

- **Assessment One: Immersive Digital Twin (Group)**

Worth 35% of the overall course grade.

A Group Assignment comprising 3 components.

Due: 8th September 2019.

This assessment task is a GROUP exercise.

A digital twin is “a realistic digital representation of assets, processes or systems in the built or natural environment” (Bolton A, Enzer M, Schooling J et al. 2018). In this assessment students will work in groups to capture a single, immersive 360 degree image from the University of Hong Kong campus to illustrate a current industry innovation. The innovation might relate to the choice of materials, design detail, construction process or application of digital technology for virtual design and construction. The image itself is for illustrative purposes only, and need not have ‘actually’ used the material, design, construction or technology. The purpose of the image is to enable the group to address a key aspect of the professionalization and revitalization of the Hong Kong construction industry. By creatively annotating the image the group will develop an immersive digital twin that can be used in training, to promote safety, building regulation, employment promotion (to school-leavers), or marketing of the industry to the public. Each group will create up to 3 annotated versions of the single original image, along with 5-7 key bullet points/paragraphs that highlight the specific innovation, explain the annotations, and justify the purpose. The group will then make a 5 minute presentation to the class that demonstrates the immersive images they have produced, and uses the dot points to explain them.

You will be allocated to a group of 5-6 in number, based on your preexisting skills and the preferences of your peers.

The immersive 360 degree images, annotations, and presentation will be assessed in terms of:

- The effectiveness and creativity of the annotations in highlighting the innovation (40 marks).
- The clarity of the presentation to explain the innovation and annotations (20 marks).
- The direct relevance of the immersive digital twin images to the particular purpose identified by the group (40 marks).

Marks will be shared equally by all group members.

- **Assessment Task Two: Immersive Digital Twin (Individual)**

Worth 65% of the overall course grade.

An Individual Assignment.

Due: ~~Sunday 27th of October~~ Sunday 17th of November

This assessment task is an INDIVIDUAL exercise.

This assessment task repeats the group assessment task undertaken in class on the 8th of September. However this time all work is to be done individually AND the location and choice of the immersive 360 degree image is entirely open. Please note that the

assessment criteria have been adjusted, so please read them carefully. Students are required to submit up to 4 images in jpeg format (including the original, unannotated image) along with a maximum 3 minute video that presents the work in mp4 format. The video can be a voice-over screen recording, a voice-over video of the screen, or a video of the complete presentation.

The immersive 360 degree images, annotations, and presentation will be assessed in terms of:

- The specificity and potential global impact of the construction feature, context or process (30 marks).
- The clarity, creativity and sophistication of the annotation (30 marks).
- The structure, clarity and professionalism of the presentation (40 marks).

Submission of work:

- The images to be submitted as individual jpeg files in 360 format with links to Kuula.co uploaded to moodle.
- The video component is to be submitted as a SINGLE mp4 format file.
- Students should upload their assessment work to Moodle by 11:59 on Sunday 27th October 2019
- Students are strongly advised to retain a copy of their submissions.

References

Bolton A, Enzer M, Schooling J et al. (2018). 'The Gemini Principles: Guiding values for the national digital twin and information management framework'. Centre for Digital Built Britain and Digital Framework Task Group. DOI number: <https://doi.org/10.17863/CAM.32260>

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