



# Advanced Diploma in Railway Engineering

## 鐵路工程高等文憑

Programme Code 課程編號: ADREG001

Jan 2017 Intake  
2017年1月入學

Power  
Distribution  
配電

Signal &  
Communi-  
cations  
信號及通訊

Permanent  
Way  
軌道

Rolling  
Stock  
鐵道車輛

### Advanced Diploma in Railway Engineering (Power Distribution)

#### 鐵路工程高等文憑 (配電)

QR Registration No.: 16/000929/L4, Validity Period: 03/01/2017 - 02/01/2020

### Advanced Diploma in Railway Engineering (Signal & Communications)

#### 鐵路工程高等文憑 (信號及通訊)

QR Registration No.: 16/000930/L4, Validity Period: 03/01/2017 - 02/01/2020

### Advanced Diploma in Railway Engineering (Permanent Way)

#### 鐵路工程高等文憑 (軌道)

QR Registration No.: 16/000931/L4, Validity Period: 03/01/2017 - 02/01/2020

### Advanced Diploma in Railway Engineering (Rolling Stock)

#### 鐵路工程高等文憑 (鐵道車輛)

QR Registration No.: 16/000932/L4, Validity Period: 03/01/2017 - 02/01/2020

## Programme Highlights

- QF Level 4 accredited
- Curriculum is designed and taught by MTR experts
- Features 4 study streams – Power Distribution, Signal & Communications, Permanent Way, Rolling Stock
- Job attachment
- Part-time study mode

## 課程特點

- 已獲評審為資歷級別第四級課程
- 課程由港鐵公司專家設計及教授
- 四個學習主題 — 配電、信號及通訊、軌道、鐵道車輛
- 跟崗學習
- 兼讀制

心繫生活每一程

mtrAcademy





The mission of the MTR Academy is to train railway talents and develop railway experts and executives with the aim of advancing service and operational excellence of the railway industry worldwide.

In striving to fulfil these objectives, MTR Academy will make collaborative contributions to raise industry standards by:

- providing executive and professional training courses for railway operators and authorities;
- establishing a railway operator community in pursuit of management best practices, service and operational excellence;
- offering accredited programme and topical short courses for the local community;
- conducting applied research in partnership with railway operators, universities and research institutes.

In this way, the Academy seeks to support the Belt and Road Initiative and to serve the needs of Hong Kong, the Mainland of China and the rest of the world.

港鐵學院致力培訓鐵路人才、專家及管理人員，以優化全球鐵路行業服務及達到卓越運營。

為達使命，港鐵學院會以下列方式致力提高行業標準：

- 為鐵路運營商及政府機關開辦管理與專業人員培訓課程；
- 提供鐵路運營商社群平台，以追求管理最佳實踐、服務和卓越運營；
- 為本地社區提供經評審課程及專題短期課程；
- 與鐵路運營商、大學和研究機構合作開展應用研究。

學院全力配合「一帶一路」倡議，並致力服務香港，中國內地及世界各地，滿足鐵路行業的需求。



## Programme Description

This programme aims to provide students with the essential knowledge and practical skills in railway engineering to ensure high quality and reliability of railway operation in today's technology-driven environment. Upon completing the common core subjects, the students may opt for one of the four specialised streams according to their interest and career aspiration. Students can obtain theories and practical training of railway engineering in this programme. The practical training consists of hands-on practical exercises, job attachments, site visits, and face to face interaction with the MTR staff.

## 課程簡介

本課程旨在為學生提供鐵路工程的基本知識和實用技能，以維持現今以科技主導高質而可靠的鐵路營運環境。學生能夠在課堂上取得有關鐵路工程理論的知識，並透過實踐培訓提昇應用技能。其中包括實作練習、跟崗學習、實地考察、面對面與港鐵職員互動。

# Programme Structure

## 課程結構

### Common Core Subjects

#### 核心科目

Organization and Infrastructures of Modern Railway 近代鐵路的組織及基建  
Introduction to Railway Systems and Maintenance 鐵路系統及維修導論  
Safety Procedure and Practices 安全程序與實踐  
Introduction to Quality Assurance for Railway Systems 鐵路系統質量保證導論  
Integrated Skills Practice 機電工藝實務  
Basic Mechanical Principles and Theory 基本機械原理及理論  
Fundamentals of Electricity and Electronics I 電力及電子基礎 I  
Fundamentals of Electricity and Electronics II 電力及電子基礎 II  
Managing Productivity in Engineering Works 工程效率管理

### Advanced Level Subjects

#### 進階科目

Foundation Skills for Managing People 人事管理基礎技能  
Asset Management Essentials 鐵路資產管理要論

### Stream-Specific Level Subjects

#### 行業特定科目

Power Distribution Stream 配電主修	Signal and Communications Stream 信號及通訊主修
High Voltage Safety 高壓電力安全 High Voltage Equipment and Testing 高壓電力設備及測試 Power System Protection 電力系統繼電保護 Power Supply Network & Changeover Scheme 供電網絡及後備方案 Overhead Line System 架空電纜系統 Overhead Line Installation & Maintenance – Cantilever 架空電纜安裝及維修 — 腕臂 Overhead Line Safety and Testing 架空電纜安全及測試 Job Attachment 跟崗學習	Railway Signalling Fundamentals 鐵路信號基礎 Communication Systems for Railway 鐵路通訊系統 Signalling Power Cubicles and UPS Maintenance 信號電源櫃及不間斷電源系統維修 Train Detection System Maintenance 列車位置檢測系統維修 Relay Interlocking Installation and T&C Concept 繼電器聯鎖設備安裝和測試及調試程序概念 CBI and Point Machine Maintenance 電腦聯鎖系統及轉轍機維修 CBTC System Maintenance 列車控制系統維修 Job Attachment 跟崗學習
Permanent Way Stream 軌道主修	Rolling Stock Stream 鐵道車輛主修
Introduction of Rail Engineering 鐵路工程概論 Track Configuration 軌道佈局 Structures of Railway 軌道結構 Maintenance of Track 軌道維修 Railway Inspection Methods & Technique 軌道檢查方法及技巧 Rerailing 更換鋼軌 Job Attachment 跟崗學習	Rolling Stock Fundamentals 鐵道車輛基礎 Passenger Trains Overview 載客列車概覽 Passenger Train Preventive Maintenance 載客列車預防性維修 Passenger Train Door System 載客列車車門系統 Passenger Train Air Conditioning System 載客列車空調系統 Passenger Train Traction Control and Auxiliary Electrical System 載客列車牽引控制系統及輔助電力系統 Mechanical Systems for Passenger Train 載客列車機械系統 Passenger Train Brake System 載客列車制動系統 Automatic Train Control System 列車自動控制系統 Passenger Train Event Recorder System and Communication System 載客列車事故記錄儀及通訊系統 Project 專題習作 Job Attachment 跟崗學習



## Career Prospects

Graduates of this programme are eligible to apply for positions in railway-related companies.

## Teaching Facilities

MTR Academy campus is conveniently located at MTR Hung Hom station. The campus covers 21,000 square feet and is equipped with state-of-the-art teaching and learning facilities. As a student, you can enjoy using Learning Resources Centre, computer workstations, high speed Wi-Fi service and hot beverages self-service corner.

## Medium of Instruction

Cantonese supplemented with English. Training materials are in English supplemented with Chinese.

## Mode of Assessment

- For Level 1 subjects: Continuous assessment (in English)
- For Level 2 subjects: Two examinations (in English)
- For Job Attachment: Trade Test / Project (in English)

## 事業發展

本課程畢業生可投身於鐵路行業相關公司的職位。

## 教學設備

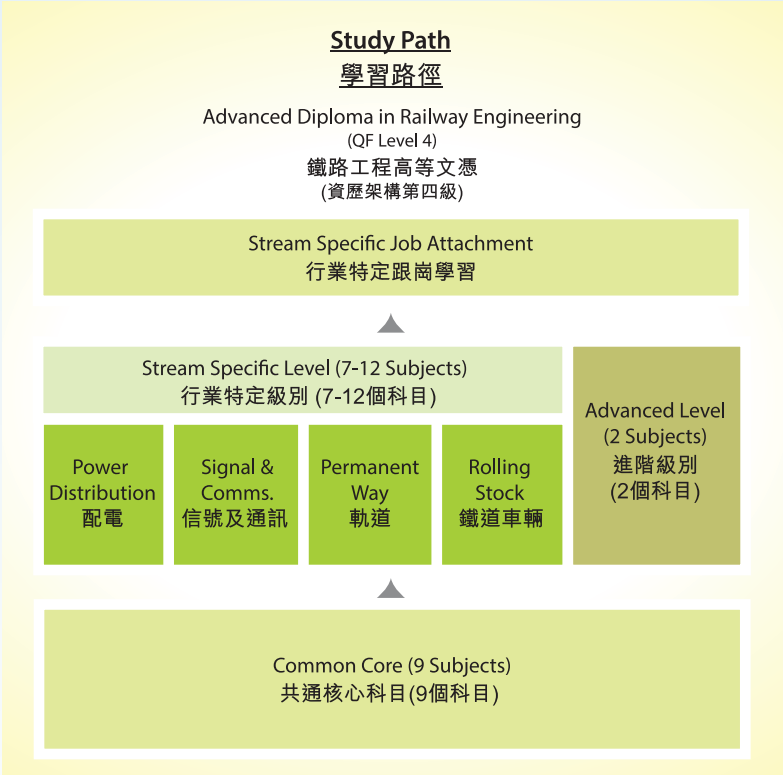
港鐵學院位於港鐵紅磡站，佔地21,000平方尺並設有先進的教學設備。同學可於中心內使用教學資源中心、電腦工作間、高速無線上網服務及熱飲自助站。

## 授課語言

廣東話輔以英語。課堂筆記為英文輔以中文。

## 評估模式

- 等級一課程：持續評估（英文）
- 等級二課程：兩次考試（英文）
- 跟崗學習：技能測試/專題習作（英文）



## Admission Requirements

Applicants shall have 2 years working experience preferably in any engineering disciplines AND

- i. have attained Level 2 or above in five subjects including English Language, Chinese Language and Mathematics in HKCEE, or equivalent; OR
- ii. have attained Level 2 or above in five subjects including English Language, Chinese Language and Mathematics in HKDSE, or equivalent; OR
- iii. hold a relevant Recognition of Prior Learning (RPL) qualification in Electrical & Mechanical Services Industry at QF Level 3 or above; OR
- iv. hold a certificate/diploma at QF Level 3 or above from a recognised institution.

Applicants may be invited to attend an interview.

## Tuition Fee for Entire Programme

HK\$41,800 (Tuition fees are paid in three instalments)

1st instalment: HK\$13,800

2nd & 3rd instalment: HK\$14,000

## Programme Duration

2 years

## Study Mode

Part-time

## Award

Completion of around 120 credits lead to Advanced Diploma in Railway Engineering (1 credit = 10 study hours)

## 申請入學條件

申請人需具有兩年與工程行業相關工作經驗；及

- i. 考獲香港中學會考五科二級（包括英文、中文及數學科）或同等學歷；或
- ii. 考獲香港中學文憑試五科二級（包括英文、中文及數學科）或同等學歷；或
- iii. 持有有關機電業「過往資歷認可」機制的資歷架構第三級或以上學歷；或
- iv. 持有認可院校頒發資歷架構第三級或以上的證書或文憑

申請人可能會被邀請參加面試。

## 全期學費

HK\$41,800（學費分三期繳交）

第一期：HK\$13,800

第二、三期：HK\$14,000

## 為期

2年

## 上課模式

兼讀制

## 頒授資歷

完成約120個學分可獲鐵路工程高等文憑 (1學分等同10學時)



## How to Apply

### Apply Online

Applicants can submit their application via the academy's website [www.mtracademy.com](http://www.mtracademy.com)

### Apply In Person

Applicants can obtain and submit their application form at one of the following training centres.

#### **MTR Academy - Manhattan Place Centre**

43/F, Manhattan Place, 23 Wang Tai Road, Kowloon Bay, Kowloon

(Office hours: 9:00am – 5:30pm, Monday to Friday excluding public holidays)

#### **MTR Academy - Hung Hom Centre**

MTR Hung Hom Building, 1/F., 8 Cheong Wan Road, Hung Hom, Kowloon

(Office hours: 1:30pm – 7:30pm, Monday, Wednesday & Friday; 9:30am – 12:30pm, Saturday excluding public holidays)

### Application Fee (Non-refundable)

HK\$200

## 申請方法

### 網上遞交申請

申請人可於學院網頁遞交網上報名表 [www.mtracademy.com](http://www.mtracademy.com)

### 親身遞交申請

申請人可親臨下列中心索取及遞交報名表

#### **港鐵學院 - Manhattan Place 中心**

九龍九龍灣宏泰道23號Manhattan Place 43樓

(辦公時間：星期一至五，上午9時至下午5時30分，公眾假期除外)

#### **港鐵學院 - 紅磡中心**

九龍紅磡暢運道8號港鐵紅磡大樓1樓

(辦公時間：星期一、三及五：下午1時30分至晚上7時30分；星期六：上午9時30分至下午12時30分，公眾假期除外)

### 申請費式 (不可退款)

HK\$200

## Programme Enquiry

### 課程查詢

Website 網頁: [www.mtracademy.com](http://www.mtracademy.com) Email 電郵: [academy@mtr.com.hk](mailto:academy@mtr.com.hk)

Tel 電話 : 2520 3535 Fax 傳真: 2520 3458

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