

#1 QUA-KIT - Online design tool

Background:

The following exercise is based on the on-going Empower Shack project in Cape Town, South Africa.

“Empower Shack is an interdisciplinary development project directed by U-TT, ETH Zurich and the local NGO Ikhayalami Development Services, in collaboration with the BT-Section community and associated local and international partners.

The ongoing pilot phase is focused on a small cluster within the BT-Section of Khayelitsha. Through innovative design and organisational models, the project aims to develop a comprehensive and sustainable informal settlement upgrading strategy centered on four core components: a two-story housing prototype, participatory spatial planning, ecological landscape management, and integrated livelihoods programming.”

For more information about Empower Shack project please [click](#).

Your task is to propose an urban layout using our web tool called "qua-kit". Your proposal should improve the living situation of the people in a small neighborhood in Cape Town. To give you a proper context, here is an exact location [on google maps](#). Note, however, 3D geometry in our tool does not correspond one-to-one to the existing site.

Qua-kit is a web platform for viewing and manipulating simple urban geometry. Logged in via edX platform you can work on a single design

problem, share your ideas together with a design proposal, and discuss design proposals made by other participants.

You will get access to your own working canvas in qua-kit to design your urban layout. When your design is completed you will need to save your proposal. Afterwards, you can always go back to your design and change it. In 6th Week, there will be another exercise asking you to compare design proposals made by other students. Given that feedback, you will be able to improve your proposal.

#2 Online data collection and visualisation tool

Exercise:

This week you learned about data collection in the city. In this exercise, you can put into action what you learned and collect qualitative and quantitative data in your city. Select one urban area in your city and collect data from the following variables:

1. Temperature (in degrees Celsius, °C)

(you can use a simple tool like a thermometer or download a smart phone application)

2. Thermal perception

(from 1 to 10 – 1 being “very cold” and 10 “very warm”)

3. Noise (in decibel, dB)

(you can use a sound/decibel meter with a smart phone application)

4. Noise perception

(from 1 to 10 - 1 being "no noise" and 10 being "a lot of noise" -)

5. General satisfaction

(Do you like the place you selected? from 1 to 10 – 1 being "not at all" and 10 "yes, very much" -)

CE3 - Compare Designs Exercise

[Bookmark this page](#)

Peer Reviews Rating

In this exercise, we ask you to look at a series of design pairs. You need to focus on a single criterion from our criteria list (you can read and think about it first). For each design pair, you need to select which design is better with respect to this criterion. Optionally, you can add your explanation for your choice (textual explanation is not graded)

As in the previous exercise, you will get 60% of the grade immediately after you finish.

Compulsory Exercise 3 (External resource)

(20.0 points possible)

Compare design proposals of other students according to a single design criterion. You will be given a series of design pairs; for each pair you have to select a better design according to a given criterion. Optionally, you can write down a reason for your choices.

Go!

Once the system gets enough votes, it will start calculating **double-peer-reviewed grades to give you remaining 0-40% of the grades**. This means, that:

- 1) For the first (design) exercise: **the more upvotes and the fewer downvotes you get, the better your grade.**
- 2) For the second (vote-compare) exercise: **the more your votes agree existing rating, the better your grade.**

For this way of grading, we use the idea that majority of students should implicitly agree on the concepts of proposed design criteria. This is how participatory design works:

1. Most participants agree that design A is better than design B (w.r.t. a single criterion);
2. Those who agree are likely to be "right" -- their grade increases;

3. Those who disagree are less likely to be "right" -- their grade decreases.

The grades will be updated daily until the end of the course. If you are not satisfied with your grade for the second exercise, you can try to vote more -- the grade reflects your average "voting performance".