

## Subject Description Form

<b>Subject Code</b>	BRE275
<b>Subject Title</b>	Individual and Integrated Project
<b>Credit Value</b>	5
<b>Level</b>	2
<b>Pre-requisite / Co-requisite / Exclusion</b>	Nil
<b>Objectives</b>	<ol style="list-style-type: none"><li>1. Encourage critical investigation, analysis and synthesis in solving problems in the engineering and surveying professional context.</li><li>2. Provide an environment for the students to develop skills in identifying and solving problems related to the engineering and surveying profession and allow the integration of knowledge gained in separate subject areas.</li><li>3. Provide students with knowledge and skills on Building Information Modeling (BIM), with the assistance and under the mentoring support from relevant professional institution.</li></ol>
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"><li>a. Integrate and apply knowledge and skills gained from various subject areas on construction engineering design, technology, management, economics and legal aspects to the case of a particular project.</li><li>b. Plan and develop the work individually in an effective approach in order to tackle problems related to the engineering and surveying profession in a professional context.</li><li>c. Communicate effectively technical information in a managerial role, including information collection, proper presentation of analysis and justification of recommended actions.</li><li>d. Understand and able to apply the knowledge of Building Information Modeling (BIM) in the engineering and surveying practices.</li></ol>
<b>Subject Synopsis/ Indicative Syllabus</b>	<p>A construction and property related project scenario will be set to replicate a situation which could be met in practice. Sometimes the restrictions of the study environment will require the scenario to be modified. The integrated project requires students to make use of the knowledge and skills acquired in Level 2 subjects in various disciplines (e.g. Technology, Economics, Law and Management) to tackle the tasks related to the management, technology and legal aspects as assigned by the respective lecturers. The project will include an element of group effort and individual work assessment.</p>

<b>Teaching/Learning Methodology</b>	<p>The whole class is divided into groups of 4 or 5 students. Each group is to identify and select a building construction site/project to form a common base for project appraisal. Each student also needs to work individually and submit an individual report. The tasks to the students may include design review, method statement development, measurement, cost planning and valuation of variations. Briefing sessions via a 'Project Guide' will be conducted to familiarize students with the methodology and areas of consideration for each task. Visiting practicing professionals will be invited to deliver relevant lectures to students on the subject matter. Supervision and consultation will be made available during the entire process. Mid-way through the project interim report and at the end final, Group Report are required for assessment by the relevant supervisors. Towards the end of the Semester II, each student shall submit their own individual work in the form of in-depth study as an Individual Report for a specific topic area in construction with the Supervisor.</p>																																													
<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	<table border="1" data-bbox="427 757 1453 1133"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Group Report</td> <td>40%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>2. Individual Report</td> <td>60%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <ul style="list-style-type: none"> <li>(a) Relevant focus and depth.</li> <li>(b) Analysis, synthesis and technical competence of construction methods.</li> <li>(c) Logic of explanation.</li> <li>(d) Relevance and clarity of sketches.</li> <li>(e) Communication skills.</li> <li>(f) Ability of using the BIM software.</li> </ul>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Group Report	40%	√	√	√	√			2. Individual Report	60%	√	√	√	√			Total	100%						
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## Reading List and References

Construction Industry Council (CIC): BIM Standards (Phase One) (September 2015).  
[http://www.cic.hk/eng/main/aboutcic/publications/reference\\_materials/index.html](http://www.cic.hk/eng/main/aboutcic/publications/reference_materials/index.html)

Smith, D.K. and Tardi, F.M. (2009) Building information modeling: a strategic implementation guide for architects, engineers, constructors, and real estate asset managers, John Wiley and Sons.

“Building Information Modelling for Tertiary Construction Education in Hong Kong”, Journal of Information Technology in Construction (ITcon), 2011 Vol. 16, pg. 467-476, <http://www.itcon.org/2011/27>. Wong K.D., Wong K.W., Abid Nadeem.

“Government Roles in Implementing Building Information Modelling Systems: Comparison between Hong Kong and the United States”, Journal of Construction Innovation: Information, Process, Management, Vol. 11 No. January, 2011 pp. 61-76 Emerald Group Publishing Limited 1471-4175 DOI 10.1108/14714171111104637. Wong K.D., Wong K.W., Abid Nadeem.

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>