

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	Olivia Fanlin Meng
Student number	4572777

Studio		
Name / Theme	Methods of Analysis & Imagination - Positions in Practice	
Main mentor	Dr. Jorge Mejía Hernández	Architecture Methods of Analysis & Imagination
Second mentor	Ir. Pierre Jennen	Building Technology
Argumentation of choice of the studio	The studio addresses the challenge of defining a personal architectural and analytical position, through the exploration of various research and design methods. Through the studio, I aim to learn about and use such instruments in order to adopt my own position as a future architect in practice, something I deem very important as the outcome and finalization of my master's degree.	

Graduation project	
Title of the graduation project	The River Keeps the Score
Goal	
Location:	Budapest, Hungary; Margaret Island and Óbudai Island
The posed problem,	<p>Rivers are the <i>genius loci</i> of riverside cities, carrying the spirit of the place and its people, as a body of water, always flowing. Rivers have been the source of life upon which civilization was built, but are also spiritually deeply meaningful for many cultures and philosophies.</p> <p>Religion is understood not only as the institutionalized systems of beliefs such as Christianity, Islam, etc. that operate in the world today, but also with the origin of the word. Derived from the Latin word of <i>religare</i>, it means 'to bind'</p>

or 'to put together what has previously been separated'. Human processes have severely impacted the natural landscapes of the Earth, resulting in drastic environmental issues. An ecological approach, with respect to nature, is therefore in a sense religious, aiming for reconnection of what has been fragmented: the relationship between humans and nature. Relating the river to this twofold meaning of religion reveals two ways of looking: the established systems of faith in which nature and the elements are divine, as a source of inspiration; and the river as a natural body of water existing alongside human processes where the connection is fragmented. This particular approach to the state of the environment, in the case of the river – reconnecting what has been lost – is explored in the case of the Danube.

The river Danube is the second longest river in Europe. It flows through 10 countries, including Hungary, and has played a central role in the forming and political position of cities in central and southeastern Europe. As a waterway, it remains an important route for industry and trade. In the case of Budapest, the Danube directly connects and separates the two parts of Buda and Pest. In the Danube lie several islands, including Margaret Island and Óbudai Island.

Budapest's Danube is under increasing social and environmental stress. Considering Budapest's lengthy history, throughout times of war and industry, the riverbanks have been contaminated, physically and spiritually. Memorials along the riverbanks 'keep score' of events of the past as a materialized form of history. The riverbank of the Danube consists of mostly hardened quays, lined with roads, with a great height difference between water and the

	<p>shore, as a means of flood protection but also resulting in little to no access to the water for people. The people of Budapest are physically and spiritually removed from the river. Thus, the graduation project focuses on the urban river that flows through Budapest, and considers a religious approach in order to reconnect the people of Budapest to the spirit and body of the river.</p>
research questions and	<p><i>Main question:</i> How can a religious architecture spiritually reconnect the people of Budapest to the river Danube?</p> <p><i>Sub-questions:</i></p> <ul style="list-style-type: none"> • What role do rivers/water play in established religions and how is this expressed through architectural elements? • How can architecture be spiritual? • How can architecture be religious? • How is iconography used in architecture and religion? • What does ecology mean for architecture?
design assignment in which these result.	[Design Assignment]
<p>Resulting from the contextual, conceptual and disciplinary analysis of the studio framework, the design assignment consists of two public buildings that allow the people of Budapest to reconnect to the river, spiritually and physically. While the entire scale of the river is relevant, the site is set on two islands in the river Danube, Margaret Island and Óbudai Island.</p> <p>The first island is a place where the river splits into two parallel streams, and the latter is an island along which the river stream flows. Connected through the Árpád Bridge, two buildings bring together the hills of Buda on the east and the city of Pest on the west, as well as recharging the Óbudai Island beyond the summer festival season and landmarking the tip of Margaret Island as a monumental entry point to the city for ships and visitors alike. The route from one to the other is like a spiritual pilgrimage.</p> <p>I am designing a museum and archive on Óbudai Island and a chapel on Margaret Island. An addition to the Árpád Bridge is part of the design assignment to establish a route between the two locations. The design approaches stem from the specificities</p>	

of the site: Óbudai Island emphasizes the flow of the river, the stream along which the city was developed; Margaret Island points towards the horizon and the origin of the river. The two buildings individually respond to these site-specific characteristics, yet collectively behave like yin and yang, acting as a whole. As part of the river's 'score', the buildings redefine the relationship between the people and the river: more spiritually and environmentally conscious.

The museum and archive will function as a place of education and connection, through new, sensory ways of experiencing the river, with exhibitions paying homage to the rich history of the river. The chapel will allow for reflection and introspection and reevaluating one's relationship to the spirit of the river.

Process

Method description

Research methods

For the research methods, I make use of the epistemes, such as ecology, praxeology, and semiology. To analyze and understand the context of the graduation project, research questions are:

What is the history of the river Danube?

- What is the geographical history?

Method: mapping a geographical timeline of the Danube throughout the millennia, focused on the around within and around Budapest.

- What is the etymological origin?

Method: looking into writing and literature, and linking this to religious or cultural meanings.

- What historical events have happened there?

Method: cataloguing the events in which the Danube played a significant role, describing them and mapping the locations and spatial impacts.

- What does the Danube mean for the country of Hungary and more specifically, the city of Budapest?

Method: semiotic analysis of the river Danube in iconography, existing architecture, and literature, looking at symbols, through describing and ascribing meaning.

What is the role of the river today?

- How do people use the riverbanks?

Method: behavioral analysis of what activities happen along the riverbank, when, and where, through drawing and photographic materials; conducting interviews with local people; inspired by methods of Image of the City (Lynch, 1964) in which he describes how people subconsciously make mental maps of the cities they experience.

- What kind of iconography and symbols are found along the river?

Method: semiotic analysis of the existing architecture, memorials, bridges, and statues, alongside the riverbanks, through mapping the iconography/symbols and architecture and its meanings; based on methods from Learning from Las Vegas (Venturi et al., 1972), in which the architecture of Las Vegas is analyzed based on symbols and signs.

- What is the ecological status of the river?

Method: mapping the green/gray spaces along the river, biodiversity, and green/water quality; conducting interviews with local experts on the topic.

Two precedents in Budapest were also analyzed as part of a disciplinary analysis, the Margaret Bridge and Gellért Bath. The first being a bridge crossing the river, and the second a thermal bath showcasing one of the city's cultural traditions related to water, these analyses allow for a different, representative perspective on the subject of the river Danube and its relation to the city's architecture and infrastructure.

Thus, by analyzing the past and the present of the river Danube and its relation to the city of Budapest, the questions about the future can be explored. All these research methods are paired with ethnographic fieldwork done on-site.

The research methods help sharpen design choices throughout the design process. For instance, interviews and mapping spatial and ecological qualities about the river lead to the choice of the site and the approach to the site. By investigating the history of the river, the program was decided – the need for a museum and a chapel were established. Furthermore, through the disciplinary analysis of relevant projects already within the context, the design is put into relation to the existing architecture and their performances.

Design methods

The design methods focus on producing detailed and accurate drawings, such as plans and sections, as a way of understanding the design and its technical aspects in its totality, and continuously refining these. To reflect upon the design process so far, methods are:

- Sketching and drawing both conceptually and to scale
- Creating physical and digital models: site models and sketch models
- Working in various scales (1:2000 to 1:5)
- Drawing perspectives and atmospheres using various media, such as paint, ink, pencil, collage, physical models, photos

One key design method is reference studies: analyzing existing reference projects (see also *Literature and general practical preference*) by a broad range of architects, that achieve the architectural goals I am looking for; taking inspiration from their form and purpose. Beyond just looking at the images, actually drawing the buildings has been extremely helpful in discovering the design decisions and techniques of the architecture, such that it can inform my own.

The design process began with consolidating the contextual, conceptual, and disciplinary analyses and developing these into a design proposal. Big challenges were the key decision-making moments of the design, such as the choice of site, program, form, purpose. These were overcome by looking back to the conclusions of the contextual analysis, thoroughly analyzing reference projects that achieve similar goals, and lots of trial and error.

Continuously moving from the urban level (1:2000/1:1000), to conceptual sketches, to accurate and technical drawings (1:200, 1:100 and 1:50) has been another key method in the design process. It exposes the spots where the architecture is still lacking, as it uncovers new levels of detail that were invisible previously. Moving back and forth between scales, zooming in and out, from concept to architecture and back, has been fundamental in realizing a complete picture of the design assignment and an extremely valuable lesson that forces me to do quick decision-making and keep on moving forward.

Literature and general practical preference

Key sources

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Key reference projects

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Ando, T. (1991). Water Temple. Awaji Island, Japan.

Märkli, P. (1992). La Congiunta. Giornico, Switzerland.

Le Corbusier (1960). Convent of La Tourette. L'Arbresle, France.

Van der Laan, H. (1975). Abbey Roosenberg. Vaals, the Netherlands.

Van der Rohe, L. M. (1929). Barcelona Pavilion. Barcelona, Spain.

Van der Rohe, L. M. (1968). Neue Nationalgalerie. Berlin, Germany.

Turrell, J. (1996). Celestial Vault. The Hague, The Netherlands.

Utzon, J. (1976). Bagsværd Church. Copenhagen, Denmark.

Zumthor, P. (2007). Bruder Klaus Field Chapel. Mechernich, Germany.

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 graduation topic of the Danube in Budapest addresses the social and environmental challenges of contemporary cities in a European context, which are dealing with important spatial, political, spiritual questions in the urban landscape. It is relevant to the studio topic as it specifically asks students to define an individual position in practice and to take the responsibility of determining a strategy for intervening in an existing site. Central to this challenge are the methods and instruments used in research and design. As the scale and subject of the graduation topic are so variable, it is a fertile testing ground for a variety of methods and instruments in order to develop my personal position as a future architect in practice and to imagine possibilities offered by the site.

The approach of the Methods studio and the graduation topic invites an interdisciplinary view on issues that occupy present-day societal and professional frameworks. The education of the master track Architecture and the programme AUBS moves across scales and fields, as does this project. It engages the totality of the architectural scope: form, technique, function, and communication in the context of the built and natural environment. With my project, I aim to consolidate and reflect upon all the tools, references, and skills I have learned in my entire education.

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

The graduation project addresses the questions of the environment specifically through the methods of a spiritual and religious architecture. This offers a different scientific method and ecological perspective that goes beyond conventional green building methods, for example. Engaging within the scientific frameworks of ecology, posthumanism, and environmental philosophy, and considering all these topics as relational to architecture, offers an interdisciplinary lens through which to view the challenges in the built environment. It is relevant for the contemporary social and professional questions of how to operate in architecture with regards to the urban landscape of the environment.