
- **CE4:** Adequate knowledge of the analysis and theory of form and the laws of visual perception, as applied to architecture and urbanism.
- **CE5:** Adequate knowledge of metric and projective geometry, as applied to architecture and urbanism.
- **CE6:** Adequate knowledge of graphic surveying techniques in all phases, from sketching to scientific restitution, as applied to architecture and urbanism.
- **CE10:** Adequate knowledge of the fundamentals of topography, hypsometry, cartography and site grading, as applied to architecture and urbanism.

2.3 TRANSVERSE COMPETENCIES OF THE UNIVERSITY

- **CT2:** Ability to exercise professional behavior in accordance with constitutional principles and ethical values of the respective profession.
- **CT3:** Manage unforeseen situations with the capacity to respond to changes within organizations.
- **CT4:** Use disciplinary knowledge to analyze and evaluate current situations.
- **CT5:** Integrate oneself into interdisciplinary and multicultural teams to achieve common goals in a context of diversity.
- **CT6:** Work actively in an international context.

2.4. SPECIFIC OBJECTIVES AND SKILLS

This course will emphasize the fundamentals of architecture and of architecture design. The main goal is to train the students in the different processes and scales of designing architecture, starting from the individual body and reaching the common space of the city. In that sense the students will develop the necessary graphic tools to represent the existing world in all its complexity and scales (CE1, CE3, CE5), understanding its material, formal and social construction (CE4). An important part of the semester will be devoted to the practice of mapping techniques, including data collecting and graphical restitution of existing buildings and sites in the city (CE6, CE 10), in order to better understand the reality to which their designs will dialogue with and respond to.

The experience of physical spaces will be complemented with the experience of the social spaces that build the city at large, in the belief that architecture cannot be detached from the moment and place in which it is both lived and built (CG7).

A key element in the semester will be the development of critical capacities, both through examples (not only coming from architecture, CG2) and through the close analysis of their own designs. If designing is taking decisions, an advanced critical awareness is one of the most necessary tools of the designer in order to both provide solid reasons to test the decisions already taken and to come across new ones that can provide better answers to the design questions posed.

In this course we will emphasize:

1. Ability to apply graphic knowledge to the representation of spaces and objects.
2. Adequate knowledge of systems of spatial representation, as applied to architecture and urbanism.
3. Adequate knowledge of formal theory and analysis, and the laws of visual perception, as applied to architecture and urbanism.
4. Knowledge of the role of the fine arts as a factor that can influence the quality of architectural creation.
5. An understanding of the relationship between people and buildings, and between buildings and their contexts, as well as the need to relate buildings and adjacent spaces to needs and to the human scale.

TEACHING METHODOLOGY

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

3.1. Teaching methodology

The methodological system used in DS2 pursues to make students aware of the fact that the knowledge they are going to acquire in this subject is, broadly stated, the consequence of the personal experience and critical self-reflection that they can accumulate on the topics that are proposed in the program. The subject is organized in a series of design proposals (some of them individual, others collective) of additive and increasing complexity, accompanied by theoretical lectures and constant critical discussion with the professors and their peers. The material will be learned through the development of the design proposals, the content of which will be properly explained and reviewed in class through a series of critical sessions.

The different assignments will be introduced by the professors through a detailed description of the limits of the intervention and the basic objectives of each particular assignment. On a weekly basis, the different cumulative parts of the designs will be explained, analyzed and discussed together. The evolution of the different parts of the work will be critically addressed in each subsequent brief.

Lectures will provide the students with the necessary information to critically develop their design analysis and proposals, and will also help to build a solid architectural culture through the introduction of selected examples. Therefore, the lectures will help to explain, through theory and architectural examples, the basics of the different briefs and the main competencies developed in the curriculum. The lectures will also prepare students for historical research and for research into the material, technical, social, environmental and economic foundations of architecture.

Group work will help students learn to work collaboratively from the start, from the first 1:1 architectural interface they will build to site analysis and programmatic definition.

In **pin-ups or critical sessions**, students present their exercises to the rest of the class, using drawings, models, PowerPoint presentations, or a simple written text. This is followed by a public, open discussion and feedback from the professors and peers. Relevant aspects of each presentation will be highlighted in order to guide the students towards the different potential lines of development and research of the design projects.

Finally, the progress of the design is constantly monitored through desk crits, where the work is discussed with the professor sitting at the desk as the student develops it one-on-one.

By the end of the semester, students are expected to have a high degree of control over the design process and be able to work independently.

The various materials (assignments, lectures, presentations, readings, etc.) will be made available to the students in digital format through the online campus facilities. The communication with the students will be done equally through Blackboard Ultra and the institutional platform Google Drive. The course folder will serve as a complete repository of the work produced throughout the semester.

The nature of this subject is primarily practical, which requires students to work consistently in class and outside of class. Individual work in the studio space is required during class hours that are not devoted to lectures or other collective learning activities.

The design projects will be assessed during in-class sessions and the mid-term and final reviews. External jurors will be invited to the reviews.

All the sessions will be live on-site, where students and professors coincide in time and place.

Class electronic requirements:

The use of a laptop in class is necessary to adequately follow the classes. However, the use of Wi-Fi in class for any activities not related to this course will hinder the grade in participation. Absolutely no messaging or texting or videocalling is allowed during the class.

3.2. MAIN AIMS FOR DS2:

The objective of Design Studio 2 will be to develop a small architectural interface within an existing building. In order to do so, the acquisition and strengthening of a series of practical and disciplinary tools will be fundamental for the development of the course.

In terms of the **practical tools** this course will emphasize the following:

- **ORTHOGRAPHIC PROJECTIONS:** Plans and sections as basic design tools. They are not only ways of 'representing' architecture, but mainly ways of analyzing and designing. In that sense, they are the core of any architectural design education.
- **DIAGRAMMING:** Understanding the basic spatial and material operations that bring the elements of architecture together and determine its form and relationship to other architectures from within.
- **MODEL MAKING:** Understanding of the tridimensional production and manipulation of space through a hands-on process of constant movement between orthographic drawings and physical models.
- **SITE ANALYSIS:** Understanding the intimate connections between architecture and site or place. There is no architecture in abstract mathematical or geometric space, but always in real

lived space, which is concrete and sited. It includes the basics of environmental conditions. In terms of the **disciplinary tools** this course will emphasize the following:

- **PERCEPTION:** Understanding perception as embodied perception, the body as the center of a network of relations that are always situated, and that it is not static but in constant movement in time. Perception is not a passive activity, and leads to the following:
- **OBSERVATION:** Observation as the active engagement of perceptual capacities to understand the existing spatial reality in which architecture exists (and which it actually builds). Together with 1. Perception forms the core of the first semester in architectural studies.
- **PROGRAMMING:** Understanding 'programs' or 'uses' as actions or verbs and not as given nouns. Activities and not 'spaces'. Understanding of the basic concepts of domestic space and the different domesticities involved, beyond the traditional and normalized ones.

These tools and others not included in this semester are repeated over the course of the five years of architectural education at IE School of Architecture and Design as a method to strengthen the processes involved in architecture.

ENGAGEMENT

IE School of Architecture and Design is invested in offering an education that is deeply engaged in the conditions of our present and our future. Each semester will bring new topics of engagement with reality, offering a wide perspective of the potential of the architect to produce positive change and to be more aware of the challenges of our time.

Design Studio 2 proposes that students engage with the contemporary problems of our society by understanding and redefining the assumed concepts of 'normalized social interactions'. By critically questioning social norms, they will propose new and hopefully more just forms of human and human-non human interactions.

REMEMBER: The studio is not a passive classroom, but the primary space for working and developing your ideas, both alone and with your classmates (and professors).

3.2 ECTS subjects: (150 hours are required = 6ECTS x 25h)

The subject of DS1 consists of 6 ECTS units, equivalent to 60 IE sessions (or 90 hours of f2f classes). There will usually be 3 sessions per day of class on Fridays and exceptionally 2 sessions on Tuesdays during the semester.

3.3. Training Activities

- **AF1:** Workshops and Laboratories, 30 hours
- **AF2:** Lectures, 18 hours
- **AF3:** Discussions and Seminars, 10 hours
- **AF5:** Projects presentations, 2 hours
- **AF6:** Case studies, 2 hours
- **AF9:** Individual study, 18 hours
- **AF10:** Submission preparation, 70 hours

ECTS subjects: (150 hours are required = 6ECTS x 25h)

Learning Activity	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	10.0 %	15.0 hours
Discussions	10.0 %	15.0 hours
Exercises in class, Asynchronous sessions, Field Work	50.0 %	75.0 hours

Group work	20.0 %	30.0 hours
Individual studying	10.0 %	15.0 hours
TOTAL	100.0 %	150.0 hours

PROGRAM

4.1. GENERAL CONTENTS

Design Studio 2: Form and Material continues and deepens the architectural explorations begun in Design Studio 1: Idea and Form.

If in DS1 the course evolved from the intimate interaction of body and tool in a domestic environment to the production of an architectural aggregate that housed a broader program, in DS2 the starting point is architecture itself understood as an interface for social relations. Thus, the individual body-object connection with the domestic space is now extended to a broader, multi-person social interaction mediated by an architectural environment.

And if in DS1 the programmatic frame was the domestic space, and the temporal frame oscillated between memory and desire, in DS2 the program expands to include the community and the city at large, with a focus on the present and the existing.

Finally, if the domestic focuses mainly on private spaces (privately used or owned), the social space of the community moves to the communal and the concept of the commons (public).

Unlike DS1, where the student first constructed the site of intervention as an abstract yet emotional narrative, DS2 jumps into the existing objective complexity of the city, where the students will be confronted with the analysis of an existing building and its environment, which will later be transformed by an architectural intervention.

Thus, the entire year, understood as a continuum, moves almost seamlessly from the intimate small scale and the personal memory to the social (and socially constructed) environment, larger scales (a medium-sized architectural intervention in an existing building and the city), and the social dynamics of the collective. In summary, the student will transition through all architectural scales, in each of which the bidirectional yet complex interaction of the individual/collective and the single architectural piece/urban setting will be intimated.

Typically, the semester is developed as a continuum, with the midterm serving as the fulcrum and measure of a work-in-progress, rather than a divide between two separate parts. Materiality and phenomenological perception function as constant links through the semester.

The conceptual framework for the studio semester is, accordingly, twofold:

On the one hand, it focuses on exploring the experiential as well as the social and symbolic modes of production of architecture, engaging both the individual and the collective, the private and the communal.

On the other hand, it is an in-depth exploration of the physical and material conditions of architecture, from the basic assemblage of construction elements to the intervention in an existing building to complex environmental systems.

This comprehensive framework also allows students to thoroughly explore the poetic dimension of architecture and its ability to signify and create meanings that can provide an experiential and symbolic engagement with places and cities.

4.2. THE FRAME: CRITICAL INTERFACES FOR REIMAGI(N)ING SOCIAL INTERACTION

A general narrative will be presented at the beginning of the semester to set the theoretical and practical framework for the architectural explorations of the real that students will undertake.

This narrative will be approached from different scales and perspectives in order to fully grasp the bigger picture of architectural engagement. The various projects assigned to students will involve working processes that are at times individually and at times collectively authored. The assignments will help students progress in exploring the range of scales at which architecture operates, from a volume that can house the size of the human body to a series of structures that can shelter a community.

Site visits will allow students to fully explore the social and architectural reality in which they will be immersed.

For this semester, the main processes of **acquiring, preparing and sharing food** in the places where these three activities more often come together, **food markets**, will provide the conceptual framework for the architectural exploration. Important emphasis will be made in the complex network of nondescript boundaries, transitional spaces, liminal zones where the distinctions individual/common, public/private operate at the spatial and temporal level.

Food markets are places where multiple activities and multiple sensory inputs come together in an architectural space. Markets are structures specifically designed to accommodate different processes, at different scales, involving many different actors. They are transversal to any human society (at least since around 5000 BC). And they are the right places to gain access to the different ingredients and experiences that will be explored as part of the architectural design. Moreover, their social and urban presence and function make them the core of social and communal interactions that spill over into the larger areas and neighborhoods in which they are located. Around any food market multiple communities gather, coming from different social and economical backgrounds, and in many cases even from very diverse geographical and cultural ones.

There are food markets all over the world and in all times since the Neolithic Revolution; they come in different forms, sizes and shapes, from street markets to traditional market buildings to supermarkets, and they can be temporary or permanent. They are always deeply embedded in the daily life of the community they serve, allowing for a myriad of different interactions throughout the twenty-four hours of the day and the seven days of the week.

They host many different activities beyond the standard selling, buying, and usually eating of food, and they extend their influence into their surroundings in an almost organic way. They follow the rhythms of time, the daily, weekly, and yearly routines according to the calendar and the seasons.

They are perfect places for social exchange, not only for the basic act of buying and selling, but also for a range of activities that include the small talk of neighbors or the tourist gaze. They are, of course, ideal places to explore the full range of human senses: smell, taste, hearing, touch, sight, proprioception (movement of the body in space). All of them are individually and collectively called upon in a market environment. In a market, many spaces are defined only by the senses (e.g. the "space" of a cheese shop is defined by how far the smell reaches). The body is constantly activated by the senses, individually and in interaction with other bodies; the social space of the market is in constant motion. Promises, memories and desires trigger our perceptual imagination. Local and cultural particularities merge with global customs; economic and political issues intertwine with environmental and ecological problems that challenge our survival as a society and almost all of our ethical and moral beliefs, from how humans treat non-humans to the complex chains of food production and distribution (which must be critically understood and radically transformed if humans are to survive on Earth). In food markets, material configurations, events, and symbolic constructions work together to construct complex architectural spaces that go far beyond the physical framework of the building to intertwine with the neighborhood and city in which they are located, ultimately questioning human society as a whole.

4.3. CORE EXERCISES

Part A. The architectural object as social interface (groups)

Our senses are the first interface that allows us to engage with the world around us as you perfectly know from ds1. We humans are well adapted to creating tools that allow us to amplify or augment these senses. As a result, our understanding of the world is transformed by the tools that allow us to engage with it.

At a bigger scale, there are other built interfaces that allow humans to interact with other humans (and non-humans) in different social situations (architectural interfaces). They help, encourage, prohibit, or facilitate certain kinds of interactions to the detriment of others. These interfaces are architectural machines, and it is possible to study (and change) certain aspects of social behavior through their design.

The question we want to ask is: How can architecture help us interface with the world by amplifying (or dampening) certain social interactions? And what are the consequences for our understanding of space and architecture? How can we critically engage with the spatial mechanisms they produce?

To this end, students will work in groups of three to produce one of these complex architectural interfaces. In the environment of a given food market (detailed information will be provided), they will first discover and identify the presence of the sensory qualities of food and the occurrence of the socially defined processes of acquiring, preparing and sharing. And then, they will design a 1:1 scale interface (in relation to the size of a human body) perfectly functioning architectural machine, whose performance will be tested in real space and recorded using video techniques (apart from the obvious orthographic set and models).

Part B. Mapping the site: the agency of architecture (individual)

Part A helps to define the interactions to work with and their spatial fluidity in the market environment. Part B will focus on a detailed site analysis using mapping techniques. The assignment begins with a working site visit.

The goal is to understand a built piece of urban tissue from many different angles, using different representational techniques to identify potential pocket sites and discrete areas of latency within the city, diachronically and synchronically. The resulting material will serve as the basis for the rest of the semester's work.

The site visit is instrumental in understanding what is there. The students will identify and draw potential areas where the three main processes of the course, acquiring, preparing and sharing interact with each other within the market area and the market itself. They will map the moving boundaries and areas of indistinction between the spaces and actions of the different agents involved in the three processes.

The starting point for the mapping project will be the "site" (i.e., the interface or abstract architectural machine) built in the first assignment, both in its literal sense (the architectural design produced) and in its metaphorical sense (the enhanced understanding of the relationships between individuals, space, and activities in society). They will serve as the "goggles" from which the reality of the site will be read, analyzed, and represented. The social interface will now perform its task as a machine that directs the search that will result in a comprehensive (yet biased) site analysis.

Analytical diagrams that trace the plan of the city will serve to project a multi-layered, simultaneously historical and meta-historical history of the city, opening the context to the past and the future. Photo-joiner techniques will allow for a detailed and personal haptic survey of the given area. Spatial/visual urban transects will address the narrative experience of architecture in bodily movement. Drawings, photographs, and maps will support anthropological layers and personal impressions of the site, blending the phenomenological, the abstract-mathematical, and the anthropological into a comprehensive, complex, and instrumental output.

Environmental analysis is also emphasized in mapping. The students would carefully record the key physical data of the site (local climatic conditions, solar orientation, wind prevalence, light-shadow patterns in urban environments, sound and noise distribution, pollution, etc.) in order to later apply them to the final design.

Part C. Developing the architectural machine (individual)

The previous site analysis and architectural interface will now be disassembled and reassembled to construct a larger spatial structure in the existing building. Focusing on one of the already defined processes (**acquiring, preparing, sharing**) and on one particular area within the market, the interface machine, until now on the scale of a portable device, will grow into a complex architectural construction. The reduced (in terms of the number of people) interaction developed so far will now expand its programmatic core and ambition, as well as the number of users and interactions between them. At the scale of an architectural 'folie', it will test different material and functional configurations, creating a series of iterative fully functional models.

The main processes of interaction that the machine enacts will now be mapped in order to understand its functioning spatial possibilities and their unfolding capacities. The actions, the movements, the in-between spaces generated by the different actors/users, the zones of indistinction between 'what is mine and what is yours,' individual and shared, private and public mediated by the material structure, the social and cultural backgrounds, and the processes themselves, some of them then singular, others repetitive, others iterative (repetition + variation), changing in time or remaining stable, all this will create a complex network of movements, actors and new material configurations to be mapped in detail.

The architectural interfaces, perceived and conceptualized from different angles and expanded options, will help to critically understand the possibilities embedded in the material structures, addressing liminal and transitional spatial configurations.

After this detailed mapping of movements and interactions, the resulting mobile interstitial spaces will be rearranged into a new architectural aggregate or 'folie', which will give material form and shape to the processes of interaction and negotiation programmatically defined. And do not forget: 'folie' means 'folly, madness, craziness, extravaganza...'

Part D. Site Re-Programming: Community Spaces for Expanded Social Interaction (individual)

After identifying a specific site within the broader area of the mapped building and city, the final project will deal with its reprogramming according to the previously developed instrumental process research, designed artifacts and spatial strategies. The specific site finding will be limited according to a set of rules in response to interior/exterior, private/public and individual/collective spatial relations simultaneously. As already mentioned, in-between, transitional, and negotiated spaces, as well as fluid areas of indistinction between multiple entities are the main goal.

The students will develop a detailed program according to the site of their choice within the existing building, the potentials identified through mapping that respond to the spatio-social investigations, and the programmatic framework of a "Community Kitchen" proposed by the professors. The program will be structured to identify spatial relationships between new and existing uses and to explore differently produced types of events/spaces that address the flimsy boundaries between the many different actors. It must be developed as a multi-level program that clearly engages the vertical dimension of architecture.

Site specific, this last project will fully develop the environmental, functional, regulatory, material and constructive responses of the built architecture, closing the arc that began with the individual approach at the beginning of the year with a full engagement with the collective function of architecture.

SESSIONS 1 - 3 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Overall introduction to Design Studio 2. Architecture as interface. Architecture as process. Architecture as mapping.

Understanding the site. Identifying key social and spatial interactions, individual and communal. Fixed and fluid boundaries. Social and spatial transitions. The three processes: **to acquire, to prepare, to share.**

Presentation of the site (food market).

Presentation of the first assignment.

Hands-on work in the first assignment begins.

SESSIONS 4 - 6 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Architectural, social, and site interactions. First iteration of the interface architectural machine.

Pin-up critique and in-class development.

SESSIONS 7 - 9 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Second iteration of the interface architectural machine. Sequential performance.

Models and drawings.

Pin-up critique and in-class development.

SESSIONS 10 - 12 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Final iteration of the interface architectural machine due.

Models and drawings.

Real performance of the machines. Video documentation.

Pin-up critique.

Second assignment presentation.

Theoretical introduction: Mapping and advanced mapping techniques.

Preliminary work for mapping assignment starts.

SESSIONS 13 - 15 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Participatory Site-Visit. Sketching and active mapping (to be taken at the end of visit).

The visit will help to understand the relationship between people and buildings at the scale of the neighborhood, and between buildings and their community contexts, as well as the need to relate buildings and adjacent spaces to programs and to the human and non-human scales. Emphasis in identifying the spatial occurrence of the three course processes (acquiring, preparing, sharing) and their material incarnations will be done.

SESSIONS 16 - 18 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Spatial representation applied to architecture.

Negotiated boundaries and narrative drawings (1). Development the site in-between spatialities.

In-class development and desk-crits.

SESSIONS 19 - 21 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Negotiated boundaries and narrative drawings (2). The programmatic areas.

Third assignment presentation.

In-class development and desk-crits.

SESSIONS 22 - 24 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Negotiated boundaries and narrative drawings (3). The in-between space expanded.

Processes, program and material. 1st iteration.

Orthographic set and models.

In-class development and desk-crits.

SESSIONS 25 - 27 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Negotiated boundaries and narrative drawings (4). The in-between space constructed.

Processes, program and material. 2nd iteration.

Orthographic set and models.

Pin-up. In-class development.

SESSIONS 28 - 29 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Processes, program and material. Final iteration.

Orthographic set and models.

In-class development and desk-crits.

Midterm preparation.

SESSIONS 30 - 32 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

MIDREVIEW

SESSIONS 33 - 35 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Fourth (last) assignment presentation.

Assemblage of materials: Tectonics of architecture.

Hands-on work in the first assignment begins.

SESSIONS 36 - 38 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Identifying the site and program. First draft.

In-class development and desk-crits.

SESSIONS 39 - 41 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Introduction to Climate and the City (general Climate zones + specific conditions of the given place: temperatures, pattern of rains, prevalent winds, sun hours etc. that affect cities and its architecture and how). Case Study.

Comprehensive drawings and photo-documentation of the site. Orientation and environmental diagrams.

Shared pin-up of the ongoing mapping and programmatic procedures.

SESSIONS 42 - 44 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Definition of site and program. Intervention in existing buildings. Context: communities and individuals.

1st iteration of design. Orthographic projections. Models.

In-class development and desk-crit.

SESSIONS 45 - 47 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Overview of structural systems.

2nd iteration of design. Orthographic projections. Models.

In-class development and desk-crits.

SESSIONS 48 - 50 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Introduction to Building Code.
3rd iteration of design. Orthographic projections. Materiality.
In-class development and desk-crits.

SESSIONS 51 - 52 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

4th iteration of design. Orthographic projections. Materiality.
In-class development and desk-crits.

SESSIONS 53 - 55 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

5th iteration of design. Exploded axonometric (showing construction systems), draft. Orthographic projections (final draft). Relevant views (collage, photocollage, render, sketches...).

In-class development and desk-crits.

SESSIONS 56 - 57 (LIVE IN-PERSON)

Sustainability Topics:

- Environment

Final axonometric and orthographic drawings. Views.
Preparation of Final submission.
In-class development and desk-crits.

SESSIONS 58 - 60 (LIVE IN-PERSON)

FINAL REVIEW

EVALUATION CRITERIA

5.1. GENERAL DESIGN STUDIO SEQUENCE OBSERVATIONS

Student progress is monitored via regular individual and group tutorials, pin-ups as well as through other activities proposed during the course. There will be two critiques (midterm and final reviews) corresponding to the 50% and 100% progress over the semester project proposed, in which students are expected to produce a coherent visual and verbal presentation of their design proposal following the minimum requirements listed by the professors and to communicate and debate their work with others.

Grading will be based on the completion of periodic assignments, attendance and punctuality, student-instructor dialogue, participation in class-wide critiques and discussion, and the individual development of the design process. All these factors are equally important in the final evaluation and neither will take precedence over the others.

5.2 MIDTERM EVALUATION

Midterm evaluation refers to the grade obtained after the first half of the semester, and not merely to the midterm review. After the Midterm Review, students will be evaluated based on three items:

- **PROCESS**, which will encompass work habits, production, development, and ability to evaluate

and incorporate the received criticism. Continuous and sustained development of the work is expected during the considered period. Short-term efforts will be downgraded.

- **CONCEPT/DESIGN**, which evaluates the architectural ideas embedded in the design and the adequacy of the design produced to those ideas. The two, concept and design, should go hand in hand.
- **CRAFT**, which evaluates the material and graphic quality of the work presented (models, drawings, etc.). It is especially important for first-year students to demonstrate their ability to develop accurate orthographic projections of their designs.

FAILURE TO PRESENT, VERBALLY AS WELL AS GRAPHICALLY, OR AN ABSENCE DURING THE MIDTERM REVIEW WILL TRANSLATE INTO THE DEDUCTION OF 2 (TWO) POINTS FROM THE FINAL GRADE.

After the Midterm Review, students will receive a non-binding grade as an indication of her or his progress at that point of the semester. This grade will be based on the following scale:

- **Check**: the student has reached the goals set up for the first part of the semester.
- **Check +**: the student has surpassed the goals set up for the first part of the semester.
- **Check -**: the student has not met the minimum goals set up for the first part of the semester.

This grade will not determine the final grade and should be taken as an indication of progress.

5.3 FINAL EVALUATION

For the Final Review the students will receive a grade on a scale from 0 to 10, with a minimum passing grade of 5.0.

After the Final Review, and considering the totality of the work developed over the course of the semester, students will be evaluated on three areas:

- **PROCESS**, which will encompass work habits, production, development, and ability to evaluate and incorporate the received criticism. Continuous and sustained development of the work is expected during the considered period. Short-term efforts will be downgraded.
- **CONCEPT/DESIGN**, which evaluates the architectural ideas embedded in the design and the adequacy of the design produced to those ideas. The two, concept and design, should go hand in hand.
- **CRAFT**, which evaluates the material and graphic quality of the work presented (models, drawings, etc.). It is especially important for first-year students to demonstrate their ability to develop accurate orthographic projections of their designs.

FAILURE TO PARTICIPATE IN THE FINAL REVIEW, IN TERMS OF DELIVERABLES OR IN TERMS OF ATTENDANCE, WILL AUTOMATICALLY TRANSLATE INTO FAILING THE WHOLE COURSE WITH A GRADE NOT HIGHER THAN 4,5.

For the final review, the students would be requested to present or submit the material in a given time and location. No late submissions will be accepted.

5.4 ATTENDANCE

The minimum attendance allowed will be that established in the IE University regulations: those students that do not attend at least 80% of all sessions will fail the course with a 0,0 and will proceed directly to third enrollment.

The behavior of the students during the sessions must comply with IE University's standards on education, respect for peers and professors, and commitment to joint learning. Promptness is a requirement, and the students are expected to be in class (physical or virtual) on time. More than 10 minutes delay will translate to an absence in the first session, and more than an hour in all the sessions of this day class.

Students that have failed the subject in first enrollment pass to the second enrollment, except those who do not meet the minimum attendance percentage. The maximum grade a student may achieve in second enrollment is 8.

5.5 GRADING STANDARDS

According to IE University policies, the students will be evaluated in a scale from 1 to 10. The standards of each grade are described below:

- 1, 2, 3, 4: Not passing level of work -- significant areas needing improvement and/or not enough deliverables to properly represent the project strategy.
- 5: Passing level of work with a few areas needing critical improvement, and/or the need for developing minimum required deliverables to properly represent the project strategy.
- 6: Fair level of work with some areas needing critical improvement.
- 7: Consistent, solid work during the whole semester. Solid grade, student producing what is expected at that year level.
- 8: Advanced level of work for what can be expected at that year level.
- 9: Exceptional level of work, within the standards of a slightly higher year-level of studio. Starting on a 9, the student could (according to the necessary consensus among professors) receive a MH as a recognition of an exceptional work.
- 10: Beyond exceptional level of work, within the standards of a much higher level of studio.

5.6. DSI EVALUATION CRITERIA AND WEIGHTING

This course will involve the following evaluation methods:

- SE1: Attendance and Active Participation
- SE2: Submission and/or Presentation of Group Projects
- SE3: Submission and/or Presentation of Individual Projects

The final projects will be evaluated, with a grade number (from 0 to 10) according to the following criteria:

criteria	percentage	Learning Objectives	Comments
PROCESS Development of the proposed exercise	30 %		Analytical and synthetic abilities/ Development of the design idea
CONCEPT Ideas, narratives, and argumentation	30 %		Proposal's rigorousness, coherence, and character/ Appropriated and well-structured presentation
CRAFT/DESIGN Formal presentation of the developed ideas	30 %		Ability to graphically express the ideas /Ability to formally materialize ideas according the required representation systems
Class Participation	10 %		Active participation in class /Research beyond the class

RE-SIT / RE-TAKE POLICY

Students that have failed the subject in first enrollment during the ordinary period will pass to the second enrollment. As explained, those who do not meet the minimum attendance percentage according to IE University policies during the ordinary period will not have the option of attending the second enrollment and will automatically pass to the third enrollment.

For those attending the second extraordinary exam period, the exam will have two parts:

- Part I will consist of the presentation of the project originally produced during the ordinary period with a further development of those areas that were underdeveloped for the final review. The professor in charge of the course will explain to the student the areas to improve in order to obtain a passing grade.
- Part II will consist of a design exercise to be presented and administered the day of the exam. The students will have to pass Part I to be able to pass to Part II. Those students that do not pass Part I will go to third enrollment.

Part I and Part II should obtain a passing grade for the student to be able to pass the second enrollment. The minimum grade to pass the second enrollment is 5.0.

The maximum grade that a student may achieve in second enrollment is an 8

The second enrollment conditions and requirements will be explained by the professors in a specific document handed out to the students that fail the class. The students attending the second enrollment have the right of requesting office hours to follow the progress made in the improvement of their projects. The second enrollment will take place in person and at the campus where the student enrolled during the ordinary period.

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