MECH3422 Building Services Engineering I

http://me.hku.hk/bse/MECH3422/

Assignment 02 – Interior Lighting Design

Lighting design is the process of creativity using the qualities and functions of light to affect people, objects and space. The qualities of lighting are intensity, form, colour and movement. The functions of lighting are visibility, mood (atmosphere), composition and motivation. Lighting designers often use personal observations and computer software tools to evaluate the design options and system performance.

Objective

To develop a better understanding of the basic principles of interior lighting design and appreciate the skills of using lighting computer software tool.

Methodology

This assignment is intended to strengthen what you have learned during the lectures, by relating your learning to practical situations and by applying computer software tool to examine real-life visual environment. Each student should choose one room in a building (e.g. a classroom, an office, a function room) that you can get access to collect information about the interior lighting system. By using personal observations and onsite examination, you shall evaluate the characteristics of the visual environment and the major design factors of the lighting system. The space being investigated may have both natural and artificial light sources, or only one of them.

By using the following online interior lighting design tool, you should try to represent the lighting system (usually in the ceiling) and evaluate its performance. You can make some assumptions for the room characteristics and luminaire features if the information is not available. The design tool has a library of common lighting products for you to select and apply in your technical analysis (see Appendix for brief overview).

• Visual Interior Lighting Design Tool (online), http://www.visual-3d.com/tools/interior/

Report Submission

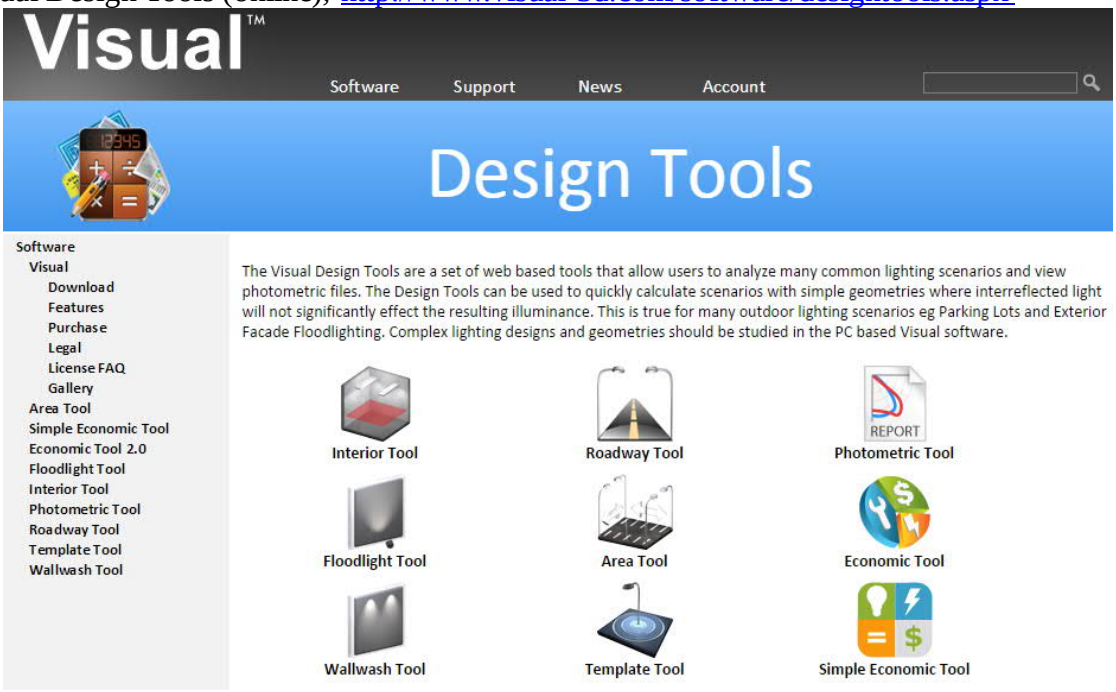
Each student shall prepare a study report of not more than ten (10) A4 pages to explain the findings of the investigation in a systematic and logical manner. The contents of the report shall address the following aspects. Other important issues may also be included.

- Basic information of the building space and appreciation of its lighting system(s)
- Characteristics of the visual environment
- Major design factors of the lighting system(s)
- Results of analysis using the online interior lighting design tool

Detailed calculations are not required, but essential data, diagrams and photos are useful to enhance understanding. If appropriate, a list of references should be provided at the end of the report. The report shall be submitted in electronic format to the Moodle platform.

Appendix

Visual Design Tools (online), http://www.visual-3d.com/software/designtools.aspx



Visual Interior Lighting Design Tool (online), http://www.visual-3d.com/tools/interior/

Training video (4:00), http://www.visual-3d.com/tools/interior/helpvideos/video.html