Subject Description Form

Subject Code	**BSE269**
Subject Title	BIM Basic and MEP
Credit Value	3 Academic Credits
Level	2
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	This subject aims to equip students with the techniques to present engineering design using building information models.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. create construction drawings and building information models to recognized conventions and standards; b. explain the concepts, definitions, scope, standards and guidelines of BIM in Hong Kong and global contexts; and c. create building services drawings from building information models.
Subject Synopsis/ Indicative Syllabus	<u>Building Information Modelling (BIM) Basics</u> • Introduction of BIM concept, definition and software; • Industry recognized modelling conventions and standards; • Techniques for building information modelling; and • Import CAD drawing. <u>Mechanical, Electrical and Plumbing (MEP) for BIM</u> • Introduction of BIM MEP concept, definition and software; • Industry recognized MEP modelling conventions and standards; and • Techniques for building information modelling of MEP systems.
Learning Methodology	The subject will be delivered through the following learning methods: a. Mini-lectures – Lectures and demonstrations are used to introduce and explain key concept, definition and application of modelling. Multi-media illustrations are used for students to appreciate the good practices of modelling skills. b. Software practice in computer laboratory - Students are arranged to operate industrial standard BIM software to practice modelling techniques; c. Assignments - Individual assignments are arranged to sharpen students' modelling skills; and d. Self-learning - Independent on-line learning materials are provided for students to broaden their knowledge of BIM technology and applications.

<table>
<tr><td rowspan="5">Assessment Methods in Alignment with Intended Learning Outcomes</td><td rowspan="2">Assessment Method</td><td rowspan="2">Weighting (%)</td><td colspan="3">Intended Subject Learning Outcomes Assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td></tr>
<tr><td>Assignments</td><td>70</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Tests</td><td>30</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td colspan="5">Assignments - Students' performance are assessed continuously by take-home modelling assignments.
Tests - Modelling tests are used to assess students on their modelling skills.</td></tr>
<tr><td rowspan="6">Student Study Effort Required</td><td colspan="4">Class Contact</td></tr>
<tr><td colspan="3">Mini lecture and demonstration</td><td>30 Hrs</td></tr>
<tr><td colspan="3">Hands-on practice and test</td><td>9 Hrs</td></tr>
<tr><td colspan="4">Other Study Effort</td></tr>
<tr><td colspan="3">Assignment</td><td>60 Hrs</td></tr>
<tr><td colspan="3">Self-learning</td><td>6 Hrs</td></tr>
<tr><td colspan="3">Total Study Effort:</td><td>105 Hrs</td></tr>
<tr><td>Reading List and References</td><td colspan="4">Reading Materials:
• Construction Industry Council BIM Publications (https://www.bim.cic.hk/en/resources/publications)

References:
• Kim, Marcus, Lance Kirby, and Eddy Krygiel. Mastering Autodesk® Revit® 2018. Indianapolis, Indiana: Sybex, a Wiley Brand, 2017.
• Hamad, Munir M. Autodesk Revit 2019 Architecture. Dulles, Virginia: Mercury Learning and Information, 2018.</td></tr>
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