

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

The graduation plan consists of at least the following data/segments:

Personal information	
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Studio	
Name / Theme	Architecture & Dwelling Global Housing: Cross-cultural Methods and Positions / Addis Ababa (AR3AD132)
Teachers / tutors	Prof. Ir. Dick van Gameren Dr. Ir. Nelson Mota Ir. J.P.G. Holst
Argumentation of choice of the studio	Housing shortage is an urgent issue worldwide, especially in developing countries. Ethiopia which is the second populous nation in Africa suffers the rapidly urbanization and relatively slow economic development. How to provide affordable housing for the mass in Addis Ababa at the same time considering the local situation like culture and life style is a big challenge. But it is as well a great opportunity for architects to use architectural way to come up with alternative housing type which interests me.

Graduation project	
Title of the graduation project	Start from the bridge: an urban strategy for slum upgrading
Goal	
Location:	Merkato area, Addis Ababa
The posed problem	<p>Ethiopia, with only 17 percent of the total population living in urban areas, but witnesses fast urban growth rate currently. The influx of the rural migrants into the capital city Addis Ababa aggravates the existing housing shortage problems. In order to be closer to the job opportunity many people choose to stay in the informal settlement of city center although it is already quite dense there. The imbalanced distribution of population in Addis Ababa shows the urgency to provide affordable housing in the city center areas.</p> <p>One of the main approaches to accommodate the mass is the condominium led by government. It provides a type of affordable housing and could be seen as successful to some extent (physical aspect), but there still remains a lot to be rethinking. Middle- and high-rise are implemented to increase the density but the typical life style is not well-considered like outdoor kitchen for cooking traditional food Injera. The modern architectural form combined with Ethiopian traditional living way (social and cultural aspects) deserves a better interpretation. Moreover the lottery system destroys the social network further breaks the income resource. As a result a lot of people move back to slum and rent the apartments to the other people.</p> <p>As the city expended, government invested a lot on the development of the infrastructure, such as the Ring Road and recently constructed Light Rail Way. They obviously increase the accessibility of the public</p>

	<p>transportation but also set as a board in the urban scale due to the width of the road and lack of over-bridges. In some parts the distance between nearest two over-bridges is as far as 3 kilometers. Many people would choose a more dangerous but easy way to pass across the handrail to reach other side.</p> <p>In conclusion, city center, modern architectural form with traditional life style as well as infrastructure is the mainly focusing points.</p>
research questions and	<p>According to the existing problems mentioned above, the research questions are as following:</p> <p>Can we take advantage of infrastructure to provide affordable housing in city center area and has a positive impact on city?</p>
design assignment in which these result.	<p>More than providing a shelter for the people, designing affordable housing should also consider social, cultural and economic aspects. It means merging the poor people in the city.</p> <p>Based on the status quo and position, the site is chosen at the Merkato area which is one of the most populous areas. A newly-constructed light rail way runs through the area and cuts it as two separated zones.</p> <p>Considering the disconnection of two sides and lack of public space, firstly a city corridor is provided to serve as not only the over-bridge but also a lifted square which allows public access. The publicness and being a critical junction offer great opportunities for both low- and middle-income groups to generate income. Then the middle- and high-rise buildings for housing which can achieve higher density are arranged on both sides of the streets connected by the “city corridor”. The project attempts to act as a model when redeveloping the inner city.</p>
<p>The design assignment can be divided into 3 different scales.</p> <ol style="list-style-type: none"> 1. Urban level: The strategy on this scale is explained above. 2. Community level: Currently the condominium projects mainly aim at a certain kind of income groups and show the exclusiveness of the very poor people. The object of new community is to enable better integration of different income groups and create a lively community atmosphere. 3. Unit level: Taking into consideration of the future development, the housing units should be designed as flexible as possible. Every dweller would have the opportunity to transform and extend their living place as the family grows. 	
<h2>Process</h2>	
<h3>Method description</h3> <p>In the first two phase, the whole studio is divided into several groups to do the study and research of different topics (Design research and thematic research). The phase 1 is mainly about building a collective knowledge base of morphological and typological figures. The central component of this knowledge base will be a research on the Urban Transformation and Housing Figures of Addis Ababa through four time periods from the foundation of the city until nowadays. In phase 2 four themes related to the housing policies in contemporary Addis Ababa are studied, namely migration, built heritage, infrastructure and mass housing developments. These two researches are done before site survey, so the main resource is the literature, articles and reports from the library and internet. The phase 3 is the site survey. Based on the knowledge from the previous two phases, site survey can be seen as an in-depth understanding of the city, different housing types and living habits. Photography, interview and hand drawings are applied in this phase. After this, another research focusing on social and spatial practices is carried out. Income generation, building techniques, social spaces and boundaries will be analyzed in this phase. Models making and computer drawings will be used in the design periods.</p>	
<h3>Literature and general practical preference</h3> <p>Literature:</p> <ol style="list-style-type: none"> 1. Abrams, Charles. Man’s Struggle for Shelter in an Urbanizing World. Cambridge, Massachusetts: M.I.T. Press, 1964. 2. Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. A Pattern Language: Towns, 	

Buildings, Construction. OUP USA, 1977.

3. Angéllil, Marc, and Dirk Hebel, eds. **Cities of Change: Addis Ababa : Transformation Strategies for Urban Territories in the 21st Century.** Basel: Birkhauser, 2010.

4. Bredenoord, Jan, Paul Van Lindert, and Peer Smets, eds. **Affordable Housing in the Urban Global South: Seeking Sustainable Solutions.** Abingdon, Oxon: Routledge, 2014.

5. Cherenet, Zegeye, and Helawi Sewnet, eds. **Building Ethiopia: Sustainability and Innovation in Architecture and Design.** Addis Ababa: EiABC, 2012.

6. Fuller, Mia. **Moderns Abroad: Architecture, Cities and Italian Imperialism.** New York: Routledge, 2007.

7. Gadanho, Pedro, ed. **Uneven Growth: Tactical Urbanisms for Expanding Megacities.** New York, NY: The Museum of Modern Art, New York, 2014.

8. Saunders, Doug. **Arrival City: How the Largest Migration in History Is Reshaping Our World.** New York: Pantheon Books, 2010.

9. Tipple, Graham, and Kenneth G. Tipple. **Housing the Poor in the Developing World.** London and New York: Routledge, 2003.

10. UN-Habitat. **Ethiopia: Addis Ababa Urban Profile.** Nairobi: United Nations Human Settlements Programme, 2008.

Case Study:

1. CIDCO Housing in India by Raj Rewal
2. Aranya Housing in India by Balkrishna Doshi
3. Ekbatan Housing in Tehran by Gruzen & Partners
4. Sangharsh Nagar in India by PK Das & Associates

Reflection

Relevance

Housing shortage is not the problem occurred only in Addis Ababa, and a lot of projects designed by both Western architects and local try to tackle this issue. But most of the approaches focus only on the architectural way. The project is an experiment to involve more aspects when dealing with the affordable housing.

Time planning

Week 1.1 (2015.09.01-2015.09.06)

- Introduction to the Graduation Studio
- Presentation of the students and tutors
- Introduction Phase 1 (Design Research and Projective Mapping)
- Formation of the "Research groups"

Week 1.2 (2015.09.07-2015.09.17)

- Discussion of bibliographic references related to the Urban Transformation and Housing Figures of Addis Ababa;
- Presentation and discussion of the preliminary research on the housing figures

Week 1.3 (2015.09.18-2015.09.24)

- Presentation of the diagrammatic synthesis of key aspects of the design research
- Establishment of an Editorial Team* for the Design Research booklet, and definition of editorial guidelines.
- Discuss draft version of the contents for the communication of the research output

Week 1.4 (2015.09.25-2015.10.01)

- Presentation of the outcome of Phase 1: Design Research and Projective Mapping

Week 1.5 (2015.10.02-2015.10.08)

- Introduction Phase 2 (Thematic Research / Problem Statement)
- Formation of the "Theme groups"
- Presentation and discussion of source texts and documentation

Week 1.6 (2015.10.09-2015.10.15)

- Group presentation of the main topics related with each theme/issue

Week 1.7 (2015.10.16-2015.10.19)

- Lecture by Paul van Lindert (Habitat Future / Utrecht University)
- Discussion of the group's draft problem statement
- Hand in draft version of the research booklet "living in Addis"

Week 1.8 (2015.10.20-2015.10.25)

- Hand in draft version of the research booklet "living in Addis"

- Presentation of the outcome of Phase 2: (Thematic Research / Problem Statement)

Week 1.9 (2015.10.26-2015.10.30)

- Phase 3: Field Trip to Ethiopia

Week 1.10 (2015.11.02-2015.11.08)

- Formation of "Site Survey" groups

- Site Survey and Workshop

- Lectures

Week 2.1 (2015.11.09-2015.11.15)

- Field Trip

Week 2.2 (2015.11.16-2015.11.22)

- P1 Presentations

Week 2.3 (2015.11.23-2015.11.29)

- Introduction Phase 4 (Patterns of Inhabitation)

- Discuss material gathered in the Site Survey;

- Definition of the Editorial Team* for the Addis Ababa Book of Patterns (AABP)

- Preparation of the guidelines for the AABP

Week 2.4 (2015.11.30-2015.12.06)

- Discussion of the contents for the AABP

Week 2.5 (2015.12.07-2015.12.13)

- Lecture by Michelle Provoost (INTI) tbc

- Presentation and discussion of the Addis Ababa Book of Patterns

Week 2.6 (2015.12.14-2015.12.20)

- Introduction Phase 5 (Design Hypothesis)

Week 2.7 (2016.01.04-2016.01.10)

- Lecture by Ralf Pasel (Pasel Kunzel Architects), tbc

- Discussion of the individual design hypothesis

Week 2.8 (2016.01.11-2016.01.17)

- Discussion of the individual design hypothesis

Week 2.9-2.10 (2016.01.18-2016.01.31)

- P2 Presentation

Week 3.1-3.4 (2016.02.08-2016.03.06)

- Reflection on P2

- Discussion on complexities within the design assignment

- Design concept formulation

- Build urban model incorporating urban strategy

- Sketches of impressions and variations

- Comparative analysis existing scheme and design proposal

- Typological analysis on dwelling floor plans

- Diversification of typologies in design

- Morphological analysis of locations (part of urban strategy)

Week 3.5-3.7 (2016.03.07-2016.03.27)

- Re-evaluation of the design assignment

- 3D model making

- Preparation for P3 presentation: problem statement, urban strategy, concept design, diagrams, technical drawings (floor plans, sections, elevation...), building construction principles, details

Week 3.8 (2016.03.28-2016.04.03)

- Easter holidays

Week 3.9 (2016.04.04-2016.04.10)

- P3 Presentation

Week 3.10-4.1 (2016.04.11-2016.04. 24)

- Reflection on Design

- Research booklet

- Descriptive analysis of design proposal

- Impressions and axonometric views

- Improvements to floor plan/section/elevations

Week 4.2-4.5 (2016.04.25-2016.05.22)

- Preparation of P4 presentation: research booklet, urban strategy, projective mapping of research, concept design, diagrams, technical drawings (floor plans, sections, elevation...), building construction principles, critical details, storyline

Week 4.6 (2016.05.23-2016.05.29)

- P4 Presentation

Week 4.7-4.10 (2016.05.30-2016.06.26)

- Preparation of P5 presentation

Week 4.11 (2016.06.27-2016.07.03)

- P5 Presentation