

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Jing Han
Student number	5768764

Studio		
Name / Theme	Public Building	
Main mentor	Stefano Corbo	Project Design
Second mentor	Florian Eckardt	Technical Building Design
Third mentor	Sang Lee	Theory & Delineation
Argumentation of choice of the studio	<p>The core value of architectural design to me is its human-centered approach. Public spaces and buildings are crucial as they can revitalize a city and enhance the quality of life for people. I am fascinated by public buildings because they are designed for people and allow for multiplicity as architectural design elements. I would like to explore the topic of the vertical campus, as it offers opportunities to envision a typology of university space in the 21st century that is not only functional but also integral with social values.</p>	

Graduation project	
Title of the graduation project	Verticalizing Public Space: Campus as a learning community
Goal	
Location:	The Hague, Netherlands
The posed problem,	<p>The majority of theories related to public space are deeply rooted in the concept of horizontalism. Traditionally, perceptions have been predominantly confined to horizontal landscapes and flat surfaces. However, with global cities experiencing vertical growth due to increased population density and urbanization, the notion of ungrounded public space requires reassessment.</p> <p>In the context of the campus, the functions and value of the campus need to be reevaluated. In the 21st century, the role of the campus extends beyond its primary function as a space for learning; it plays a crucial role in nurturing social values. It epitomizes the essence of community. Within this communal</p>

	<p>setting, individuals with diverse characteristics converge around shared values and common interests. It functions as a dynamic hub for the exchange of ideas and serves as a wellspring of inspiration.</p>
<p>research questions and</p>	<p>In the domain of public space design: How can the foundational principles of horizontal public space design be utilized to shape and influence the evolution of vertical public spaces? In other words, what valuable insights can be drawn from the design of horizontal public spaces and adapted to their vertical counterparts?</p> <p>Revisiting the context of campus design: How do functions, learning experiences, and public spaces harmonize within the structure of a vertical campus?</p> <p>Moreover, in exploring the application of the community concept in vertical campus design, how might it contribute to enhancing the overall learning experience?</p>
<p>design assignment in which these result.</p>	<p>The discoveries will set the theoretical groundwork and be experimentally applied in my graduation project. The primary aim is to create a design in line with my vision for a 21st-century vertical campus. This vision encompasses establishing a specialized learning community in The Hague. Anchored by two crucial pillars—enhancing the learning experience and fostering a dynamic vertical social public space—this community seeks to encourage interactions among diverse age groups, promoting the exchange of ideas, and acting as a source of inspiration. It not only prioritizes education but also nurtures meaningful connections and supports continuous learning throughout life.</p>

Process

Method description

In the endeavor to enhance vertical public space, I intend to accomplish my goal through a detailed exploration of three critical aspects: boundary, threshold, and hierarchy. Specific methods will be applied to each aspect, as outlined below (the list of literature reviews for each aspect are in the next section):

Boundary: Qualitative analysis through literature reviews and case study

Threshold: Qualitative analysis through literature reviews and observation

Hierarchy: Qualitative analysis through literature reviews and case study

These research efforts aim to enhance our understanding of defining private and public spaces, fostering social interactions, and establishing varying degrees of privacy within learning spaces associated with the program within the design.

Concurrently, while delving into the concept of a 21st-century campus as a community, the research will employ the methodology of literature review and case study. The plan involves crafting an enhanced learning environment guided by a thorough literature review of scientific research in the field of environmental psychology, with a particular focus on how spatial proportions impact the learning experience. This approach ensures that the physical space itself contributes to a positive and conducive learning atmosphere. Additionally, the community programs will be tailored to encompass all age groups, fostering a culture of lifelong

learning. The programs within the design should be designed to cater to different age groups, and their configurations should enhance the learning experience and promote social interactions.

Literature and general practical references

Campus as a community

Literature review: Patrick Geddes, Team X and John Turner, **Community and Architecture Treble**

Oshin Vartanian, Gorka Navarrete, Anjan Chatterjee, Lars Brorson Fich, Jose Luis Gonzalez-Mora, Helmut Leder, Cristián Modroño, Marcos Nadal, Nicolai Rostrup, Martin Skov, **Architectural design and the brain: Effects of ceiling height and perceived enclosure on beauty judgments and approach-avoidance decisions**, *Journal of Environmental Psychology*, Volume 41, 2015, Pages 10-18
Avishag Shemesh, Gerry Leisman, Moshe Bar, Yasha Jacob Grobman, **The emotional influence of different geometries in virtual spaces: A neurocognitive examination**, *Journal of Environmental Psychology*, Volume 81, 2022

Potential case study: Nanyang Learning Hub, Roy and Diana Vagelos Education Center, Stavros Niarchos Foundation Cultural Center

Boundary, hierarchy, and threshold

Boundary: Jan Gehl's studies, including *Life Between Buildings* (concentrated on street-level experiences, reinforcing the prevailing emphasis on flat public spaces.) Herman Hertzberger *Space and Learning* (investigate threshold, hierarchy, and boundary in educational settings)

Kevin Lynch *The Image of the City* (examined cities from the perspective of a pedestrian, discussing the concept of boundaries in shaping our understanding of cities.)

Potential case study: Parc de la Villette (analyze boundaries in terms of physical, spatial, functional, and spiritual)

Threshold: Herman Hertzberger *Space and Learning* (investigate threshold, hierarchy, and boundary in educational settings.)

Potential Observation Method: List and sketch thresholds for at least one public space and one campus. Compare the similarities and differences within these thresholds, explore their duality, and analyze how vertical campuses can benefit from the findings.

Hierarchy: Richard Sennett, *Together: The Rituals, Pleasures and Politics of Cooperation* (explore hierarchy through the social, political, and cultural dimensions.) Herman Hertzberger *Space and Learning* (investigate threshold, hierarchy, and boundary in educational settings)

Potential case study:

The Edge (analyze hierarchy in terms of materiality, sustainability, and interconnected programs)

50 Hybrid Buildings (Study the spatial and functional hierarchy within mixed-use buildings.)

Reflection

1. What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?

The studio topic, "The Vertical Campus: A Public Hub of the Future in The Hague," sets the stage for my graduation project, allowing for an in-depth exploration of the campus as a learning community. Both public space and campus design are of paramount importance in the realm of architecture. The courses I've undertaken during my master's program have prepared me for the graduation studio, and completing this design will deepen my understanding of public building dynamics, enhancing my sensitivity as a future architect. The CommuVersity serves a dual purpose as both a public space and a campus, seamlessly integrating into The Hague's urban fabric. My graduation design aims to create a vertical campus for the 21st century, serving as a vessel for a learning community to form.

2. How did your research influence your design/recommendations and how did the design/recommendations influence your research?

In the development of this design, research and design processes inform each other iteratively.

From research, I get better understanding of what spaces need to be designed and how can I design the space to achieve specific goal, research provide the theoretical and scientific backup for my design decision. In my project CommuVersity, Research highlights the increasing recognition of lifelong learning as a necessity. Consequently, it's clear that 21st-century campuses must adapt to meet this demand. This raises the pivotal question: How can we design campuses to enhance the learning experience? Addressing this inquiry, my research delves into environmental psychology, emphasizing the roles of spatial configuration and color in facilitating learning. The design of future learning spaces should prioritize flexibility, allowing for the creation of diverse spatial configurations over time. In line with this principle, CommuVersity adopts a modular shelf-like structure, enabling the adaptation of spaces to suit specific learning activities. Additionally, my research underscores the importance of social interaction in learning. To promote this, I've reconfigured circulation within the building to encourage encounters between individuals. Together with ample informal study spaces, this fosters an environment conducive to organic social interactions. Extensive research has also been conducted on color, alongside spatial configuration and materiality, to create versatile spaces tailored to different learning styles and activities.

In addressing the public aspect, I analyzed the interaction between the chosen site and the urban landscape through literature review and observation. This assessment considered factors such as traffic flow, nearby public spaces, and surrounding buildings to enhance city identity and accessibility. Insights from this analysis guided decisions on entrance, orientation, and programming. Additionally, background research on Terminal Zuid was conducted using Dutch archives to better understand its historical significance. This informed the decision to repurpose rather than demolish it

3. How do you assess the value of your way of working (your approach, your used methods, used methodology)?

I utilized three primary research methods—literature review, case studies, and observations—to address two key aspects of this project: the enhancement of public space and the optimization of the campus environment to facilitate effective learning. I assess the value of my approach, methods, and methodology as effective in

addressing the project's objectives. By integrating a combination of literature review, case studies, and observations, I was able to develop a comprehensive understanding of the subject matter and apply this knowledge to the design process in public aspect and campus aspect. The research result will inform my design and help to make design decisions.

4. What is the relevance of your graduation work in the larger social, professional and scientific framework.

This graduation project seeks to address identified design challenges and propose an innovative approach to vertical campus design. Utilizing the research-informed design method, the outcomes of the research will establish theoretical foundations, forming the basis for shaping in my graduation project. This process allows for a comprehensive exploration and critical reflection on the concept of the 21st-century campus, contributing to the future realm of campus design. The collaborative synergy between research and design is focused on developing a campus typology that prioritizes the learning experience while integrating social values. The goal is to create a holistic environment that transcends traditional educational paradigms within the urban fabric. From an academic standpoint, the CommuVersity project holds value due to its innovative approach to addressing the challenges of urban density and the need for adaptable learning environments. Moreover, the societal implications of the project are considerable, as it offers a tangible response to the growing demand for lifelong learning spaces within densely populated urban areas. Ethically, the project prioritizes sustainability from the perspective of reuse instead of demolishing.

5. Why and how should horizontal public space be reoriented in a vertical direction in your design?

Given The Hague's high population density and limited ground-level space, there's a growing need for vertical urban living. The CommuVersity serves as an extension of the city's horizontal public spaces, addressing the challenge of space scarcity. To justify vertical public space, I identified key attributes of horizontal public spaces, emphasizing social interaction, and integrated them into the design. The CommuVersity features three major public spaces—the Botanic Garden, Playground, and Plaza—strategically placed throughout the building and connected by internal public spaces on each floor, fostering social interaction and community engagement.

6. How does your project help to form a community of learning?

For a community, there are two aspects: tangible and intangible. The intangible aspect pertains to the spirit of community, characterized by shared values, a sense of belonging, and a collective identity. In the context of a learning community, individuals share the common value of learning.

The tangible aspect refers to the physical spaces that allows the intangible spirit to happen and enhance and assist on the goal of this community, in this case, is to help people learn better. Informed by research in environmental psychology and campus design, CommuVersity creates spaces that facilitate social interaction, thereby aiding learning. Public spaces with diverse atmospheres foster diverse preferences, allowing individuals to choose learning environments that suit their preferences and learning tasks. CommuVersity also offers programs for multi-generational learning, promoting lifelong learning. All these elements collectively provide the foundation and conditions necessary for a learning community to flourish.

public space, leading to the derivation of a new approach to integrate public spaces within vertical campuses. The anticipated outcome is a meaningful contribution to the ongoing research in vertical public space and the broader realm of new campus design.