## Learning Plan

<table>
<thead>
<tr>
<th>Personal information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Student number</td>
</tr>
<tr>
<td>Address</td>
</tr>
<tr>
<td>Postal code</td>
</tr>
<tr>
<td>Place of residence</td>
</tr>
<tr>
<td>Telephone number</td>
</tr>
<tr>
<td>E-mail address</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Studio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme</td>
</tr>
<tr>
<td>Teachers</td>
</tr>
</tbody>
</table>

**Argumentation of choice of the studio**

I initially started the studio with in mind the double degree possibility (Architecture + Building Technology). Because of this I could only choose for Materialisation and Architectural Engineering. From both graduation studio’s I knew some people and had a talk with them. I Found out Materialisation was a studio where you started immediately with designing, unlike the studio of Architectural Engineering. I preferred a quick start for the designing process which made my choice very easy.

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of the graduation project</td>
</tr>
</tbody>
</table>

### Product

#### Problem Statement

Within New York many buildings are built with an icon image. How are you able to design a representative building within this city, despite a limited program available? Besides that, the structure of the city New York is very strict. The area of the United Nations is an exception on the grid structure within the city. How should this be dealt with in the new design?

The Franklin D. Roosevelt Drive is a blockade to the connection from the inner city to the waterfront of the East River. By lowering the FDR Drive underground this connection has been recovered. How can the UN plot and the UN environmental Council play their part in restoring and strengthening this connection?

The UN Environmental Council will host different groups of visitors, like visitors, delegates and employers of the UN. How can these different flows be separated within the building at a clear way? And how should these different groups be able to walk around the building?

Last, but not least, the building will become the UN Environmental Council, the department of sustainability. Therefore the building should be sustainable itself. This should be achieved.

#### Goal

Because the large number of iconic buildings within New York, of which the existing building of the United Nations is one, the design for the UNEC shouldn’t compete with these icons. It will rather be modest and it should find it’s place within the city at a different way. By designing a modest building, low-rise and stretched, located on the edge of a new public square it starts determine it’s position within the city. Together with the existing UN building and the other surrounding buildings it forms a new square. Located on the long side of the square, the building acquired a dominant position. This square could be seen as a grand entrance for the building and for the existing UN building. Besides being the grand entrance, the square (and the building) is also part of the connection arisen between the city and the waterfront. Lowering the Franklin D. Roosevelt Drive, and creating a park in...
stead gave this possibility. Together the Dag Hammarskjöld Plaza (47th street), the square, the building and the park make a beautiful route towards the waterfront. The building should take a special part in this route, which is obtained by creating an inner court within the building, partly accessible to public. Passing by people should be triggered to enter the building. However, security should be taken into account. Whenever an important meeting takes place, the gates of the building can be secured, or even the whole square. In this way the security is provided. Locating the entrances has been a search. Positioning the entrance inside the inner court should make people aware something special has been built by passing a versatility of zones, with the shielded inner court as icing on the cake. It will be an area within New York, which is one of it’s kind.

Because of the function of the building, and the function it will house, the building has to be sustainable. By building with prefabricated elements the, the time to build is shrunk. Also the possibility to use pre-stressed elements will provide savings on materials. Also the future is taken into account. The building has been designed at such a way it is adaptable to future desires. Also changes at for short term to the office layout have been taken into account. Because of the modest appearance and layout the building is very well suited to future usage in different functions (like offices).

Also in energy terms multiple measurements have been taken contributing to the sustainability of the building.
- Avoiding unwanted entrance of the sun to avoid overheating
- Heat pump together with a cold/heat source underground
- The use of low temperature heating and high temperature cooling
- The use of thermal mass by using concrete core activation which is very suitable for an heat pump
- Thermal mass by night cooling
- Climate ceilings for additional heating / cooling and quick adaptions
- Induction units for the office for personal adjustment, also suitable for an heat pump
- Green roof filtering the rainwater and storing the rainwater for flushing the toilets, etc.
- PV panels on the roof

All of these together should contribute to a sustainable building.

---

**Process**

**Method description**

The project started with analyzing the location as a group (literature, sketching, etc). Simultaneously we had to design a masterplan for the design plot and the area nearby. During this process personal preferences where filtered and the first idea’s for the design arose. By interpreting the outcomes of the analyses and the personal preferences the starting points for the design were made, which needed to be translate into a design. This was done by doing mass studies. The outcome of this has been worked out into drawings. Of course the process took more time and work as explained above. The research was done by using scale models, sketching and discussion. Some researches have been done more intense, like the search for the typology of connecting two buildings/building parts. For this many schemes were drawn. By comparing them at pro’s and con’s a choice was made. At some point the project reached an certain stage, and structure, climate and building technology gain a more important role in the process. By discussing the progress with the tutors and the consults for structure and climate new insight were given. By that the project improved and became more realistic. These consults were very helpful.

Overall during the process were several methods used to design. Discussion with the tutors and the other students, sketching/drawing, modeling and analyzing. All these have contributed to a satisfactory design.
Literature and general practical preference

Reflection
Relevance
The function of the building itself already has a great relevance towards the whole world concerning sustainability. In it research is done to sustainability, as well as providing information all over the world. In it the council for sustainability will be housed, and important meetings and congresses will be held concerning sustainability.
Knowing all this, logically the building should be an example at sustainability as well. Multiple measures have been taken resulting in energy savings. Also the building is designed it can be easily adapted, at short notice, and in the future.

During the process of designing the building there has been thought how the building should be implemented in the city structure. How can it contribute to the city instead of just being there? By lowering the FDR a new possibility arose, a physical connection between the city and the waterfront. The building and the square designed in front of the building contribute to this new fascinating route. Passing by through the Dag Hammarskjöld Plaza (47th street), over the UN square (views on the UN Buildings), through the gate of the UNEC where behind an unexpected inner court will be found (partly public), again through the gate of the UNEC you’ll finally arrive at the UN park at the waterfront. All of these urban areas have a different type atmosphere. And all of them are there (except in case of high security periods) for the city and people.

Time planning
P5 Presentation