

BAMD / BAME

**Certificate in Building Information Modelling (BIM) – Asset Management for EMSD Projects**

建築信息模擬資產管理(機電工程署工程)證書

To train up practitioners with the capabilities of using BIM-enabled software to manage the asset data for the Electrical and Mechanical Services Department (EMSD) projects in accordance with the latest “Building Information Modelling for Asset Management (BIM-AM) Standards and Guidelines”

根據最新的「建築信息模擬-資產管理(BIM-AM)標準及指引」對從業人員進行培訓，使其具有使用BIM的軟件來管理機電工程署(EMSD)項目資產資料的能力。

|                                | <b>BAMD</b>  | <b>BAME</b>                               |
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| Lecturer<br>講師                 | Professionals<br>專業人士  |   |
| Medium of Instruction<br>授課語言  | Cantonese supplemented with English technical terms<br>廣東話輔以英文技術用語   |   |
| Mode of Attendance<br>授課形式     | Part-time day course 日間部份時間制：<br>09:00 to 18:00  | Part-time evening 夜間部份時間制：<br>19:00-22:00 |
| Duration<br>授課期                | 8 hours x 3 sessions<br>8小時 x 3堂   | 3 hours x 8 sessions<br>3小時 x 8堂          |
| Admission Requirements<br>入學條件 | Have basic BIM knowledge; <b>AND</b><br>(i) At least one year of work experience in construction or electrical & mechanical engineering or related industry; or<br>(ii) Holder of Higher Diploma in building/ architectural studies, or structural/ mechanical/ electrical engineering/ quantity surveying, or other construction-related discipline; or equivalent qualification; or<br>(iii) Technician Trainee under the EMSD Technician Training Scheme.<br><br>必須具備基本的BIM知識；以及<br>(i) 不少於1年建造或機電工程經驗；或<br>(ii) 擁有與建造/建築/結構工程/機械/電機工程/工料測量或任何與建造業相關學科的高級文憑或以上學歷；或<br>(iii) 屬機電工程署技術員訓練計劃的學員。 |   |
| Award of Certificate<br>證書頒發   | Completion certificate - Attended 21 hours or above and passed the examination<br>結業證書 - 出席課程21小時或以上及考試合格  |   |
| Venue<br>上課地點                  | HKIC Kowloon Bay Campus, 44 Tai Yip Street, Kowloon Bay, Kowloon<br>九龍 九龍灣大業街 44 號香港建造學院九龍灣院校  |   |
| Course Fee<br>課程費用             | \$2,660.00   |   |
| Enquiry<br>查詢課程                | 2100 9526 / 2100 9000<br>shanning@hkic.edu.hk  |   |
| Application Method<br>報名方法     | Please apply online on <a href="#">SPDC portal</a><br>請透過建造專業進修院校的 <a href="#">網上報名系統</a> 報名   |   |

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| <b>Course Content</b><br>課程內容         |   |
|---------------------------------------|---|
| 1. User Interface and Basic Operation | <p><i>Discover the REVIT environment and setting, the skill of navigating and operating in BIM system.</i></p> <p>1.1 Difference between BIM and CAD<br/>1.2 Revit interface<br/>1.3 Terms used in REVIT<br/>1.4 Mouse navigation &amp; selection<br/>1.5 View Cube<br/>1.6 Ribbon, Project Browser &amp; Properties Panel<br/>1.7 Basic Draw and modify<br/>1.8 Levels<br/>1.9 Grids<br/>1.10 Project Base Points and Survey Points</p>  |
| 2. Overview of MEP Settings - 1       | <p><i>Recognise the HVAC system.</i></p> <p>2.1 HVAC Systems<br/>2.2 Air Terminal<br/>2.3 Mechanical Equipment<br/>2.4 Add and Modify Ducts</p>   |
| 3. Overview of MEP Settings - 2       | <p><i>Recognise the plumbing and FS systems.</i></p> <p>3.1 Piping/ FS Systems<br/>3.2 Plumbing Fixture<br/>3.3 Pipes<br/>3.4 Modifying Plumbing pipe systems</p>   |
| 4. Overview of MEP Settings - 3       | <p><i>Recognise the electrical system.</i></p> <p>4.1 Electrical Systems<br/>4.2 Wiring<br/>4.3 Cable Track &amp; Conduit<br/>4.4 Panel Schedule for Distribution board<br/>4.5 Trunking</p>  |
| 5. View and Documentation             | <p><i>Create views and compose schedules from BIM model and set up drawing sheets.</i></p> <p>5.1 Plan/ Elevation/ Section.<br/>5.2 3D Views<br/>5.3 Sheets<br/>5.4 Tags<br/>5.5 Annotations and Dimensions<br/>5.6 Schedules per individual equipment<br/>5.7 Presentation Style</p>   |
| 6. Collaboration                      | <p><i>Appraise the multi-discipline coordination and work sharing system in BIM.</i></p> <p>6.1 Link model with Copy and monitor<br/>6.2 Work sharing by using Workset</p>  |
| 7. Introduction of EMSD BIM-AM system | <p><i>Understand the EMSD BIM-AM standards and guidelines.</i></p> <p>7.1 EMSD BIM-AM Standards and Guidelines (requirement of modelling; asset information; system information)<br/>7.2 Object Creation Guidelines (LOD requirement; demonstration of object creation with Creation of LV switchboard and switchgear as an example)<br/>7.3 Model &amp; Object Naming Convention and Category<br/>7.4 Asset Code and Zone Code<br/>7.5 Creation of Zone in model and Zone Tags<br/>7.6 Coding Requirement of Asset Tag and Zone Tag<br/>7.7 Concept of Shared Parameters in BIM and EMSD standard Shared Parameters file</p> |
| 8. EMSD Standardised MEP Asset Data   | <p><i>Examine and manage the asset information.</i></p> <p>8.1 EMSD Standardised MEP Asset Data templates (21+)<br/>8.2 Manage shared parameters<br/>8.3 Asset Information Management Platform (AIMP) through COBieLite (control of asset information and document; MEP asset in asset management)<br/>8.4 Upload of Corporate Computer System (CCS) spreadsheet for objects not drawn in models<br/>8.5 Asset relationship and Upload of file (Excel Template)<br/>8.6 Preparation of O&amp;M document (folder structure) and upload of document</p>   |

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| 9. Interfacing/<br>Integrating BIM-AM System with other systems - 1  | <i>Practice on Verification of BIM Models.</i><br>9.1 Laser scanning for BIM model construction to existing buildings<br>9.2 Verification of BIM Model by 360 spherical photos  |
| 10. Interfacing/<br>Integrating BIM-AM System with other systems - 2 | <i>Practice on BIM-AM System with RFID.</i><br>10.1 RFID tags and QR code tags Installation procedures<br>10.2 Types and requirements of tagging to MEP equipment<br>10.3 Method of RFID tag encoding (ASCII – Hexadecimal code)<br>10.4 General guidelines for RFID tag installation<br>10.5 Demonstration on EMSD BIM-AM System (remote monitoring & diagnosis; encode RFID tags; export COBieLite to BIM-AIM platform) |
| 11. Overview of Families   | <i>Differentiate the REVIT families and manage shared parameters.</i><br>11.1 Systems Families<br>11.2 Component Families<br>11.3 In Place Families<br>11.4 Shared Project Parameters<br>11.5 EMSD Asset data Template (ADT) & GUID file<br>11.6 EMSD Standard Shared Parameters (Type and Instance)  |
| 12. Introduction of BIM-AM system operation                          | <i>Implement the EMSD BIM-AM System.</i><br>12.1 User interface of BIM-AM Systems - Application and web based<br>12.2 Workflow of BIM-AM implementation in new and A&A projects   |
| 13. Summary  | <i>Conclude the key aspects of collaboration in BIM-AM project.</i>   |
| 14. Assessment   | <i>Assess the knowledge and skills of BIM-AM in REVIT environment.</i>  |