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EXERCISE 3 PROGRAM: ARCHITECTURE, LANGUAGE, AND TECTONICS

OBJECTIVES

Exercise 3 aims to consolidate project practice on a smaller scale, focusing on built space. It develops, in the learning process: mastery of techniques that support the act of design; architectural culture as the foundation of the creative act; ergonomics as a tool for spatial sizing; the site as a reference point for architecture; and introduces the issue of materiality.

The student is expected to develop the following skills:

- Creative capacity in responding to the project problems, in relation to the consolidated urban context.
- Deepening the disciplinary culture as support for the project, developing awareness of architectural language.
- Understanding space, its dimensions, the ergonomic relationship with human body movement, and its dynamic perception as a reference for its transformation through design.
- Ability to question the multifunctionality, sharing, and temporary use of public and architectural space in contemporary society.
- Ability to develop and materialize an architectural idea through design, exploring the relationships between form, language, and materiality.
- Exploration of materiality issues in architectural space, addressing its plastic expression and introducing the problem of tectonics.
- Mastery of project representation techniques (manual methods), integrating two-dimensional representations and exploring three-dimensional spatial thinking, ensuring spatial, dimensional, and expressive control in sketching, precise drawing, and model-making.

PROGRAM / Syllabus

The exercise focuses on the urban plot adjacent to the site of Exercise 2, with a footprint area of 182 m² (approximately 12.5 m x 14.5 m) and a 9-meter difference in level between Rua de O Século, at the lower elevation, and Alto do Longo, at the upper elevation.

The implementation of the program establishes a dialogue between the two architectural project phases of the semester of distinct nature – public space and built form. A deliberately controlled plot size is chosen, in order to allow for a deeper investigation of the design responses at closer scales and for their development at the level of materiality, with an emphasis on stereotomic expression. The exercise also seeks to explore verticality as a tool for fostering students' competences in three-dimensional spatial reasoning.

The cultural framing of the architectural choices to be developed is also encouraged. The exercise is carried out individually and is organised into two stages:

Phase 1 – Development of the building project (Art Gallery and Bar), at a 1:100 scale, complying with the given program and materialising a spatial strategy articulated with the urban analysis carried out.

Phase 2 – Development of the building project at a scale of 1:50, focusing on tectonics and materiality.

The implementation of the exercise presupposes a dialogue between the group work (urban analysis and public space project at the upper level) and the individual development of the building project. The programmatic guidelines of Exercise 2 are maintained, materialising in the building the possibilities of connection between the upper and lower levels, as part of the gallery's exhibition route.

The building project must comply with the following program:

» Art Gallery:

- Multifunctionality: includes exhibition spaces capable of accommodating artworks of different characteristics over time.
- Central space: includes an area capable of accommodating pieces up to 5 m in height (e.g., tapestries).
- Dark room: includes an enclosed space for video and sound projection, with a minimum volume of 50 m³.
- Support: includes a reception, office, and restroom facilities.
- Exhibition route: accessible from both Rua de O Século and Alto do Longo, it ensures the connection between levels internally.

» Bar:

- Reference area of 120 m².
- Service spaces: includes a small kitchen, counter, and restroom facilities.
- Autonomous program, with access/visual connection to the art gallery, and the possibility of independent access from the street.

SITE OF THE EXERCISE

The exercise is carried out on a private plot located between Rua de O Século and Alto do Longo, in the Parish of Misericórdia, covering the area outlined in the following figure:



Figure 1: delimitation of the intervention area for Exercise 2 (marked in red), on a 2025 aerial photograph, Google Maps.

DEVELOPMENT OF THE EXERCISE

The exercise unfolds in 3 phases:

Phase 1 – Development of the public space project at a scale of 1:200 and in detail, realizing the strategy defined by the group.

- Classes 10 to 14:
 - » Individual exploratory essay of alternative public space project solutions at a scale of 1:200, conducted in the classroom and through independent work between classes, on A1 sketch sheets, numbered and dated. This should include research sketches, intermediate synthesis of plans and sections, detailed sketches, working models, a crossover of design techniques (sketch on photo, sketch on model photo, among others), with aesthetic intent.
 - » Research of architectural references to support the project, exploring the language that inspires the student and addressing aspects of materiality to be integrated into the working process.
 - » Realization of the individual public space project solution, including its systematization in two-dimensional drawings at a scale of 1:200, articulated with each other, and in a working model integrated into the contextual model.
- The development of this task includes a rotation of instructors in Class 12 (October 16), aiming to diversify the discussion of the work and stimulate the critical thinking of the students.
- Elements to be submitted: A1 sketch panels, following the provided layout, at scales 1:200 and for detailing; model of the final version, integrated into the contextual model (keeping the building as a generic volume for now).

Phase 2 – Development of the building project (House of Architecture) at scales 1:200 and 1:100, adhering to the specified program and realizing the strategy defined by the group.

- Classes 15 to 23:
 - » Individual exploratory essay of alternative design solutions for the House of Architecture building at scales 1:200 and 1:100, conducted in the classroom and through independent work between classes, on A1 sketch sheets, numbered and dated. This should include research sketches, intermediate synthesis of plans and sections, detailed sketches, working models, and a crossover of design techniques (sketch on photo, sketch on model photo, among others).
 - » Research of architectural references to support the realization of materiality in the project, associated with the exploration of architectural language: photographs, drawings.
 - » Realization of the individual building project solution, including its systematization in two-dimensional drawings at scales 1:200 and 1:100, articulated with each other, and in a working model integrated into the contextual model.
- The development of this task includes a rotation of instructors in Class 20 (November 13), aiming to diversify the discussion of the work and stimulate the critical thinking of the students.
- Elements to be submitted: A1 sketch panels, following the provided layout, at scales 1:200 and 1:100; model of the final version, integrated into the contextual model (integrated with the public space project developed in Phase 1).

Phase 3 – Development of a section of the building project at a scale of 1:50, focusing on tectonics and materiality.

- Classes 24 to 28: Realization of a specific part of the project at a scale of 1:50, refining the dimensions of spaces and architectural elements and addressing materiality issues, with a plastic intent, at the scale of 1:50.
- Elements to be submitted: A1 sketch panels, following the provided layout, at a scale of 1:50.

EXERCISE CALENDAR

- Exercise launch: Class 11, October 14.
- Submission of phase 1 – Individual proposal: Class 15, October 28, during the class.
- Submission of phase 2 – Individual proposal: Class 24, November 27, during the class.
- Status update of the phase 3 – Individual proposal: Class 28, December 11, during the class.
- Submission of phase 3 – Individual proposal: in the exam.

EVALUATION OF THE EXERCISE

The exercise is based on a continuous evaluation process and regular interaction between the teaching team and the work produced by students, both in class and during independent work. Evaluation criteria are considered throughout all classes, not just at the final submission.

The evaluation criteria for the exercise focus on the objectives outlined above and the quality of individual participation, attendance, and punctuality of the students:

- C1- Understanding of the site and appropriateness of ideas: 10%.
- C2- Potential spatial quality: 20%.
- C3- Support of disciplinary culture: 10%.
- C4- Space, material, and tectonics: 10%.
- C5- Mastery of representation techniques (manual methods): 20%.
- C6- Development and quality of the design process: 20%.
- C7- Quality of participation in classes, attendance, and punctuality: 10%.

BIBLIOGRAPHY OF THE EXERCISE

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Lisbon, September 4th, 2024