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EM1 825155: >> GROUNDLESSNESS: FROM EXTRACTION TO INHABITATION.

New Productive Settlements in the Post-Extractive Landscape of the Samuño Valley, Asturias

UIBK Winter Semester 2026/27

Instructors: José Carlos López Cervantes/ Cynthia Sánchez Morales

Course meetings: Wednesdays 11:00 am



® ***Groundlessness: inhabiting the excavated mass beneath Pozo San Luis.***

Image: Studio Soqotra, 2026.

Introduction

Groundlessness *does not describe the absence of ground, but the loss of ground as a fixed, immutable and unquestioned support for architecture. In an extractive territory, ground is no longer simply the solid mass upon which architecture stands; it becomes part of architecture's material itself.*

It can be excavated, displaced, accumulated, hollowed out and reorganized. Every apparently solid condition contains the possibility of becoming void, and therefore of ceasing to operate as ground at all. Ground becomes inherently mutable, provisional and continuously exposed to transformation.

Ground consequently acquires another kind of value. It becomes a form of spatial capital: matter whose depth, mass, position and material condition can be modified, redistributed and exchanged through design. Rather than remaining a passive datum, it becomes an active asset. What appears to be permanent territory is always potentially transformable.

>ARCHITECTURE NO LONGER STANDS ON THE GROUND. IT OPERATES WITH THE GROUND.

This change of perspective introduces a fundamentally different relationship between architecture and territory. Conventional construction colonizes the empty space above ground through the addition of matter. Underground architecture performs the inverse operation: it colonizes solid mass through the production of void.

>BUILDING ABOVE GROUND = OCCUPYING VOID WITH MASS
BUILDING UNDERGROUND = OCCUPYING MASS WITH VOID

Addition and subtraction therefore become complementary architectural operations. Matter excavated below ground may reappear above it; void produced in one location may generate mass in another. The territory becomes the result of a continuous negotiation between excavation and accumulation, solidity and emptiness, depth and surface.

During the last century, the Samuño Valley was transformed precisely through these operations. Coal extraction created an extensive underground world of shafts, galleries and tunnels while displaced material generated artificial landforms above ground. Between both emerged railways, industrial buildings, infrastructures, housing and collective facilities.

Mining did not simply occupy this landscape. It continuously reconstructed it.

Groundlessness takes this condition as the starting point for architectural design. The post-mining landscape will not be approached as a tabula rasa, nor exclusively as an industrial heritage site to be preserved, but as a three-dimensional field of latent geometries whose original economic purpose may have disappeared while their spatial potential remains.

The studio therefore asks:

How can excavation become a ground for inhabitation?

Students will work with topographies, underground networks, shafts, spoil heaps, transport infrastructures, industrial structures and territorial traces as raw material for architecture.

The objective is not to place architecture onto a landscape, but to discover how new architectures and forms of urbanity can emerge from geometries that were never conceived as architecture in the first place.



® Pozo San Luis and La Nueva: mine, infrastructure and settlement as parts of a single productive landscape.
Source image: Ecomuseo Minero Valle de Samuño, Ayuntamiento de Langreo. Edited by Studio Soqotra 2026.

Context:

The Samuño Valley: Mine, Settlement and Territory

The studio will focus on Pozo San Luis, La Nueva and the wider Samuño Valley in Langreo, Asturias.

Pozo San Luis was deepened by Carbones de La Nueva between 1928 and 1930. The operation represented a transition from earlier mountain mining, based on horizontal adits above valley level, towards a system centred on a vertical extraction shaft. The Machine House and headframe were constructed first, followed progressively by the lamp room, changing facilities,

warehouses, workshops, dining facilities and offices required by the mining operation. In 1968 the mine became part of HUNOSA and subsequently operated in support of the neighbouring Pozo Samuño.

The significance of San Luis, however, extends far beyond the industrial compound. Carbones de La Nueva also shaped the settlement of La Nueva, providing workers with housing and services including a company store, school, mutual-aid fund and medical provision. Workshops, garages, stables and other infrastructures occupied the central areas of the settlement. The official heritage designation consequently describes the ensemble through three interconnected scales: the mining compound itself, the residential settlement of La Nueva and the wider Samuño Valley, where mines, transportation systems, residential structures and industrial infrastructures coexist.

This historical condition is particularly relevant within the Institute of Urban Design. The mine can be understood as a small-scale urban system in which production, dwelling, mobility, welfare, consumption and collective life were spatially coordinated.

Its architecture also demonstrates that industrial production was never governed exclusively by efficiency. The Machine House was conceived with an unusual architectural and decorative ambition for a mining facility, while the riveted steel headframe, brick pavilions, workshops and infrastructural structures established other aesthetic and tectonic languages. The result is not a homogeneous industrial image but a complex coexistence of machinery, structure, ornament, utility and representation.

The studio will investigate this inherited system not merely as an obsolete machine, but as the physical residue of a particular relationship between territory, technology, architecture and society.



® Pozo San Luis: architectural representation, industrial infrastructure and collective space within the mining compound.

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Photo: José Carlos López Cervantes, 2026. Edited by the author.

Studio Proposal

The studio proposes the transformation of the Samuño Valley from a post-extractive territory into a new productive settlement.

Its starting point is a reversal of the historical logic of the valley:

EXTRACTION → PRODUCTION
RESOURCE → KNOWLEDGE
MINER → NEW FORMS OF SKILLED LABOUR
UNDERGROUND VOID → INHABITABLE INFRASTRUCTURE

Coal is no longer the primary resource of the territory. Instead, students will investigate the resources already produced by more than a century of extraction: underground space, stable thermal conditions, vertical shafts, galleries, industrial structures, mobility networks, artificial topographies and an existing settlement system.

These conditions may support new productive models involving artificial intelligence, digital infrastructure, data processing and storage, research, fabrication, environmental technologies, underground energy systems and new relationships between working and living.

A data centre, an AI infrastructure or an environmental facility should therefore not be understood as the final object of the studio. Such programmes may instead become productive engines capable of reorganizing a larger settlement.

The project consequently operates at an urban scale without necessarily producing conventional city form. Urban design is understood here as the organization of relationships between production, dwelling, infrastructure, collective life, landscape and territory.

This approach also requires reconsidering the social dimension of the historical mine.

Mining settlements did not only provide spaces for production. They organized time, movement and everyday routines. Shifts structured the day; changing facilities and showers choreographed the transition between mine and home; housing, schools, healthcare, shops and recreational spaces supported a particular relationship between worker, company and community.

The contemporary project cannot simply reproduce these paternalistic structures. It must instead ask how a radically different productive economy might produce different forms of collective life.

What happens when the miner gives way to researchers, digital workers, technicians, fabricators, environmental scientists, or forms of labour that do not yet exist?

The transformation of the productive model therefore implies a simultaneous transformation of its architecture and its society.

The final proposal will not consist of a single building.

It will propose a new system of inhabitation for the valley.



® Groundlessness: speculative reuse of the Machine House as the public interface of a new productive settlement.

Image: Studio Soqotra, 2026.

Learning Outcome

Students will:

- *Investigate Groundlessness as an architectural condition in which ground becomes active design matter rather than an immutable support.*
- *Understand post-extractive territories as potential fields for contemporary architectural and urban transformation.*
- *Read ground simultaneously as matter, volume, resource and spatial asset.*
- *Derive architectural organizations from non-architectural geometries such as geology, topography, shafts, galleries, transport networks, spoil heaps and artificial landforms.*
- *Understand excavation and accumulation as reciprocal operations capable of generating architecture and territory.*
- *Move from isolated geometries toward systems capable of variation, transformation, growth and adaptation.*

- *Understand settlement as a system connecting production, infrastructure, dwelling, collective life and environmental processes.*
- *Use section as a generative design instrument rather than solely as a conventional mode of architectural representation.*
- *Develop hybrid representational languages informed by architecture, geology, mining and infrastructure.*
- *Utilize generative AI to produce unexpected associations between heterogeneous geometries and graphic languages.*
- *Critically reconstruct, clean and systematize AI-generated material rather than accepting generated images as final architectural proposals.*
- *Explore emerging relationships between architecture and the subsurface through lithospheric design, climate repair and new productive technologies.*
- *Develop a complete proposal for a new productive settlement within the Samuño Valley.*

Contents

The course positions urban design as the organization of systems and relationships rather than exclusively as the production of conventional urban fabric.

The Samuño Valley allows architecture to be investigated simultaneously across different scales: geological formation, territorial transformation, infrastructural network, settlement, building and inhabitable space.

The course will be structured around three thematic investigations:

1. Groundlessness – Excavation, Accumulation and Lithospheric Design

Mining generates two territorial conditions simultaneously.

Material removed from below ground creates negative geometries: shafts, galleries, tunnels, cavities and cuts.

The same operation creates positive geometries elsewhere. Excavated material is transported, displaced and accumulated, producing spoil heaps and artificial topographies.

The underground void and the artificial mountain are therefore not independent phenomena. They are two manifestations of the same material operation.

Students will investigate:

- *excavation and accumulation as reciprocal territorial processes;*
- *solid and void as interchangeable spatial conditions;*
- *natural and artificial topography;*
- *ground as material rather than datum;*
- *the relationship between material value and spatial value;*
- *the possibility of transferring matter between different parts of the territory;*
- *the transformation of surface into volume;*
- *and existing mining geometries as generators of new architectural systems.*

Groundlessness therefore implies a territory in continuous transformation. Every solid condition can potentially be excavated; every excavation produces displaced matter; and every displacement creates the possibility of another ground.

The contemporary subsurface adds another dimension to this problem.

In Log 60: The Sixth Sphere, Holly Jean Buck describes a recent "subterranean" and "volumetric" turn in which the underground is no longer understood simply as inert rock or as a reservoir for extraction, but as an active three-dimensional field requiring new forms of design, governance and environmental responsibility.

Her concept of Lithospheric Design is particularly relevant to this studio. The subsurface is increasingly involved in clean-energy and climate technologies: enhanced geothermal systems employ fluid injection, while carbon-management systems inject CO_2 into deep geological formations where it can be stored within porous rock.

CO_2 injected into particular rock formations may eventually mineralize and become part of the rock itself. These processes are not purely mechanical: microorganisms and other underground life can affect mineralization and carbon transformation, revealing the lithosphere as an active environmental system rather than a passive container.

Another particularly relevant possibility is enhanced rock weathering at mines. Mining waste and crushed rock may potentially participate in accelerated mineral reactions capable of removing atmospheric carbon. Existing mines are especially interesting because they combine appropriate materials with already established industrial infrastructure.

These technologies will not constitute mandatory programmes for the studio. Instead, they demonstrate that an apparently obsolete mine may acquire entirely new environmental and productive values.

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2. Productive Settlements – Technology, Society and Collective Life

The historical mine functioned as a spatial, technological and social system.

Coal extraction required shafts and machinery, but also transport systems, housing, workshops, changing facilities, medical provision, education, consumption and collective routines.

Architecture therefore participated in what might be understood as a form of social engineering.

The transition from rural labour to industrial labour required a new relationship with time, discipline, work and collective organization. The company settlement provided many of the institutions through which that transformation occurred.

The contemporary studio will critically reconsider this relationship.

If a new economy based on digital production, artificial intelligence, research, fabrication or environmental technologies occupies the valley, it will introduce a new population and new forms of labour.

Students will investigate:

- *historical mining settlements as systems of social and spatial organization;*
- *the relationship between production and collective life;*
- *working and dwelling;*
- *individual and collective space;*
- *education, welfare and shared facilities;*
- *changes in the profile of inhabitants;*
- *economic and material cycles within the settlement;*
- *productive infrastructure as a catalyst for territorial regeneration;*
- *and architecture as a producer of cultural identity rather than only technical efficiency.*

The historical architecture of San Luis will provide another important lesson.

The mining compound was not aesthetically neutral. Industrial structure, brick construction, riveted steel, machinery, utilitarian pavilions and architectural ornament coexist within the same settlement.

The new productive territory must therefore ask two questions simultaneously:

How should it operate?

And what kind of place should it become?

3. Geometry, Systems and the Dynamic Section

The formal methodology of the studio begins with geometries that do not originally belong to architecture.

Students will work with:

- *geological structures;*
- *topographic surfaces;*
- *underground galleries;*
- *shafts;*
- *spoil heaps;*
- *railway traces;*
- *extraction systems;*
- *infrastructural networks;*
- *and other territorial morphologies.*

The objective is not simply to discover an interesting shape and enlarge it until it becomes architecture.

The objective is to discover the logic that produces it.

A geometry may represent a finished condition. A system describes relationships between parts and therefore permits variation, growth, repetition, combination, adaptation and transformation.

The design process will consequently follow a sequence:

READ → EXTRACT → ABSTRACT → SYSTEMATIZE → TRANSFORM → INHABIT

Generative Artificial Intelligence will play an important role within this process.

AI is capable of operating between representational languages without the disciplinary restrictions that usually guide architectural design. A geological section may unexpectedly acquire the logic of an architectural section. Mining infrastructures may be interpreted as inhabitable structures. A spoil heap may be read as an organizational system rather than simply as topography.

This capacity for unexpected hybridization is precisely why AI is introduced.

Its outputs, however, will never constitute finished designs.

The student's task is to recognize what is valuable within these sometimes accidental combinations.

Selected relationships must subsequently be redrawn, remodelled and understood. Geometry must be cleaned and reconstructed. Coincidence must become intention. Image must become system.

The methodological transition can therefore be summarized as:

IMAGE → GEOMETRY → SYSTEM → ARCHITECTURE



® Ground as inhabitable mass: architectural interventions suspended within a system of excavated geological voids.

Image: Studio Soqotra, 2026.

The Dynamic Section

Section will become the principal representational and generative instrument of the studio.

The mine is inherently sectional.

Its spatial organization cannot be understood through a single horizontal plane. Different levels are connected vertically through shafts and lifts. People, materials, air, water, energy and information move continuously between different depths.

Mining also introduces time into the section.

Excavation progresses.

Voids expand.

Material moves.

New levels are opened.

Other spaces become obsolete.

Water enters.

Ventilation changes.

Infrastructure is extended or removed.

The section is therefore not merely a representation of space. It can become a representation of transformation.

Students will develop what the studio defines as a dynamic section: a sectional drawing capable of describing simultaneously spatial, infrastructural, environmental and temporal processes.

It may register:

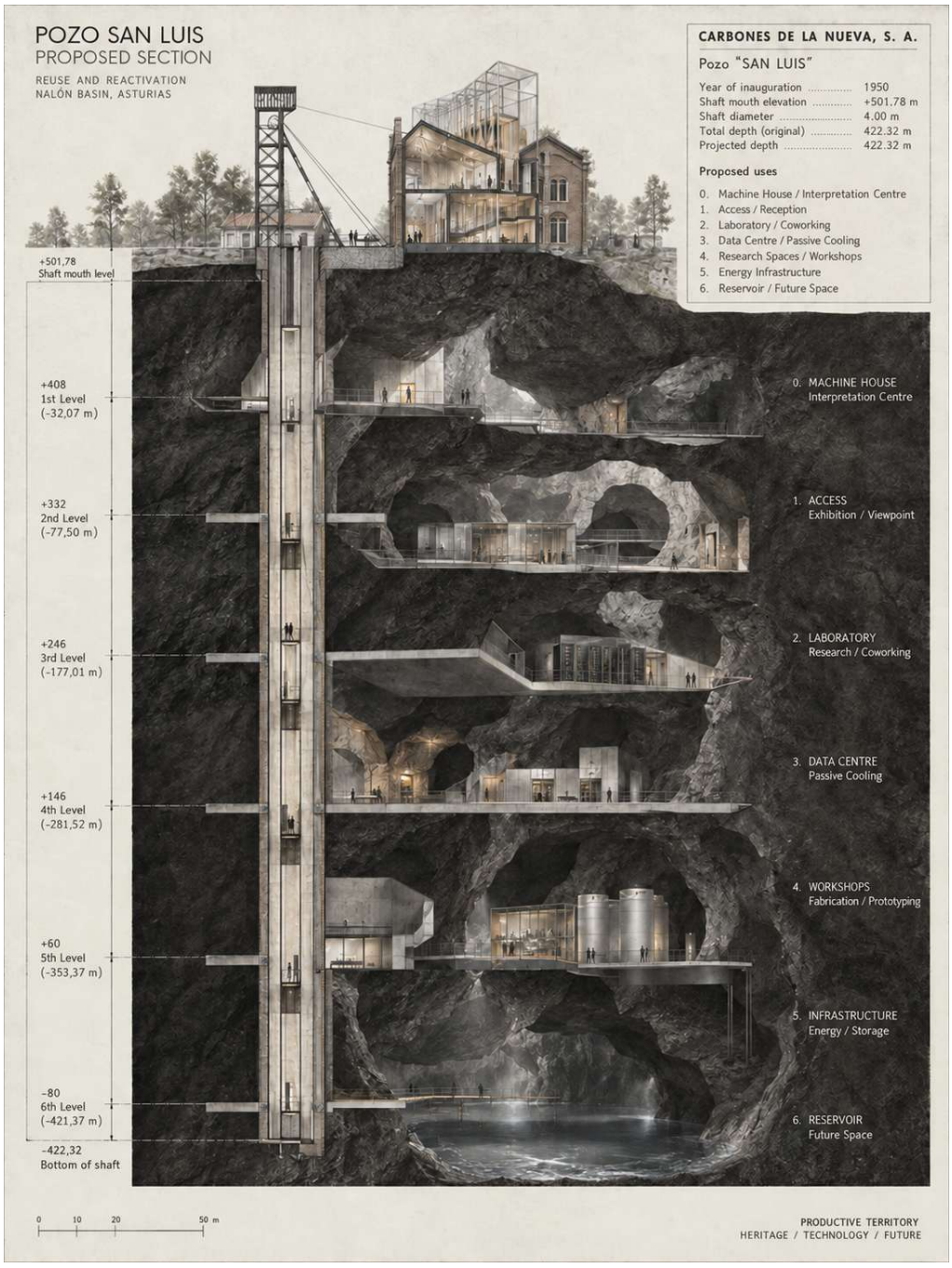
- *people;*
- *material;*
- *vertical transportation;*
- *ventilation;*
- *water;*
- *energy;*
- *data;*
- *temperature;*
- *excavation;*
- *accumulation;*
- *occupation;*
- *ecological processes;*
- *and transformations over time.*

Historical mining drawings, geological sections, infrastructural diagrams and architectural representations will be studied together.

The objective will be to construct hybrid forms of representation capable of explaining this new architectural condition.

The final section should not merely show what the project looks like.

It should explain how the project works and how it changes.



® *Pozo San Luis: speculative dynamic section combining mining infrastructure, inhabitation, productive programmes and environmental systems across depth*

Image: Studio Soqotra, 2026.

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Course Blocks

The course follows a three-block progression, moving from conceptual and territorial investigation to geometric experimentation and finally to the design of a new productive settlement.

BLOCK 1: Conceptual Knowledge – Ground, Extraction & Settlement

- *Historical investigation of Pozo San Luis, La Nueva and the Samuño Valley.*
- *Introduction to Groundlessness as a conceptual framework.*
- *Reading of the territory as a three-dimensional field.*
- *Mapping of geological, topographic, architectural and infrastructural systems.*
- *Analysis of shafts, galleries, industrial structures, railways and spoil heaps.*
- *Investigation of excavation and accumulation as complementary operations.*
- *Study of mining settlements as productive and social systems.*
- *Introduction to Lithospheric Design and contemporary subsurface technologies.*
- *Study of historical mining and geological representation.*
- *Production of territorial sections relating surface and depth.*

Block 1 Output

A three-dimensional territorial atlas combining maps, diagrams, sections, drawings and digital models.

The atlas should identify not only existing forms, but the systems and relationships capable of becoming architectural material.

BLOCK 2: Procedural Knowledge – From Geometry to Systems

- *Dedicated geometry webinar.*
- *Extraction and reconstruction of non-architectural geometries.*
- *Cleaning, abstraction and transformation of territorial information.*
- *AI-assisted readings of geology, mining systems and topography.*
- *Experiments hybridizing architectural, mining, infrastructural and geological languages.*
- *Critical selection of unexpected formal relationships.*
- *Reconstruction of AI-generated material through precise modelling.*
- *Transformation of selected geometries into systems of parts, rules and relationships.*
- *Testing of variation, growth, repetition and transformation.*
- *Development of dynamic sectional representations.*
- *Physical modelling of positive and negative volumes.*

Block 2 Output

A catalogue of spatial systems documenting the sequence:

SOURCE GEOMETRY
↓
ABSTRACTION
↓
AI INTERPRETATION
↓
CRITICAL RECONSTRUCTION
↓
SYSTEM

The final outcome of the block must demonstrate that the student understands not simply the geometry produced, but the logic capable of reproducing and transforming it.

BLOCK 3: Practical Knowledge – New Productive Settlement

Students will transform the systems developed during Block 2 into a complete architectural and urban proposal for the Samuño Valley.

Possible programmes may include combinations of:

- *housing;*
- *working environments;*
- *research facilities;*
- *digital production;*
- *artificial intelligence infrastructure;*
- *data processing and storage;*
- *fabrication;*
- *educational programmes;*
- *environmental research;*
- *geothermal systems;*
- *carbon-management or lithospheric-repair processes;*
- *collective facilities;*
- *landscape infrastructures;*
- *mobility and logistics.*

This list should not be interpreted as a fixed programme.

Each student will define a productive model and determine what architectural, infrastructural and collective programmes are necessary to sustain it.

Rather than developing a conventional masterplan, students will propose a three-dimensional settlement system in which surface, underground space, architecture, infrastructure and landscape operate as parts of the same organization.

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Block 3 Output

A complete architectural and urban proposal demonstrating the transition:

TERRITORY → GEOMETRY → SYSTEM → INHABITATION

Methodology

The course employs a research-by-design methodology integrating territorial research, generative Artificial Intelligence, geometric experimentation, architectural representation and physical modelling.

1. Research & Territorial Reconstruction

- *Historical and spatial investigation of Pozo San Luis, La Nueva and the Samuño Valley.*
- *Reconstruction of the territory as a three-dimensional model.*
- *Identification of geological, topographical, infrastructural, architectural and social systems.*
- *Analysis of extraction, displacement and accumulation.*
- *Study of historical mining drawings and representational conventions.*

2. AI as an Exploratory Tool

- *AI will be used to generate unexpected relationships between heterogeneous forms of representation.*
- *Geological sections, mining diagrams, topographies, infrastructures and architectural languages may be deliberately hybridized.*
- *AI will operate as an instrument for speculation rather than as an autonomous designer.*
- *Students will identify productive anomalies and unexpected formal associations.*
- *Generated material will subsequently be redrawn, cleaned, reconstructed and understood.*

AI PRODUCES POSSIBILITIES.
THE STUDENT PRODUCES ARCHITECTURE.

3. Geometry & System Development

- *Dedicated webinar on geometric extraction, abstraction and transformation.*
- *Reconstruction and simplification of selected geometries.*
- *Development of systems of components, rules and relationships.*
- *Iterative testing through digital models.*
- *Development of families and variations rather than singular formal solutions.*
- *Exploration of positive and negative space through physical models.*

4. Section as Design Instrument

- *Section as analytical representation.*
- *Section as spatial generator.*
- *Hybridization of architecture, geology, mining and infrastructure.*
- *Introduction of movement and time into architectural representation.*
- *Visualization of flows of material, people, energy, data and environmental processes.*
- *Development of one major comprehensive dynamic section throughout the semester.*

5. Settlement Design

- *Translation of formal systems into inhabitable conditions.*
- *Definition of a contemporary productive model.*
- *Integration of working, dwelling and collective programmes.*
- *Relationship between underground and surface conditions.*
- *Integration of technological and environmental infrastructure.*
- *Development across architectural, urban and territorial scales.*

Course Structure & Organization

Students will work individually.

Each session will contain a theoretical lesson, desk crits and specific software or representation tutorials required for the development of the project.

Progress will be reviewed weekly at the studio.

The course emphasizes continuity between research, experimentation and final design. The final project must demonstrate how its architecture emerged from the original territorial geometries and the systems developed throughout the semester

NEEDS:

Material Requirements:

Students need to bring their own laptops. Software will be accessible through educational licenses.

Tools and Techniques:

In order to apply this specific methodology, students will be instructed in specific software. No previous experience with the software will be required.

Final Deliverables & Requirements & Assessment (OLAT):

Complete graphic description of the project is expected, including visualizations, drawings, diagrams, research material, and any visual information necessary for a complete understanding of the proposal.

SUBMISSION

Grading Procedures:

Grades are determined based on the quality of work produced, progress and improvement over the course of the semester, completion of project requirements, quality of participation, attendance, attitude, and ethical conduct. Grading policies will be discussed during the first weeks of the studio, and any questions regarding grades or policies should be directed to the instructors. A passing grade in the course requires committed completion of all projects, including the institute archive in proper formats. Incomplete work will not be evaluated until the submission is completed. A failing grade is given whenever cumulative work, final work, and/or attendance are unsatisfactory. It is also given when a student fails to submit a final project or fails to take a final examination without prior approval from the instructor.

Academic Integrity:

The integrity of the work of individuals is first and foremost a grading milestone. Student work that delivers the ideas or words of others as the student's own adversely impacts the whole faculty. Academic dishonesty, including cheating, plagiarism, commissioning academic work by others, or performing academic work on behalf of another student, is strictly prohibited and would result in a negative grade.

Plagiarism:

This includes but is not limited to; copying words, images, or other material from a source without using appropriate citation rules such as quotation marks, footnotes, references, or other indications of the original source, paraphrasing another person's ideas in your own words without crediting the original source, taking sole credit for assignments without giving credit to those who worked with you, submitting work for a course that has already/also been submitted for another course or internet plagiarism, such as submitting work either found or paid for online, failing to cite any internet sources used, or cutting and pasting sentences from various websites to create a collage of uncited words.

Incomplete Work & Extension of time:

A student may receive a negative grade or no grade when the work is incomplete at the evaluation date by the end of the semester. By requesting permission from the instructor in good time prior to the date of the final examination or presentation, this can be avoided. Permission will be granted only under extraordinary circumstances and usually for medical reasons, requiring a medical document proving the situation. Incompleteness must be fulfilled to the instructor's satisfaction no later than two weeks after the end of the term.

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Archiving:

Students are required to submit physical examples of their work or digital examples no later than one week after the end of the term to their instructors or administration for archiving. This is a chance for students to have their work displayed or exhibited online and potentially featured in future institute publications or research projects. The instructors will provide a document titled the Einwilligungsformular that allows the institute to keep track of the agreement; if you wish not to permit this archival material to be published, please contact the institute secretary in good time.

Learning Policy (Studios and Seminars):

Attendance is mandatory at critiques, pin-ups, and reviews. If you do not present your work regularly, you will not receive a passing grade for the course. Students must have all required work related to the course during course hours (not at another location or other time). Students should not use course time to leave school to procure materials, run errands, etc. All activities that require one to be away should be scheduled to occur outside of course hours. Leaving in the middle of or before the end of regularly scheduled course times will result in an absence unless discussed with the instructors. Grades will be determined by the quality of work produced, an improvement over the course of the semester, completion of project requirements, quality of participation, and attendance.

All electronic recordings, image captures/screenshots (during zoom meetings), or audio recordings are strictly prohibited unless agreed upon or discussed beforehand with the instructors and participants.

Bibliography

Ground, Landscape and Post-Extractive Territories

Berger, Alan. Drosscape: Wasting Land in Urban America. New York: Princeton Architectural Press, 2006.

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The Technosphere and Lithospheric Design

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Buck, Holly Jean. "Principles for Lithospheric Design." Log 60: The Sixth Sphere. New York: Anyone Corporation, 2024.

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Industry, Infrastructure and Settlement

Easterling, Keller. Extrastatecraft: The Power of Infrastructure Space. London: Verso, 2014.

Sierra Álvarez, José. El obrero soñado: ensayo sobre el paternalismo industrial (Asturias, 1860-1917). Madrid: Siglo XXI, 1990.

Sennett, Richard. Building and Dwelling: Ethics for the City. London: Penguin, 2019.

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Geometry, Systems and Representation

Allen, Stan. Points + Lines: Diagrams and Projects for the City. New York: Princeton Architectural Press, 1999.

Kwinter, Sanford. Far From Equilibrium: Essays on Technology and Design Culture. Barcelona: Actar, 2008.

Picon, Antoine. Architecture and the Virtual: Towards a New Materiality. Cambridge: MIT Press, 2019.

Carpo, Mario. The Second Digital Turn: Design Beyond Intelligence. Cambridge: MIT Press, 2017.

Artificial Intelligence and Computational Design

Carpo, Mario. Beyond Digital: Design and Automation at the End of Modernity. Cambridge: MIT Press, 2023.

Picon, Antoine. Digital Culture in Architecture. Basel: Birkhäuser, 2010.

Additional readings, software references and contemporary case studies will be provided throughout the semester according to the development of individual projects.

First meeting: Wednesday October 7th 11:00 am