

# 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](mailto: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	Aleksandra Joanna Troć
Student number	4952073

Studio		
Name / Theme	Advanced Housing Design	
Main mentor	Theo Kupers	architecture
Second mentor	Pierijn van der Putt	architecture
Argumentation of choice of the studio	I find the topic of the Advanced Housing studio especially relevant. After coming to Netherlands, I personally experienced the deficit of housing, staying room-less for months. On the other hand, recent events of the epidemic made me spend more time inside my dwelling than ever. Both these events made me reflect on the importance of our daily living environment and I wished to develop my understanding of it in the Advanced Housing Studio through my graduation project.	

Graduation project	
Title of the graduation project	Healthy Aging design as a tool supporting prevention of modern diseases among middle-aged people
Goal	
Location:	Rotterdam, Merwe-Vierhavens
The posed problem	In the last 30 years the chronic diseases contributed to shortening the healthy lifespan of an average Dutch person from 64 to 38 years. Coincided with the trend of aging of the population, in the next decades the problem is expected to cause undesirable situation from both humane and an economic perspective. One of the biggest reasons for that worrying development is the character of our living environment (including dwellings), that supports inactive behaviors and sedentary lifestyle.
research questions and	Main question: Which spatial characteristics of a dwelling can improve the physical and psychological health of the middle-aged inhabitants? Sub questions:

	<p>Which events of the past contributed to transformation of the lifestyle into sedentary?</p> <p>Which signs (types, elements, policies, models, etc.) mark the evolution of health-conscious dwellings across the years?</p> <p>Which elements of modern environment, especially dwelling, contribute to a healthy or unhealthy lifestyle?</p> <p>What are opportunities to generate more movement and participation in a dwelling space?</p> <p>What is active design, who adapts it and what are strategies it incorporates to improve the health of the aging population?</p> <p>Who are middle aged people?</p> <p>What are movement habits in a typical dwelling of the group age 45-60?</p> <p>What forms, relationships, spatial and programmatic opportunities can create social and physical well-being of the target group?</p>
<p>design assignment in which theses result.</p>	<p>The goal is to find appropriate household conditions for the middle-aged people, that could prevent them from developing chronic diseases, support the active lifestyle and provide rich experience of movement.</p>
<p><b>Process</b></p>	
<p><b>Method description</b></p>	
<p>In order to successfully explore the topic of healthy aging, and answer posed above questions I have decided to divide my research into two parts. First part is based on a literature survey from fields of medicine, sociology, and political economy on the topics of evolution of health-conscious dwellings, the change in the lifestyle and the target group of middle-aged people. The second part will use case studies to find active strategies incorporated in housing projects, that are acknowledged in the field, by doing analysis of plans and visual ethnography. This will be accompanied by general literature research from the field of architecture and urban design on strategies used to enhance physical activity and psychological health, focusing in particular the Active Design strategy and the Healthy City ideas.</p>	

## Literature and general practical preference

Castle, Helen., ed. *Designing for the Third Age: Architecture Redefined for a Generation of "Active Agers"*. London: Architectural Design, 2014.

Careri, Francesco., *Walkscapes*. Barcelona: Gustavo Gili, 2002.

Cheng, Irene., ed. *Active Design Guidelines: Promoting Physical Activity and Health in Design*. New York: Centre for Active Design, 2010.

De Bont, Ad., ed. *The Active City*. Amsterdam: Urhahn, 2017.

Edwards, Peggy., Tsouros, Agis D. *A healthy city is an active city: a physical activity planning guide*. Copenhagen: World Health Organization Regional Office for Europe, 2008.

Jones, Peter Blundell., Meagher, Mark. *Architecture and Movement: the Dynamic Experience of Buildings and Landscapes*. London: Routledge, 2014.

Lieberman, Daniel. *The Story of the Human Body, Evolution, Health and Disease*. London: Penguin Group, 2013.

Schittich, Christian., ed. *In Detail Housing for People of All Ages: flexible, unrestricted, senior-friendly*. Munich: Detail, 2007.

Urban Land Institute. *Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment*. Washington, DC: Urban Land Institute, 2015.

Van Oppen, Auguste., Klinkenberg, Evert., Pique, Eldrich. *Active Design for Buildings*. Amsterdam: Pantheon Drukkers, 2016.

## Reflection

1. The studio of Advanced Housing confronts the problem of the need to build a million new homes between now and 2030, but it dwells not only on the quantity, but most of all on the quality. One of the questions it tries to answer is how modern households can provide suitable dwellings for changing and diverse population. I believe the topic of my graduation project can result in some of these answers. My topic also ties in well into the character of architectural track, that I am part of, of which role is, according to TU Delft website, to teach us, how to deal with technical, social and spatial challenges encountered in the built environment with the help of design. I believe, finding solutions to my problem statement is a worthy challenge of a graduation master student.
2. It is during my lifetime, that the sedentary lifestyle has reached such an intense level and as a young architect I can observe recent effects of the pandemic on physical activity. I believe, it is one of the most important tasks of my generation to help older people stay healthy. Healthy elderlies can give indispensable wisdom and contribute hugely to the future society and economy. The following research topic will help me gain knowledge for this mission.

3. Ageing population is perhaps one of the most pressing topics of our time. Even though the life expectancy is higher than ever, the quality of the extended lifetime leaves a lot to desire. In the next decades a big pressure to treat the epidemic of chronic diseases will lie on the healthcare. It is important to reduce this pressure through actions on many fields including architecture by focusing on the prevention of the unhealthy lifestyle, rather than fixing its effects. As history has shown, environmental design can play a crucial role in improving public health. Like in the past, nowadays designers have means to play essential role in addressing the rapidly growing epidemics of obesity and related chronic diseases, especially in light of mounting scientific evidence demonstrating the impact of environmental design on physical activity and healthy aging. In the last decades we observed the rise of architecture, that values comfort, efficiency, and entertainment supported by passive technologies. Optimization of the space, that contributed to decreased human energy expenditure, is often seen as progress. The problem of larger population with diseases is dealt by adjusting dwellings to the reality of living with physical limitations and less thought is put into preventing or delaying those. Many architects are not aware of the urgency of the problem and the important role they can play by incorporating active approaches in their work. I believe, that this research can contribute to rising the awareness among architects of importance of activity-oriented spaces, walkability of the space, experience of space and breaking habits.