

CPD Series: Fundamentals of Railway Signalling and Train Control

Lecture: 2 May 2026, 9:00 am - 12:00 pm &

9 May 2026, 9:00 am - 12:00 pm ; 1:30 pm - 4:30 pm (Saturdays)

Course Code: SC 26-011

Co-organized with IRSE (Hong Kong Section)

Objectives and Learning Outcomes

The course is designed to provide participants with a practical understanding of railway signalling with an introduction of evolution of railway signalling from semaphore signalling system to computer-based signalling system and associated signalling trackside equipment.

Upon completion of this course, participants will be able to:

- Understand the signalling principles and aware of trackside safety;
- Understand train operation and various type of railway signalling systems; and
- Evaluate headway time and distance.

Who Should Attend

- Practitioners in railway industry who wish to learn fundamental knowledge in the railway signalling
- Graduate Engineers who wish to broaden their knowledge
- Engineering students who are interested in railway signalling
- Candidates who wish to attend the IRSE Professional Examination Module A

Language

Lectures will be conducted in Cantonese and supplemented by English terminology and terms. Course materials are written in English.

Venue

MTR Academy - Hung Hom Centre



Mode of Learning

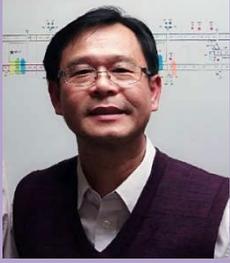
Classroom lecture

Course Structure

The course covers the following fundamental railway signalling topics:

- Signalling principles and trackside safety
- Railway infrastructure and trackside equipment
- Train operation and headway
- Latest developments in signalling system

Professional Speakers



Ir Y. T. Tai,
FIRSE,
Chairman of IRSE
(HK)

Timothy Y. T. Tai (Tim) is a professional signal engineer with over 40 years of experience in maintenance, implementation, design; test and commissioning of relay interlocking, Computer Based Interlocking, Automatic Train Control and Communications-based Train Control (CBTC) systems. He is currently employed as a consultant for the New ATC Replacement Project for the Urban Lines in HK. Prior to this post, he was the Signalling & Electronic Control Engineering Manager tasked with the responsibility of design, implementation, test & commissioning of modification for the Signalling & Electronic Control system in Operating Railway and the on-coming new line interfacing systems.

Tim was a Visiting Lecturer in the Hong Kong Polytechnic University, teaching Signalling and Train Control Systems in MSc course in year 2009, 2013 and 2019. Tim was also a visiting lecturer for MTR Academy from 2017 to 2025. Through these period, Tim conducted Fundamentals of Railway Signalling & Train Control course, Intermediate Railway Signalling course, Railway Signal Control & Communications course and Signalling Control Table Design & Test Knowledge course.



Mr. Y. F. Sung,
Hon FIRSE

Y. F. Sung is a retired professional signal engineer with over 32 years of experience in maintenance, installation, design, T&C of railway signaling system. His last job position was the Signal Maintenance Manager in KCRC, responsible for the first line and second line maintenance of East Rail, West Rail, Ma On Shan Rail and Light Rail.

Mr. Sung was a Visiting Lecturer of VTC, teaching Railway Signalling in the year of 2006, 2008, 2010 and 2014. Mr. Sung was also a visiting lecturer in MTR Academy, teaching Intermediate Railway Signalling course in 2019, 2020 and Railway Signal Control and Communications course in 2023, 2024 and 2025.

He is the General Secretary of IRSE (HK Section).

Schedule

Time & Date	Lesson	Topics	Speakers
2 May 2026 9:00 am - 12:00 pm	1	Introduction to the history, principles and function <ul style="list-style-type: none"> Railway Signalling History; Signalling Principles – The Requirements and the logic; Signalling Terminology-Typical Items: Approach Control, Trap point, Track Circuit Interrupter, Deadman Switch, Detonator, Fouling point and Clearance point, etc.). 	YF Sung
9 May 2026 9:00 am - 12:00 pm	2	Technologies for train control <ul style="list-style-type: none"> Evolution of Railway Signalling System (Token/Mechanical/Color Light/Speed Code); Single Line working 	Ir Tai Yin Tung
9 May 2026 1:30 pm - 4:30 pm	3	Tain Operations <ul style="list-style-type: none"> Headway Time and Headway Distance; Headway Calculation The use of Control Tables Control Table for Routes, Points and Signals 	Ir Tai Yin Tung

Certificate of Attendance

Each participant will receive a certificate of attendance signed jointly by MTR Academy and the Hong Kong Section of Institution of Railway Signal Engineers, showing 9 hours upon successful completion of this course.

This course is recognized for 45 CPD points by the Chartered Institute of Logistics and Transport in Hong Kong (CILTHK).

Programme Fee	Early Bird Fee	Discount Scheme
\$3,100	\$2,790 (Paid registration on or before 19 April 2026)	15% off for <ul style="list-style-type: none">– members of supporting professional bodies ^– full time staff of MTRCL and its subsidiary companies,^– full-time students (Senior Secondary or above) <p>^Latest details, please refer to our webpage</p>

Application Methods

Online

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

Enquiry in Person

Address: 1/F, MTR Hung Hom Building, 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.