

# 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	
Student number	4407997
Telephone number	
Private e-mail address	

Studio	
Name / Theme	Cross Domain: City of the Future
Main mentor	Urbanism
Second mentor	Urbanism
Argumentation of choice of the studio	<p>The approach cross-domain studio is beneficial in understanding a multidisciplinary topic like affordable housing. While knowledge in the field of Management of the Built Environment is necessary for understanding the superordinate economic conditions and political decisions affecting urban development, explorations in the field of Architecture can provide answers regarding specific spatial implications on the human scale.</p> <p>The studio is motivated by urgent social / local issues directly affecting the main study topic like housing demand, social inclusiveness, new economy and transitions in areas of automation and digitalization influencing the process of housing production.</p>

Graduation project	
Title of the graduation project	Towards an Affordable Munich
Goal	
Location:	Munich, Germany
The posed problem,	<ul style="list-style-type: none"> <li>- Decreasing household size.</li> <li>- Increasing use of space.</li> <li>- Increasing demand for affordable and social housing.</li> <li>- Increasing real estate prices.</li> <li>- Stagnating wages of lower and middle classes.</li> </ul>

	<ul style="list-style-type: none"> <li>- Increasing demand for speculative housing investments.</li> <li>- Decreasing social housing stock.</li> <li>- Decreasing supply of available land for development.</li> <li>- Decreasing capacities of the construction industry.</li> <li>- Increasing constructions costs.</li> <li>- Increasing regulative complexity of construction.</li> </ul> <p>Summary:</p> <ul style="list-style-type: none"> <li>- Decreasing supply of affordable housing.</li> <li>- Increasing demand for affordable housing.</li> <li>- Increasing costs for affordable housing.</li> </ul>
<p>research questions and</p>	<p>Main question:</p> <p>How to accommodate more affordable housing in the city of Munich?</p> <p>Sub-question:</p> <p>How to increase supply of affordable housing with the means of urban and architectural planning and design?</p> <p>How to decrease demand for affordable housing with the means of architectural design?</p> <p>How to decrease construction costs of affordable housing with the means of architectural design and engineering?</p>
<p>design assignment in which these result.</p>	<p>Increase supply of affordable housing with the means of urban and architectural planning and design!</p> <p>Decrease demand for affordable housing with the means of architectural design and engineering!</p> <p>Decrease construction costs of affordable housing with the means of architectural design and engineering!</p>

Increasing supply with the means of:

- Expansion
- Transformation
- Densification

Decreasing demand with the means of:

- Minimalisation
- Externalisation
- Optimisation

Decreasing costs with the means of:

- Simplification / Low-Tech
- Standardisation / Rationalisation / Modularisation
- Prefabrication / Mechanisation / Robotisation / Mass-customisation

## **Process**

### **Method description**

Decreasing demand with the means of:

- Minimalisation
- Externalisation
- Optimisation

Theory:

- Literature review
- Quantitative analysis
- Qualitative analysis
- Best practice

Context analysis:

- Mapping
- GIS
- Case study analysis

Design:

- Explorative design
- Case study
- Best practice
- Criteria based design / parametric design
- 3D modelling
- Sketching

### **Literature and general practical preference**

BAHNER, O., & BÖTTGER, M. (Eds.). (2016). Neue Standards: Zehn Thesen zum Wohnen. Jovis Berlin.

DREXLER, H. (2017). Einführung – Bezahlbar. Gut. Wohnen. In K. Dömer, H. Drexler, & J. Schultz-Granberg (Eds.), Bezahlbar. Gut. Wohnen: Strategien für erschwinglichen Wohnraum (pp. 10–35). Jovis.

DÖMER, K., DREXLER, H., & SCHULTZ-GRANBERG, J. (Eds.). (2017). Bezahlbar. Gut. Wohnen: Strategien für erschwinglichen Wohnraum. Jovis.

DREXLER, H. (2017). Strategien für erschwinglichen Wohnraum. In K. Dömer, H. Drexler, & J. Schultz-Granberg (Eds.), *Bezahlbar. Gut. Wohnen: Strategien für erschwinglichen Wohnraum* (pp. 36–69). Jovis

HABITAT FOR HUMANITY (Eds.). (2015). *Housing review 2015: Affordability, liveability, sustainability*. Habitat for Humanity, Bratislava, [https://www.habitat.org/sites/default/files/housing\\_review\\_2015\\_full\\_report\\_final\\_small\\_reduced.pdf](https://www.habitat.org/sites/default/files/housing_review_2015_full_report_final_small_reduced.pdf).

HAFFNER, M.E.A., ELSINGA, M.G. (2015). Affordability. In Habitat for Humanity (Eds.), *Housing review 2015: Affordability, livability, sustainability* (pp. 29–42). Habitat for Humanity

FEZER, J., HIRSCH, N., KÜHN, W., & PELEG, H. (Eds.). (2017). *Bibliothek 100 Jahre Gegenwart: Vol. 2. Wohnungsfrage*. Matthes & Seitz Berlin

KEMENY, J. (1992). *Housing and social theory*. Routledge.

KLEEFISCH-JOBST, U., KÖDDERMANN, P., & JUNG, K. (Eds.). (2017). *Alle wollen wohnen: Gerecht. Sozial. Bezahlbar*. Jovis Berlin.

KOCKELKORN, A. (2017). Wohnungsfrage Deutschland: Zurück in die Gegenwart. Von der Finanzialisierung der Nullerjahre über den Niedergang der Neuen Heimat zum Ordoliberalismus der 1950er Jahre. In Fezer, J., Hirsch, N., Kühn, W., & Peleg, H. (Eds.), *Bibliothek 100 Jahre Gegenwart Vol. 2. Wohnungsfrage* (pp. 107–132). Matthes & Seitz Berlin

KRAFT, S. (2017). Einige Überlegungen zur Frage der Wiederbelebung des sozialen Wohnungsbaus. In Kleefisch-Jobst, U., Köddermann, P., & Jung, K. (Eds.). (2017). *Alle wollen wohnen: Gerecht. Sozial. Bezahlbar* (pp. 14–21). Jovis Berlin.

KUHN, G. (2017). Von der Familienwohnung zum Clusterwohnen. Wohngrundrisse im Spiegel des gesellschaftlichen Wandels. In Kleefisch-Jobst, U., Köddermann, P., & Jung, K. (Eds.). (2017). *Alle wollen wohnen: Gerecht. Sozial. Bezahlbar* (pp. 46–49). Jovis Berlin.

LÖFFLER, K. (2016). *Wohnungspolitische Instrumente zur Gewährleistung von bezahlbarem Wohnraum: Wohnen in Weimar seit 1990*. IfEU EDITION: Band 1. Bauhaus-Universitätsverlag Weimar als Imprint von VDG - Verlag und Datenbank für Geisteswissenschaften Weimar.

MOORE, J., SCHINDLER, S. (2017). Eine Definition der Ungleichheit. In Fezer, J., Hirsch, N., Kühn, W., & Peleg, H. (Eds.), *Bibliothek 100 Jahre Gegenwart: Vol. 2. Wohnungsfrage* (pp. 63–74). Matthes & Seitz Berlin

MUNDT, A. (2012). Housing and Welfare Regimes. In D. Clapham, W. Clark, & K. Gibb (Eds.), *The SAGE Handbook of Housing Studies* (pp. 274–294). SAGE Publications..

## 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)?

Munich is the city I have been born in and spend most of my life. During my first five years of practical experience in an architectural office, I have witnessed an unprecedented increase in real

estate prices. I came to realise, that with every year, chances of becoming a homeowner in the city of Munich grew up in are getting slimmer. The city is not only rapidly attracting new people, but also new capital in search for a safe yield, all in competition for the ever scarcer supply of housing.

My interest lies in understanding the underlying economic and political preconditions of affordable housing. At the same time, I have been always fascinated by the ordinary design assignments. The design of affordable or social housing is seen by many as such an ordinary assignment, due to the abundance of restrictions and limited leeway. I regard it as the supreme discipline exactly because of that.

During the last two years of my practical experience I had the chance to work on developing an industrialised, modular building system for a private construction company. I encountered the many restrictions within the building industry that is preventing further industrialisation like in other producing industries. Nevertheless, I can see the potentials of industrial production on cost efficiency and would like to explore and test these systems within the task of providing more affordable housing in the city of Munich.

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

Societal Relevance:

The sharply rising real estate prices in German metropolitan areas, has not happened unnoticed by the public. Soon newspapers all over the country picked up more stories about the negative effects of rising prices on the lives of residents. It soon became apparent that the not only marginalised groups assisted with social welfare, but an increasing share of the middle classes are affected. Moving up the social ladder by becoming a homeowner is becoming increasingly difficult for more, especially young and even highly educated people. The few extracts of media coverage in this section demonstrate the sense of urgency of the lack of housing affordability.

Scientific Relevance:

Experts on various levels and with different scientific background are concerned with the topic of affordable housing, illustrating its multi-disciplinary nature. On a global level, Saskia Sassen is particularly interested on the effects of increasing globalisation, privatisation, marketisation and financialisation on local housing. She identifies the city as the new urban frontier in which multinational corporations compete with individual residents alike for valuable resources.

Many scholars with real estate management background, who are aware of political developments and their effects on housing, are becoming increasingly critical of current housing policies in European countries. Two professors of Delft University Technology, Marja Elsinga and Marietta Haffner, are leading experts in the field of housing affordability. Their numerous contributions to the body of knowledge over the last decades demonstrate the timeless relevance of the topic.

Finally, the concern with the topic of affordable housing is going through a renaissance in the field of architecture and urbanism, after classical modernists pioneered their relevance for the topic and fellow colleagues of the post-war period continued in their tradition. The great number of

publications and exhibitions by architects and architectural publishers during the last few years  
underlines this notion.

## **Time Planning**

### **Week 1.1 – 5.5 Graduation**

**Week 1.1 – 1.10** preliminary research, problem statement, research question, societal and scientific relevance

**Week 2.1 – 2.10** in depth research, expert interviews, multi-scalar site exploration, design principles and strategies, definition of affordability criteria, theoretical framework (regimes, actors, typologies, audience, definitions of affordability)

**Week 3.1 – 3.10** final research, site evaluation and selection, actor analysis, testing design principles, reflection of principles and criteria, optional: case study construction system 'maxmodul' regarding multi-scalar spatial implications

**Week 4.1 – 4.11** in depth design proposal, evaluation of case study and design proposal

**P1: Week 1.10**

**P2: Week 2.9**

**P3: Week 3.7 – 3.8**

**P4: Week 4.4 – 4.6**

**P5: Week 4.10 – 5.5**