

Professors:

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EXERCISE 1: THE CELL AND THE MATERIALITY

[Meditation retreat, in the context of nature]

PHASE 1: The cell and the materiality



OBJECTIVES

The goal of Phase 1 is to build an interpretation of case studies related to individual living spaces (the cell) and the contribution of materials used throughout the semester, such as brick and concrete, in defining spaces, atmospheres, and rhythms due to their technological and plastic characteristics.

The student is expected to develop the following skills:

- Develop the ability to interpret and synthesize significant case studies to construct a consistent cultural and disciplinary reference relevant to the theme of the architecture project.
- Consolidate the ability to represent across various scales and media [rigorous drawing; freehand drawing; model making].
- Develop organizational skills and teamwork abilities.

PROGRAM

Phase 1 begins with the selection of two types of case studies, one for the “cell” and one for “material.” The work process is carried out in groups of three students. Half of the groups address case studies of ‘cell’, while the other half focus on case studies of ‘matter’, with a cross-reading carried out during class presentations.

Case study: the cell

The case study for the cell will be interpreted from a guide with analytical and representational criteria that allow the creation of a “wall atlas.” This will form a reference framework for the project, composed of comparable references. This wall atlas serves as a reference tool for project practice for all second-year students. The interpretation of the case study for the cell follows the themes below, each addressed through a summary image that occupies one page:

- 01_cover.
- 02_photograph.
- 03_plan + section.
- 04_aggregation and distribution or 04_relationship with the site.
- 05_the place of the body.
- 06_the place of the mind
- 07_the place of water.
- 08_atmosphere.

Case Study: Brick and Concrete

The interpretation of the brick and concrete case study will be done through a plan and section at scale 1:50, focusing on:

- Understanding the constructive logic with which the materials from the semester are used in the project under study, including structural logic.
- Reading the constructive and constitutive metrics.
- How the materials studied define architectural language, atmospheres, light, temperatures, and other essential dimensions of space.

ELEMENTS TO DELIVER

Vertical book: the cell

The submission will consist of 8 pages (20 x 20 cm), with centred images, a minimum margin of 3.5 cm, black and white images, and captions, following the provided layout. These elements should be placed on the wall in a vertical format, coordinated with other students' cases in the class:

- 01_cover: identification of the case study (name of the case; location; author; date + group and class identification).
- 02_photograph: black and white photograph, centred on the page, reference print size: 12 x 12 cm.
- 03_plan + section: collection and, if necessary, redrawing of essential orthogonal representation elements for the case study understanding.
- 04_aggregation and distribution or 04_relationship with the site: diagram* in black and white + 1 chosen colour, scale to be defined with the instructor.
- 05_the place of the body: diagram* in black and white + 1 chosen colour, scale to be defined with the instructor.
- 06_the place of the mind: diagram* in black and white + 1 chosen colour, scale to be defined with the instructor.
- 07_the place of water: diagram* in black and white + 1 chosen colour, scale to be defined with the instructor.
- 08_atmosphere: freehand drawing representing the interior atmosphere of the cell; it should characterize the light/shadow, textures, material, and temperature of the space.

- * Diagrams should be based on precise drawings, such as a plan, perspective section, or exploded axonometric view, supporting the graphical interpretation of the theme.

Synthesis: the material

The submission will consist of a plan and section at scale 1:50, articulated, drawn on an A1 sketch sheet.

CASE STUDIES

Case studies: the cell

- *Alcova da Enfermaria*, Convento de Mafra, Portugal, 1744, unknown author.
- *House in Walden*, USA, 1845-47, Henry David Thoreau.
- *Cell of Pavilion "Oito," Hospital Miguel Bombarda*, Portugal, 1892 (?), José Maria Nepomuceno.
- *Dom-Kommuna Housing Cell*, USSR, 1928-30, Mikhail Barshch + Vyacheslav Vladimirov.
- *Alcova/Dorkaa Housing*, New Qurna, Egypt, 1945, Hassan Fathy.
- *La Tourette Monastery Cell*, 1957, France, Le Corbusier.
- *Xenia Hotel Room (Mykonos)*, Greece, 1960, Aris Konstantinidis.
- *Vila Alcina Alcova*, Portugal, 1974, Sérgio Fernandez.
- *Nakagin Capsule Tower*, Japão, 1979. Kisho Kurokawa.
- *Abitacolo*, Italy, 1979. Bruno Munari.
- *Diogene*, Germany, 2013. Renzo Piano.
- *Like a Rolling Stone Inhabitable Core*, 2016, UK. DOGMA.
- *Casa do Castanheiro*, 2020, Portugal. João Mendes Ribeiro.
- *La Terencia*. Argentina, 2021. IR Arquitectura.
- *Aralar Cottage*, 2023, Spain. BABELSTUDIO.
- *The Box*, Sweden, 1941. Ralph Erkine
- *Norwegian Wild Reindeer Centre Pavilion*, Norway, 2011. Snøhetta.
- *Convento da Cartuxa Cell*, Évora.
- *Roosenberg Abbey Cell*, Belgium, 1975, Hans Van Der Laan.
- *Paimio Sanatorium Cell*, Finland, 1933, Alvar Aalto.
- *Ronchamp Monastery Cell*, France, 2012, Renzo Piano.
- *Praia do Canal Hotel Room*, Aljezur Portugal, 2024, João Favila.

Case studies: brick and concrete

- Ahmedabad House, Studio Mumbai (<https://iwan.com/portfolio/ahmedabad-house-studio-mumbai/>)
- Årsta church, Stockholm, Johan Celsing (https://www.celsing.se/project_display.php?id=88&pid=683)
- *Bait Ur Rouf Jame Mosque*, Dhaka, 2018, Marinata Bassum Architects (<https://marinatabassumarchitects.com/bait-ur-rouf-jame-mosque/>)
- Casa 1101, H Arquitectes (<https://www.harquitectes.com/en/proyectos/house-1101/>)
- Casa Caccia, Cadenazzo, Mario Botta

PROJECT IV

- Casa Gallo, Manuel Táinha (<https://project-arq.blogspot.com/2013/08/casa-gallo-s-pedro-de-moel.html>)
- Casa Unifamiliare, Montagnola, Mario Botta (<https://www.botta.ch/it/SPAZIO%20DELL-ABITARE?idx=4>)
- Centre for Environmental Planning & Technology Ahmedabad, Balkrishna Doshi (<https://divisare.com/projects/381255-balkrishna-doshi-vs-edmund-sumner-laurian-ghinitoiu-centre-for-environmental-planning-technology>)
- Chiesa del Beato Odorico, Mario Botta (<https://www.botta.ch/it/SPAZIO%20DEL%20SACRO?idx=10>)
- Friendship Centre Gaibandha, Kashef Chowdhury (<https://divisare.com/projects/317980-kashef-chowdhury-urbana-eric-chenal-rajesh-vora-friendship-centre-gaibandha>)
- Indian Institute of Management, Louis Kahn (<https://archeyes.com/indian-institute-of-management-louis-kahn/>)
- Maisons Jaoul, Le Corbusier (<https://www.fondationlecorbusier.fr/oeuvre-architecture/realisations-les-maisons-jaoul-neuilly-sur-seine-france-1951-1955/>)
- Phillips Exeter Academy Library, Louis Kahn (<https://archeyes.com/phillips-exeter-academy-library-louis-kahn/>)
- St. Hallvard church, Oslo, Lund & Slaatto (<https://archello.com/project/st-hallvard-church-and-monastery>)

Additional case studies (for reference):

Brick:

- St. Marks Church, Suécia, 1963, Sigurd Lewerentz (<https://divisare.com/projects/417931-sigurd-lewerentz-andy-liffner-st-marks-church>)
- Centre cívic Cristalleries Planell 1015, Espanha, 2016, H Arquitectes (<https://www.harquitectes.com/en/proyectos/cristalleries-planell-1015/>)
- Palau Solità i Plegamans, Barcelona, 2014, H Arquitectes (<https://www.harquitectes.com/proyectos/casa-1219/>)
- St. Peter Church, Suécia, 1966, Sigurd Lewerentz (<https://archeyes.com/the-church-of-st-peter-in-klippan-by-sigurd-lewerentz/>)

Concrete

- Van Wassenhove House, 1974, Juliaan Lampens (<https://hiddenarchitecture.net/villa-van-wassenhove/>)
- Church of the Light, 1989, Tadao Ando (<https://www.archdaily.com/101260/ad-classics-church-of-the-light-tadao-ando>)
- Bruder Klaus Field Chapel, 2007, Peter Zumthor (<https://www.archdaily.com/106352/bruder-klaus-field-chapel-peter-zumthor>)
- Houses in the Azores, São Miguel, 2007-2014, Souto de Moura (<https://arquitecturaviva.com/works/casas-en-las-azores-1>)
- Casa das Histórias Paula Rego, 2009, Souto de Moura (<https://www.archdaily.com/103106/casa-das-historias-paula-rego-eduardo-souto-de-moura>)
- Cien House, 2011, Pezo Von Ellrichshausen (<https://arquitecturaviva.com/works/casa-cien-6>)
- Loba House, 2017, Pezo Von Ellrichshausen (<https://arquitecturaviva.com/works/casa-loba-9>)
- House with two courtyards, 2025, Büro Mühlbauer (<https://divisare.com/projects/538700-buro-muehlbauer-mikael-olsson-house-with-two-courtyards>)
- Frame House, 2025, Pedro Domingos (<https://divisare.com/projects/527457-pedro-domingos-arquitectos-francisco-noqueira-frame-house>)
- Casa no Butantã, 1964, Paulo Mendes da Rocha (<https://arquitecturaviva.com/works/casa-mendes-da-rocha-2>)

CALENDAR

- Phase 1 Launch: Class 1, February 9.
- Phase 1 Submission and Exhibition: Class 3, February 18, during class.

EVALUATION CRITERIA

The evaluation for Phase 1 will focus on:

- The ability to synthesize cultural elements in the project, choosing and interpreting architectural case studies to support the design work.
- Mastery of expression and architectural representation through sketching, technical drawing, and 3D models.
- Attendance, interest, and active participation in class, demonstrating critical and self-critical thinking.
- Quality of the work process.

BIBLIOGRAPHY

The bibliography for this exercise is outlined in the course program.

Lisbon, February 5, 2026