

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examenscommissie-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	Oudail el Omari
Student number	5738555

Studio		
Name / Theme		Borders & Territories (AR3BO100)
Main mentor	Stefano Milani	Architecture & Built Environment
Second mentor	Mauro Parravicini	Building Design & Technology
Argumentation of choice of the studio	<p>The <i>Borders and Territories</i> studio investigates contemporary border conditions and spatial relationships between theory, analysis, and design. Choosing this studio provides me a well-balanced research approach, beginning with a theoretical framework, progressing through analysis and mapping, into applying the research to design. I believe this process enriches the design, this why by choosing this studio, I'll have a wider focus on research before design.</p> <p>Additionally, the case study lies outside my current architectural knowledge and social context, in China, which motivates me to broaden my perspective and challenge my approach to research and design. The studio's use of mapping as an analytical tool further encourages me to explore new methodologies.</p> <p>The studio's focus on social, economic, and political contexts inspires me to delve deeper into these areas, allowing me to develop and refine my perspective. Lastly, the flexibility in choosing themes and research subjects grants me the freedom to take agency over my architectural knowledge and growth in both research and design.</p>	

Graduation project	
Title of the graduation project	No ground zero
Goal	
Location:	Jiangbei, Chongqing, China

<p>The posed problem</p>	<p>Building on a mountain landscape differs significantly from building on a flat one. Mountain landscapes present challenges when intersecting with the built environment, which is why many cities and buildings are typically situated on flatter surfaces. However, Chongqing, China, defies this norm, raising the question of how a densely populated city has been constructed on the hills of Chongqing.</p> <p>Against all odds, this metropolitan city has not only been built but continues to grow, utilizing every part of the mountainous terrain. The city adapts to varying heights while serving social, economic, and cultural needs and maintaining a infrastructure that connects buildings, people, and systems. This represents a complex problem at the intersection of geography, urban design, infrastructure and architecture—a challenge Chongqing has been navigating and overcoming, particularly in the context of its rapid economic growth and urban expansion.</p> <p>Through this project, I aim to analyze and learn from Chongqing's approaches, applying these insights to other areas where similar challenges exist or where development is still underway.</p>
<p>Research questions</p>	<p>What is the impact of a mountain landscape on infrastructural connections, urban development, and architectural interventions in Chongqing, China?</p> <ul style="list-style-type: none"> - How is navigation improved within Chongqing's complex infrastructure because of its mountain environment? - What interventions are necessary to utilize the landscape in favor of

	<p>architecture and urban development?</p> <ul style="list-style-type: none"> - How can the mountainous landscape contribute to creating space and guiding architecture to foster social, economic, and cultural development?
design assignment	
<p>As a result of the mountain landscape in Chongqing, the growing population, and the need for more space in a city of over 30 million people, the urban fabric must serve the neighborhood and adapt to the relief of the Chinese terrain. This creates challenges in Chongqing's built environment, particularly in connecting the city's differing landscape elevations with infrastructure that helps citizens navigate the difficult terrain.</p>	
<p>Moreover, the mountainous landscape and differing ground levels leave parts of the terrain unsuitable for buildings or functional public space. However, these spaces could be repurposed for alternative uses—perhaps programs that serve the neighborhood. Instead of expanding the urban area further, these underutilized spaces could be transformed into functional areas.</p>	
<p>Additionally, due to the highly populated neighborhoods in Chongqing, there is an unequal distribution of cultural, economic, and social spaces. Citizens often have to travel to other parts of the city to access such facilities. A local cultural and commercial space that supports the local economy and fosters social connections is needed to better organize the city. This space should be integrated into the urban fabric rather than being concentrated in the city center or outskirts.</p>	
<p>The proposed design, therefore, can function as a multi-purpose intervention—not only for dwelling, commercial, or institutional uses but also as a link within the city's urban fabric, connecting infrastructure and programmatic elements. This approach softens the transition between the street and the building, making it more usable for the community. Furthermore, by transforming these underutilized landscape spaces with an architectural solution, the city can incorporate cultural, economic, and social programs that enhance participation and foster social connections.</p>	
<h2>Process</h2>	
<h3>Method description</h3>	
<p>In exploring the architecture and urban interventions shaped as a result of the mountain landscape of Chongqing, I will analyze approximately ten moments both in the city center and outside the city center to capture diverse scenarios and situations within the urban fabric. These moments illustrate how architecture has served as a tool and solution within the urban context. Each moment showcases different principles and strategies used to enhance connections across varying elevations, facilitate economic exchange, and foster social interaction.</p>	

Specific examples include features like maze-like staircases, sunken plazas, elevated residential blocks, rooftop squares, bridges, and marketplaces. By examining these situations, I aim to distill key elements that contribute to infrastructure, the urban environment, spatial atmosphere, connectivity and collective community dynamics. These distilled elements—principles or "lessons learned"—will be visualized through 2D and 3D maps and illustrations to demonstrate their role in the city and its neighborhoods.

Additionally, I will analyze social interactions in Chongqing, focusing on the users of these spaces. These analyses highlight the "protagonists" of the city, whose experiences play a central role in shaping the design proposal. Beyond identifying effective principles, I will also pinpoint elements with untapped potential that could be reimagined to serve the city differently. These will be visualized in the illustrations as well. In addition, social moments in Chongqing are analyzed and captured, showing the experiences of the city's users, highlighting them as the protagonists of the urban narrative.

The project site is located in Jiangbei, on Wanfengyi Road, north of the Jialing River and west of the Yangtze River, within a residential neighborhood. The site is an old abandoned Changan electric car factory situated on a hill overlooking Huangnin Village. This area lacks the types of moments analyzed earlier, and both the city and neighborhood could benefit from such interventions.

The site analysis will consider the social, economic, and cultural services available—or lacking—in the neighborhood. The intervention proposes a redesign of the existing factory with a program that integrates spaces for economic, cultural, and social activities. Additionally, the design will extend into urban interventions on the hill, enhancing connections between the lower and upper levels of the landscape and linking the two adjacent neighborhoods.

The program is designed around the users, who are the protagonists of both my research and the design. These primary users form the central narrative that informs and connects the various elements of the proposed program.

Literature and general practical references

The literature framework I am working within draws from writings about architecture in mountainous landscapes across Europe, China, Japan, and the United States. By selecting a broad range of references, I aim to present diverse perspectives on how people relate to and build within mountainous environments.

This framework spans practical viewpoints, such as those offered by D. Leatherbarrow, S. Moos, and N. K. Booth, to more spiritual perspectives on mountain landscapes, as explored by M. Breuer and T. Botz-Bornstein. It also includes architectural insights from Japanese architects Tadao Ando and Seung Hyo-sang.

Additionally, MVRDV's *Rooftop Catalogue*, which explores the second use of roofs, and OMA's *Elements of Architecture*, which examines architectural components, have been integral resources. *Cities Without Ground* is another key reference, chosen for its relevance to the urban fabric and complexities of Chongqing.

Below is a complete list of literature references used in this thesis:

Zeng, G., Zhao, D., Chen, X., & Wang, X. (2023). *Architectural design methods for mountainous environments*. Journal of Asian Architecture and Building Engineering.

Jakob, M. (2011). On the mountains: scalable and unscalable. In K. Frampton, S. Allen, & M. McQuade, *Landform Building* (p. 136). Lars Müller.

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Breuer, M. (1956). Architecture and Landscape. *Sun and Shadow*.

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Botz-Bornstein, T. (2014, March). H-Sang Seung: Design Is Not Design. *The Journal of Aesthetic Education*, 115-117.

Nemeth, D. J. (1987). *The architecture of ideology*. University of California press.

Yoon, H.-k. (2006). *The Culture of Fengshui in Korea*. Lexington Books.

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Leon, C. (Director). (2016). *Vertical City Documentary* [Motion Picture].

Burger, E. (1987). Geomorphic Architecture: Multifamily Residential Design Solutions. *Pergamon Journals*, 287-297.

Frampton , A., D. Solomon, J., & Wong, C. (2012). *Cities without ground*. Berkeley: ORO Editions.

Maas, W., van Manen, S., & MVRDV. (2021). *Rooftop catalogue*. Rotterdam: Rotterdamse Dakendagen.

Koolhaas, R., & OMA. (2018). *Elements of architecture*. Taschen.

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?
2. What is the relevance of your graduation work in the larger social, professional and scientific framework.