

CPD Series: Rolling Stock – Design Principles

Course Code: SC 26-005

Lecture: 6 March – 8 May 2026 (Fridays), 7:00 pm – 10:00 pm

Visit: 9 May 2026 (Saturday), 9:00 am – 12:00 pm

Objectives and Learning Outcomes

This course aims to provide participants with the knowledge in rolling stock (train) fundamental design.

On completion of the course, students are expected to be able to:

- Illustrate the typical sub-systems of rolling stock;
- Demonstrate understanding of the applicable international standards; and
- Design basic rolling stock using of electrical and mechanical principles.

Who Should Attend

Those who are interested in rolling stock (Train)

Pre-requisites

Participants with basic knowledge / practical experience in rolling stock or related disciplines*

Language

Cantonese with English terminologies (with presentation slides in English)

Venue

MTR Academy - Hung Hom & MTR Depot (TBC)

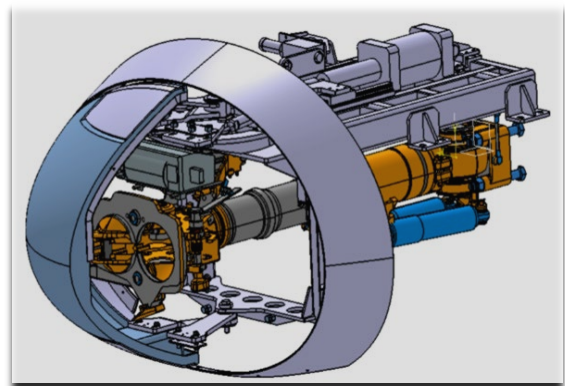
Mode of Learning

Classroom lecture, discussion and visit

Course Structure

This course covers the following topics:

- Overview of Rolling Stock
- Rolling Stock Sub-Systems Design
- Design for Fire Safety
- Depot Operation and Maintenance



Course Details

Time & Date	Lesson	Topics
6 March 2026 <u>7:00 pm – 10:00 pm</u>	1	Overall of rolling stock • Introduction of rolling stock classification & typical values
13 March – 24 April 2026 <u>7:00 pm – 10:00 pm</u> (Except Public holidays on 3 April 2026)	2 -7	Stock Sub-Systems Design i. Key sub-systems and their interfaces: Car body Structure / Bogies and suspension System / Coupler & Gangway System / Driving Cab & Saloon Interior / Door System / Brake & Air Compressor System ii. Applicable international standards iii. Available technologies and alternatives iv. Key sub-system design parameters and design principles for safety and reliability v. Application of mechanical and associated electrical principles
8 May 2026 <u>7:00 pm – 10:00 pm</u>	8	Design for Fire Safety i. Concept of fire and smoke resistant / retardant ii. Applicable international standards iii. Concept of Fire Load and Fire Power Output iv. Applications in cab facilities and saloon interior design
9 May 2026 (Saturday) <u>9:00 am – 12: 00pm</u>	9	Site Visit • Depot Operation and Maintenance

Schedule

Lesson	Time & Date	Mode of Learning
1	6 March 2026 (Friday) 7:00pm – 10:00pm	Lecture
2	13 March 2026 (Friday) 7:00pm – 10:00pm	Lecture
3	20 March 2026 (Friday) 7:00pm – 10:00pm	Lecture
4	27 March 2026 (Friday) 7:00pm – 10:00pm	Lecture
5	10 April 2026 (Friday) 7:00pm – 10:00pm	Lecture
6	17 April 2026 (Friday) 7:00pm – 10:00pm	Lecture
7	24 April 2026 (Friday) 7:00pm – 10:00pm	Lecture
8	8 May 2026 (Friday) 7:00pm – 10:00pm	Lecture
9	9 May 2026 (Saturday) 9:00am – 12:00pm	Technical Visit (To be confirmed)

Speaker



Mr Raymond Leung
M.Sc. (Eng.) B.Sc.

Raymond Leung obtained his Master of Science in Engineering from the University of Hong Kong, and he is an experienced rolling stock (RS) engineer who is proficient in both RS and depot plant equipment that support RS maintenance. He has extensive experience at driving contractors to deliver and supervise them with proper guidance and he has proven records in delivering excellent engineering solutions e.g., High-speed Train (Vibrant Express). He has gained an MTR Grand Award - Top Award on the “High Speed Rail Successful Opening” in 2019.

Raymond is currently working as a Senior RS Design Engineer and is responsible for new procurement of RS and on-track vehicle projects in Tung Chung Line Extension (TUE), Siu Ho Wan Depot Redevelopment (SHO), Tuen Mun South Extension (TME) and Northern Link (NOL) of MTR. Prior to his current appointment, he was engaged in rolling stock engineering design in various Metro passenger trains with over 20-year related experience.

Certificate of Attendance

Each participant will receive a certificate of attendance showing upon successful completion of this course if he/she fulfills the 70% attendance requirement.

Programme Fee	Early Bird Fee	Discount Scheme
\$4,100	\$3,690 (Paid registration on or before 22 February 2026)	15% off for – members of supporting professional bodies^ – full time staff of MTR and its subsidiary companies^ – full-time students (Senior Secondary or above) ^ Latest details, please refer to our webpage

Application Methods

Online

Applicants can enrol and online payment by credit card at <https://www.mtracademy.com>

Enquiry in Person

Address: MTR Hung Hom Building, 1/F., 8 Cheong Wan Road, Hung Hom, Kowloon
Opening hours: Monday - Friday 9am– 8pm; Saturday: 9am – 12:30pm
Closed on Sundays and Public Holidays

Closing Date for Registration

Please note that due to limitations of venue capacity and relevant logistics, all registrations must be made at least 2 working days prior to the delivery date of individual modules. No walk-in registration will be entertained.

*MTR Academy reserves the right to turn away successfully enrolled individuals who do not meet prerequisite.