

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	Nadejda Dmitryevna Znamenskaya
Student number	4541456

Studio		
Name / Theme	Designing for Care in an Inclusive Environment	
Main mentor	Birgit Jurgenhake	Architecture
Second mentor	Lex van Deudekom	Building Technology
Third mentor	Frederique van Andel	Research & Design
Argumentation of choice of the studio	<p>The elderly have always fascinated me. Having lived such a long life, they have a wealth of experiences from the past. Sadly the elderly are often forgotten or excluded from society, I want to do them right by choosing this studio and designing something useful for them.</p> <p>Additionally I think learning about accessibility for differently abled people is crucial for an architect, who doesn't want to unintentionally exclude anyone in the future. We all have a chance of becoming disabled someday and it would be nice if our environments would not form an additional obstacle during such a difficult period.</p>	

Graduation project	
Title of the graduation project	Happily Ever After – Mental Health Promoting Senior Living Environments
Goal	
Location:	Stieltjesstraat 65, Laakkwartier, 's Gravenhage
The posed problem,	There is a lack of studies on how depression in senior living environments can be countered or prevented with a holistic architectural approach
research questions and	Which architectural features can contribute to the prevention or alleviation of depression in senior living environments?
Design assignment in which these result.	A booklet containing list of architectural features, that can be implemented in the design of any elderly living environment to promote mental wellbeing of its future users.

	<p>These features are implemented in an architectural design proposal for an urban senior housing complex in the Hague.</p>
<p>Process</p>	
<p>Method description</p>	
<p>I will first need to form an overview of existing mood-lifting features, derived from the findings of evidence based design and environmental psychology. I will also look at case studies of state-of-the-art psychiatric facilities, which are often designed to promote mental wellbeing of their patients.</p> <p>Once I have established this first list of mood-lifting architectural features, I will need to adapt them to the specificities of the older population, since this demographic is likely to have special needs. Furthermore late life depression has different origins and symptoms than (young) adult depression. I therefore need to create an understanding of the causes of elderly depression and strategies for depression prevention and treatment. For this I will need to read existing literature and perform in-depth interviews with the elderly and geriatricians. Once I have identified the main factors influencing mental health of seniors, I can use them as guidelines to formulate a design proposal for a senior housing complex in the Hague. Finally I will summarize the mood lifting architectural features (which I have encountered in case-studies and my own design process) in a small booklet, which can be used by future architects, designing senior living environments.</p>	

Literature and general practical preference

A selection of main references, defining and structuring research

Evidence Based Design

Bradley E., Karlin Ph.D., Robert A., Zeiss Ph.D. (2006). Best Practices: Environmental and Therapeutic Issues in Psychiatric Hospital Design: Toward Best Practices. *Psychiatric Services*. 57(10). 1376-1378. <https://doi.org/10.1176/ps.2006.57.10.1376>

Malkin, J. (2008). *A visual Reference for Evidence Based Design*. Center for Health Design.

Ulrich, R. S., Berry, L. L., Quan, X., & Parish, J. T. (2010). A conceptual framework for the domain of evidence-based design. *HERD: Health Environments Research & Design Journal*, 4(1), 95–114. <https://doi.org/10.1177/193758671000400107>

Environmental Psychology

DuBose, J., MacAllister, L., Hadi, K., & Sakallaris, B. (2018). Exploring the Concept of Healing Spaces. *HERD: Health Environments Research & Design Journal*, 11(1), 43–56. <https://doi.org/10.1177/1937586716680567>

Gifford, R. (2014). Environmental Psychology Matters. *Annual Review of Psychology*. 65(1). 541-579. <https://doi.org/10.1146/annurev-psych-010213-115048>

Huisman, E.R.C.M., Morales, E., Van Hoof, J., Kort, H.S.M. (2012) Healing environment: A review of the impact of physical environmental factors on users. *Building and Environment*. 58, 70-80. <https://doi.org/10.1016/j.buildenv.2012.06.016>.

Elderly Living Environments

Feddersen, E., Lüdtke, I. (2012) *Living for the Elderly - A design manual*. (2nd ed.) Birkhäuser.

Skiba, I., Zücher, R. (2020). *Basics Barrier-Free Planning*. (2nd. ed.). Birkhäuser.

Late Life Depression

Okereke, O.I. (2015) *Prevention of Late-Life Depression Current Clinical Challenges and Priorities*. Humana Press.

Steffen, A.M., Thompson, L.W., Gallagher-Thompson, D. (2022). *Treating Later-Life Depression*. Oxford University Press.

Walaszek, A. (2022) *Late-Life Depression and Anxiety*. American Psychiatric Association Publishing

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)?

The studio Designing for Health and Care acknowledges architectural design as an element affecting the physical and mental state of its user. Healthcare Architecture should therefore prioritize human health and wellbeing by creating a healing, inclusive and stimulating environment.

In my research I will try to understand which elements of the physical environment contribute to better mental health outcomes for the elderly, a growing target group which is often neglected and excluded from society. I will carefully study these elements and try to translate them into a list of architectural features through a research by design approach. As a result my graduation project is a socially relevant combination of theoretical research and design, fitting the requirements of a master graduation.

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

Since the elderly are a growing demographic, late life depression is an increasing problem in our society. It is estimated that roughly one fifth of individuals over 75 suffer from depression. Depression is therefore a major contributor to the pressure on healthcare providers, since misdiagnosis and treatment of comorbidities is a common phenomenon. The main treatment strategy for depression is medication and psychotherapy. However since the elderly spend the majority of their time at home, their living environments will ultimately influence their mental health.

The findings of my research could be used by future architects (including myself) to design or redevelop senior living environments with a special focus on mental health. As a result it could contribute to an effort to relieve the pressure off healthcare providers.