

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	Lanxin He
Student number	5807891

Studio		
Name / Theme	Dwelling Graduation Studio: Global Housing	
Main mentor	Nelson Mota	Architecture design
Second mentor	Rocio Conesa Sanchez	Building technology
Argumentation of choice of the studio	<p>As a future architect, I want to do practical designs that solve problems. While this may seem simple, effective design involves a systematic approach, including research, experiments, logical connections, and information-rich spaces. My choice of graduation project topic aligns with my interests in housing design. Housing design, to me, is more than just shelters; it's a dynamic and sustainable connection between cities, materials, and people's lives. I'm interested in exploring how housing projects can adapt and grow with residents' changing needs. Specifically, I'm intrigued by spatial patterns in private and public areas that bridge different social groups. Therefore, the global housing design studio become my first choice for the graduation project, to explore the housing patterns based on very different social and cultural contexts.</p>	

Graduation project	
Title of the graduation project	Participatory of Co-living: An elderly-friendly affordable housing system for Lakkatura
Goal	
Location:	Lakkatura tea garden, Sylhet, Bangladesh
The posed problem,	The tea garden communities now face a complex array of contemporary problems that affect labor quality and living conditions. The elderly in tea garden communities face challenges in living within a conducive environment and lack adequate caring facilities.

	Considering the growing trend of young people leaving the tea garden community for urban job opportunities in Bangladesh, a new housing system met the needs of the elderly is crucial to ensure the community's sustainability as its population ages over time. The implementation of a new housing system, designed with a focus on caring considerations, could prove beneficial for both the elderly individuals and the entire community.
research questions and	How can an affordable housing system prioritize the living conditions of the elderly, simultaneously remaining suitable and adaptable over the years for potential changes in demographic characteristics within these tea garden communities?
design assignment in which these result.	An elderly-oriented affordable housing system in the context of Lakkatura tea garden, Sylhet, Bangladesh

Process

Method description

The research methodology serves as a comprehensive system to collect data from various aspects, forming the theoretical framework for the entire research and providing a foundation for the design. Initially, the methodology is concentrating on exploring the background of labor and tea garden communities in Bangladesh, focusing on historical, cultural, societal, and economic dimensions. Subsequently, practical experiences related to affordable housing, elderly-friendly housing, and traditional housing in the South Asian region are analyzed and incorporated. Crucially, data about the site conditions and the target group are gathered through active participation in the specific local environment during a field trip.

Literature review:

Books, academic journals, newspapers, and web pages were reviewed to gather insights into the labor and economic conditions, as well as the social, cultural, and historical background of the tea garden and its communities from the colonial period. During this process, the social and cultural characteristics of the tea garden communities and tea workers were clarified and defined. Meanwhile, the current trends, challenges, and advancements in related fields were identified, showing the potential directions that this research will pursue. By contextualizing the research problem, the information has built a knowledge base, laying the background for the ongoing analysis and design phases of the research.

Case study:

The case study analysis served as one part of references for reviewing the previous practical experience about affordable housing and elderly-friendly housing all over the world, together with traditional housing types in Bangladesh. Through the analysis of these cases, it was figured out the ways to deal with some similar situations. This study aims to conclude design methods for developing a suitable housing system for labor communities, with a specific focus on the needs of the elderly, and finally contributing to an architectural database for this research.

Field work:

The field work could be seen as the most important part of the whole methodology session. It comprises three integral parts: a field trip involving observation and interviews, site analysis, and mapping. These three parts could together form up a three-dimensional understanding of the site and target group.

During the field trip, the Lakkatura tea garden was identified as the site, representing a typical labor community facing significant challenges in living conditions for the elderly and the potential risk of the younger generation relocating to urban areas. Observation and recording works were completed during the process of field trip, under the media of photos, videos and recordings, which could directly show the current situation of community environment and the overall life quality here. Special attention was given to recording and interviewing the elderly residents to understand their living conditions.

The site analysis will primarily focus on the characteristics related to geographical isolation, potential influences from the climate feature and changes, and the basic layout and built environment conditions of this community. This systematic site analysis will mainly address the external factors that could influence the design methods, including the potential concepts of layout, structures and materials.

In the mapping phase, it will point towards the internal factors within the Lakkatura tea garden community. This aims to create an activity map illustrating the patterns of the elderly residents and the overall local residents, in order to identify the communal order of daily routines and private space needs. Additionally, the mapping process will include social and cultural characteristics, recognizing their significant influence on the activity patterns within the community.

Literature and general practical references

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Ahmed, Iqbal. "Wage Determination in Bangladesh Agriculture." *Oxford Economic Papers* 33, no. 2 (1981): 298–322. <http://www.jstor.org/stable/2662904>.

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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)?

My graduation project involves creating a cost-effective and elder-friendly housing system based on the Lakkatura tea garden community in Sylhet, Bangladesh. This study is a particular application within the broader theme of global housing, specifically focusing on the context of a global south country. The project primarily revolves around architectural design, aiming to extend its scope by examining its connections and impacts to the urban context.

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

1 Social relevance:

This project is focused on a specific problem facing by the residents who live in the Lakkatura tea garden community and aiming to provide a feasible architectural solution for them to improve their living conditions and make the community itself more sustainable. Furthermore, the design assignment of this project is to form up an affordable elderly-friendly housing system. As a mode of community composition, its repeatability makes it possible to be applied to other communities with the similar context in Bangladesh, or even in other global south countries.

2 Professional relevance:

This project aims to provide a modular structure system for the local residents to build by themselves. The structure system and housing style is influenced by the vernacular architecture style and traditional materials in Bangladesh, which could also be the concerns the current Bangladesh architects are focusing on. This project is hopefully providing aspects and discussions on practice. And the finding in this project may have practical applications for the professionals in Bangladesh.

3 Scientific relevance:

This project is aiming to design an affordable and elderly-oriented housing system, which may provide new approach or discussions to the affordable housing design.