

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

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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	Szu-Yin Huang
Student number	5287146

Studio		
Name / Theme	Complex project / Bodies, Buildings, Berlin	
Main mentor	Jelmer van Zalingen	supervision fo the graduation process
Second mentor	Florian Eckardt	guidance of the technical aspect
Third mentor	Yağiz Söylev	guidance of the design and group work
Argumentation of choice of the studio	Because of the broad design and thinking approach offered by the complex project chair.	

Graduation project	
Title of the graduation project	Bone Hospital, Medical tourist center in Berlin in the information society.

Goal	
Location:	Berlin, Germany

<p>The posed problem,</p>	<p>Berlin, the medical capital of Germany, is a fertile ground for medical tourism with its rich culture, nature, technology, healthcare resources, and innovation potential. But at the same time, Germany's healthcare system, like many other countries worldwide, is facing a crisis caused by an aging population resulting in an increasing burden on the healthcare system, a shortage of caregivers and medical staff, and an urgent need for digital transformation.</p> <p>Hospitals shape and reflect the medical system's value and, even more, influence public health. This project takes an orthopedic hospital, a medical tourist center in Berlin, as a testing ground to explore the role of architecture in the healing process and to rethink the hospital typology to better adapt to the information society.</p> <p>Also, address the issue of the demand for medical tourism in Germany, tracing the obstacles medical tourists might face during their healing process as well as the common gap in current medical facilities.</p>
<p>research questions and</p>	<p>What is the role of architecture in the healing process? How can a medical facility facilitate both physical treatment and mental healing simultaneously? The research question is further subdivided into three sub-questions:</p> <ol style="list-style-type: none"> 1. How can healthcare facilities balance treatment and leisure to achieve mental and physical healing? 2. How can architecture enhance patients' autonomy during their recovery process? 3. What is the role of technology in the medical field? How can medical facilities supplement technology to achieve the most efficient and quality service?

<p>design assignment in which these result.</p>	<p>This study focuses on understanding and analyzing the relationship between building and body, the internal flow of healthcare institutions, and the physical and mental impact of healing spaces on users. With the intervention of digitalization and technology, the study considers how medical buildings can be transformed into highly efficient, medically productive therapeutic spaces that are friendly to staff, patients, and even the city.</p>
<p>[This should be formulated in such a way that the graduation project can answer these questions. The definition of the problem has to be significant to a clearly defined area of research and design.]</p>	
<p>Process</p>	
<p>Method description</p>	

1. Program

The framing of this project's goals for economic and functional performance provides the basis for the design and, therefore for the functioning of a building throughout its lifetime. The research will seek to expand the boundaries of the architectural programming process to include a broader understanding of human factors, make an optimal environmental and social performance of the project goals and eventually compose a design brief for the medical tourist center. It is beneficial to study precedents and comprehensively understand the design strategies and philosophy concealed under the built results. The program analysis will select relevant case studies based on each sub-question.

Case study:

Study cases of buildings for physical impairments, e.g. rehabilitation hospitals, care centers, architecture with a healing effect on the physical and mental, e.g. surgical hospitals, rehabilitation centers, and multi-sensory architecture. Establish the program and area of the functional capacity of the building, the area of the intrinsic capacity, and the stacking/sequencing logic. Moreover, identify key spaces and flows within the buildings.

2. Client

Internet research: Stakeholders involved in medical tourism hospitals are mainly hospitals, travel, and medical agencies. Three main types of hospital initiators can be distinguished: government-owned, non-profit organizations, and private for-profit organizations. Most of the travel and medical agencies are private organizations. Suitable client(s) will be selected by analyzing their prospect's strengths and weaknesses.

3. Site

Map study: Study Berlin's entire environment, public transport, economic trend, and demography. Selections of potential sites through analyzing the environmental quality, accessibility, public attributes, accessibility, and regional development potential. Requirements will be set for the group topic on the economy to achieve the common goal on the city scale. Criteria for hospital typology and the specific need for the program will also be set to locate the building.

Literature study: Read about the plans and visions of the Senate and the German government for Berlin and learn about and select sites with potential development.

Site visit: Acquire information through site visits; two site visits of approximately one week are expected to occur in May and September 2023.

Literature and general practical preference

Bibliography:

Literature

1. Medical Tourism Business. (n.d.). Germany's Medical Tourism Market Continues To Thrive [Statistics, Trends, and Growth]. [www.linkedin.com. https://www.linkedin.com/pulse/germanys-medical-tourism-market-continues-thrive/](https://www.linkedin.com/pulse/germanys-medical-tourism-market-continues-thrive/)
2. Pallasmaa, J. (1996). *The Eyes of the Skin: Architecture and the Senses*.
3. Ganatra, S. (2022). *Sensory Design: Therapeutic Architecture*. RTF | Rethinking the Future. <https://www.re-thinkingthefuture.com/2021/01/30/a3098-sensory-design-therapeutic-architecture/>
4. Foster + Partners. (n.d.). <https://www.fosterandpartners.com/projects/maggie-s-manchester>
5. Thalenfeld, A. (2019). BELLEVUE "NEW BUILDING" — NYC URBANISM. NYC URBANISM. <https://www.nycurbanism.com/brutalnyc/bellevue-new-building>

Project

1. REHAB Basel, Rehabilitation Center, Basel, Herzog & de Meuron
2. JESSA Hospital, KAAAN Architecten
3. The Therme Vals, Peter Zumthor
4. Meggie's center, Norman Foster

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.

'Complex Projects explore an "architecture of dialogue", one that is dialectic, inclusive and relational, It engages with reality to transform it from within.' (Complex project, 2023)

This research was conducted within the framework and methodology of Complex Studio. Such a research based design approach is also feasible in a broader social, professional and scientific framework. The themes explored in this study include therapeutic spaces, universal design, autonomy supportive architectural spaces, and the evolution of architectural spaces in the information society, all of which are concepts that can be applied to other typologies of architecture or larger professional frame work.