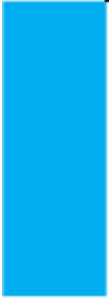


Graduation Plan

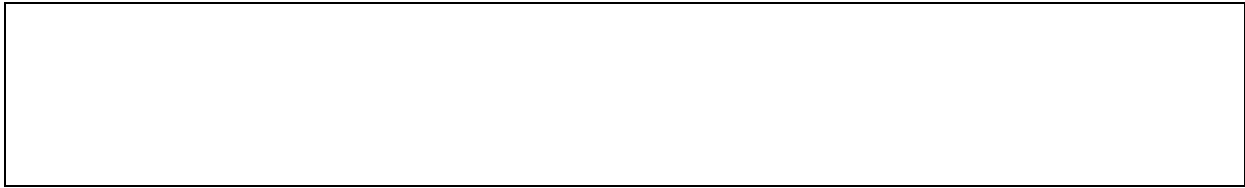
Master of Science Architecture, Urbanism & Building
Sciences



Graduation Plan: All tracks

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

Personal information	
Name	Shaista Farooqi
Student number	[4060393]
Telephone number	[06-20823049]
E-mail address	[shaistahw@gmail.com]
Studio	
Name / Theme	Architectural Engineering
Teachers	(Annebregje Snijders – Siebe Broersma)
Argumentation of choice of the studio	I like to blend the architecture with the principles of engineering .The knowledge of new and emerging technologies creates more possibilities for a smart and innovative architectural design.
Graduation project	
Title of the graduation project	[4060393_ShaistaFarooqi_GraduationPlan]
Goal	
Location:	[Van Gendthallen, Amsterdam]
The posed problem,	[In the Netherlands Solar energy is not yet playing an important role to mitigate the building fossil energy. The main reason behind the low spread of active solar technology is the low integration quality of the solar systems and lack of knowledge. A well-integrated solar system into a building, specifically into the envelope (where esthetic constraints are major and have most impact) can not only increase the quality of the architecture, but also can promote the use of active solar energy.]
research questions and	[How to integrate the active solar systems into a building's envelope without compromising the architectural quality?]
design assignment in which these result.	[Integration of an Active Solar Energy system into the envelope of Van Gendthallen by keeping the aesthetic value of architecture.]



Process

Method description

[The proposed methodology relies on literature and analysis of precedents to formulate the classification and characteristics of various available applications of active solar energy technologies. Various case studies are selected and featuring both BISTS¹ and BIPV². These case studies provide sample for a typology that search through investigation, assessment and categorizing of existing systems applications. In each case integration criteria are examined in order to identify the specification of the various applications and juxtaposed them in a manual- the recommendations for architects and for product manufactures.]

Literature and general practical preference

Literature Study.

The preliminary research for every subject starts with literature. More specific literature studies will focus on the theory of renewable energy use in the buildings according to the Energy Efficiency policy of Europeans Union for 2020 targets- zero energy buildings, Architectural Integration, solar energy, active solar technologies, solar thermal, photovoltaic and context of Van Gendthallen.

Case Study.

Reference study will focus on the “best practiced” architectural integration of Active solar energy into the building envelope (functionally, constructively and aesthetically).

Research by Design.

With different design possibilities, the optimized use of Active solar technology can be researched with calculations]

¹ BISTS – Building Integrated Solar Thermal System

² BIPV - Building Integrated Photovoltaic

Reflection

Relevance

[The graduation project intends not only to pinpoint the reasons behind the limited use of solar technology, but also to promote the use of active solar energy into high quality architecture – by underlining the need to improve the architects knowledge about the appropriate criteria for successful integration of active solar systems into the buildings and highlighting the need to enhance the integer-ability of the active solar systems/ products available in the market. By bridging the gap between architects and product engineer, the issues of architectural integration quality can be resolved and that can motivate the architects for frequent use of active solar energy. Large use of active solar energy in existing and new buildings can help to achieve the target of 2020 in short period of time.]

Time planning

