



# **MMEP**

**CIC Master Class on MiMEP Project Implementation (Project Managers)** 

建造業議會大師級培訓課程:機電裝備合成法項目實施(項目經理)

This programme aims to enhance industry capacity for supporting the development and adoption of MiMEP in the Hong Kong construction industry. It provides participants with the opportunity to develop practical competencies in managing MiMEP projects and expand their experience in problem-solving and technology-enabled project management.

Lecturer	Professionals
講師	專業人士
Medium of Instruction 授課語言	Cantonese (Supplemented with English) 以粵語為主, 以英語輔助
Mode of Attendance 授課形式	Part-time day course 日間部份時間制
Duration 授課期	3 hours x 7 sessions 3 小時 x 7 堂
Award of Certificate 證書頒發	Students must meet the following requirements in order to be considered having successfully completed the programme and receive the Completion Certificate:  Achieve an 85% attendance rate and Pass the Final Assessment
Venue	HKIC, Kowloon Bay Campus, 44 Tai Yip Street, Kowloon Bay, Kowloon
上課地點	九龍 九龍灣大業街 44 號 香港建造學院 九龍灣院校
Admission Requirements	<ul> <li>Holder of a bachelor's degree in an architectural, engineering or construction-related discipline, OR</li> </ul>
入學條件	<ul> <li>A member of a professional institution in an architectural, engineering or construction-related discipline at member level or above; OR</li> </ul>
	<ul> <li>At least 5 years of working experience in the construction industry AND recommended by the employer</li> </ul>
Course Fee 課程費用	\$6,760.00
Enquiry 查詢課程	2100 9000 / 3199 7217 / 2100 9809
Application Method 報名方法	Please apply online on <u>SPDC portal</u> 請透過建造專業進修院校的 <u>網上報名系統</u> 報名





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#### Course Content 課程內容

#### 1. An overview of MiMEP

- Introduction to Modular Integrated Mechanical, Electrical, and Plumbing (MiMEP)
- MiMEP-related policy & supply chain establishment for Hong Kong
- Advantages of adopting MiMEP
- Future development of MiMEP in the Hong Kong Construction Industry

# 2. Project Planning and Design for MiMEP - Key to success

- Introduction of the whole life cycle including design, fabrication, construction, handover and operation stage
- Key principles of design and project for MiMEP
- Design considerations (Civil project/Building project) and the best practices

#### 3. Cost Management

- Budgeting, Cost estimation, Cost control and life cycle costing in MiMEP projects
- Progress payment for modules in production and completed modules

## Procurement of MiMEP Projects in HK Construction Industry

- Procurement strategies
- Procurement & contract packaging arrangement
- Early prefab MEP Specialist involvement
- Key information in tender documentation
- Suggested tender clauses for prefab MEP documentation
- Risk management for MiMEP Project

## 5. Process map for the adoption of MiMEP - Design Stage

- Statutory requirements for MiMEP design
- Workflow of project statutory plan submissions for MiMEP projects
- Key points for the design of BS conduit routing for MiMEP adoption
- Integrated BIM-enabled Design process for MiMEP implementation
- Consideration of the future maintainability and flexibility of MiMEP design

### 6. Process map for the adoption of MiMEP - Construction Stage

- MiMEP project setup and planning: Site layout arrangement including requirements for storage area/location of temporary storage, site logistics, etc.
- Installation process of MiMEP
- Temporary works for MiMEP
- Integrated BIM-enabled construction process for MiMEP implementation, such as installation sequencing and training for workers on familiarising with working procedures and safety awareness

## 7. Production of MiMEP

- Appropriate MiMEP factory setup / cheduling and sequence of works Scheduling and sequence
   of works
- Design and fabrication drawing, production Co-ordination
- MEP Assembly: Scheduling, Sequencing, Tracking & Monitoring
- Testing Methodology Pipes and Ducts / MEP service connection methods
- Assembly of module frames
- Safety considerations in lifting, handling and delivery





- MEP material management at storage space
- Work process design and safety considerations
- 8. Application of Digital Technologies for QA/QC for Offsite and Onsite Work
  - Application of associated digital technologies for the progress development of MiMEP projects:
     Offsite module fabrication workflows and QA/QC inspections; Onsite module installation
     workflows and QA/QC inspections (incl. considerations on site constraints & key challenges)
  - Application of BIM for project management
- 9. Logistics and Transportation Management for MiMEP projects
  - Upstream Workflows: (1) Procurement/Sourcing of materials; (2) Liaison with related government departments if necessary; related customs and taxation arrangements for MiMEP
  - Downstream Workflows: Considerations for logistics arrangements and transportation of MiMEP Modules
- 10. Smart Technologies for MiMEP projects
  - · Application of smart technologies for MiMEP
  - Optimising route with smart logistics management system
  - Monitoring transportation status of the MiMEP unit with a smart logistics management system

### 11. Construction Safety

- Design for safety: Roles and responsibilities of key stakeholders in MiMEP projects; Specification and demarcation of works;
- Design for Safety Management System for MiMEP Projects: Differentiation between repetitive category of works and non-repetitive category of works; safety risk identification at the early design stage.
- Application of digital technology for safety
- 12. (1) Handover & Maintenance Stage for MiMEP
  - (2) Sustainable Construction and Achieving Net-Zero through MiMEP Projects
  - Difference between traditional projects and MiMEP projects
  - Key points on handover and maintenance
  - Introduction to the adoption of BIM-AM and IoT devices in MiMEP to enhance the maintainability and reliability
  - Introduction and application of smart technologies, such as BIM-AM and point cloud, for RMAA projects
  - Sustainability for adopting MiMEP
  - Environmental benefits, global trend
  - Introduce certifications in this aspect
  - Application of digital technology: sensor and AI for real-time monitoring and temperature adjustment

### 13. Integrated Group Projects

- (1) Presentation session:
- Participants are divided into five project teams, each consisting of 5-6 members, to deliver 20minute group presentation-discussion sessions on their studies of real-life MiMEP projects in Hong Kong during this programme.
- (2) Assessment & Feedback
- (3) Course Reflection