Subject Description Form

Subject Code	BRE274
Subject Title	Work Training and Building Information Building (in Summer Semester)
Credit Value	3 Training Credits
Level	2
Pre-requisite	BRE222 and IC301
Co-requisite	Nil
Objectives	This module aims at providing students an opportunity to 'learn by doing' in terms of participating in real construction site works and setting up building information models for works simulation. It is also intended to enhance development of all-roundness and professional competences of construction students.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Use technical knowledge in construction practices to plan and design method statements for typical construction process. b. Apply basic construction and quality control methods in typical building construction work. c. Use building and construction terminology to communicate and interact effectively with peers and working partners in construction project. d. Review and appreciate building information models. e. Simulate and manipulate construction processes within building information models.
Subject Synopsis/ Indicative Syllabus	1. Site environment and layout. 2. Project progress planning & co-ordination. 3. Engineering design & drawing. 4. Site survey & setting out. 5. Site construction according to design; construction methods. 6. Good construction practices. 7. Construction safety. 8. Quality and quantities control. 9. Site records and documentations. 10. Communication with peers, supervisors and other parties. 11. Application of building information models for site works. 12. Virtual simulation of construction process.
Learning Methodology	The module is in form of a practicum, in which trainees will be highly participative and team playing in a simulated site construction project. Students are provided opportunity to learn about the roles and tasks of a contractor to gain some insight into the construction engineering profession, to provide working environment for construction students to apply their professional knowledge / skills in a real-life situation.

Assessment Methods in Alignment with Intended Learning Outcomes

Assessment Methods	% Weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
		a	b	c	d	e
1. Generic Skills	30%	√	√	√	√	√
2. Technical Competence	40%	√	√	√	√	√
3. Reports & Oral Presentation	30%	√	√	√	√	√
Total	100%					

The construction project will be a simulated construction work project administered and constructed by the students. The scope of work will in general involve miscellaneous renovation works, minor works, condition survey and building diagnosis. Students will organize themselves and team-play different roles as in a contractor. At the end of the project, students will present their group projects with a written report and BIM models by an oral presentation.

Student Study Effort Expected

Class Contact	60 Hrs.
Other Study Effort	120 Hrs.
Total Study Effort	180 Hrs.

Reading List and References

Essential Textbooks/ Reading Materials:

The Hong Kong Polytechnic University, 2009, Construction Workshop, Reading Materials for the Training Modules of the Industrial Centre.

Building Information Modeling with Revit Architecture by Simon Greenwold March 2004; 2005−2007 version edits by David Driver

References:

IC BCU Training Materials & Presentation for Construction Students, web site developed by the Industrial Centre for the training module. http://www.ic.polyu.edu.hk/bcu/$Training-materials.htm

Autodesk BIM Resources in Hong Kong
http://www.autodesk.com.hk/adsk/servlet/index?siteID=1170102&id=12949216

Autodesk Education Community
http://students.autodesk.com

The Hong Kong Institute of BIM
http://hkibim.org