

**EE535**

**Asset Maintenance & Reliability Engineering**

**Course Introduction**

***Semester 1 - 2025/26***

***Dr K K Lee/Calvin Au Yeung/Ernest Kot***

# **EE535 – Asset Maintenance & Reliability Engineering**

## **EE535 - 设备和系统维护与可靠性工程**

### **Railway Asset Management 铁路设备和系统管理**

- *Railway Asset Overview (铁路设备和系统概述)*
- *Railway Asset Lifecycle (铁路设备和系统生命周期)*
- *Railway Asset Maintenance (铁路设备和系统维护)*
- *ISO 55000 Standards (设备维护标准ISO55000)*
- *Computerized Maintenance Management System (计算机化维护管理系统)*
- *Maintenance 4.0 (维护4.0 - 最新设备和系统维护实践)*

### **Reliability Engineering (可靠性工程)**

- *Reliability Mathematics (设备可靠性数学)*
- *Modelling of Reliability (设备可靠性建模)*
- *Engineering System Assurance (工程系统保证)*
- *Failure Mode and Criticality Analysis FMECA (故障模式和严重性分析)*
- *Reliability Centred Maintenance (以可靠性为中心的维护)*

## **Teaching Staffs**

- ❑ *Dr KK Lee – Professor, Department of EEE, PolyU, and former Projects Director of MTR*
- ❑ *Calvin Au Yeung – Manager, Operations Reliability, MTR*
- ❑ *Ernest Kot – Senior Safety Assurance Engineer, MTR*
- ❑ *Teaching Assistant -*

## Course Schedule

	Dates	Topics	By
1	1 Sep	Railway Asset Management	KK Lee
2	8 Sep	Railway Asset Management	KK Lee
3	15 Sep	Asset Management Framework – ISO55000	KK Lee
4	22 Sep	Computerized Maintenance Management System	KK Lee
5	29 Sep	Reliability, Availability and Maintainability	Calvin Au Yeung
6	13 Oct	Reliability, Availability and Maintainability	Calvin Au Yeung
7	20 Oct	Common System Assurance Techniques	Ernest Kot
8	27 Oct	Common System Assurance Techniques	Ernest Kot
9	3 Nov	Safety critical systems, and O&M in railways	Ernest Kot
10	10 Nov	FMECA	Ernest Kot
11	17 Nov	RCM	Calvin Au Yeung
12	24 Nov	Trends in railway O&M - Maintenance 4.0	KK Lee
13	TBD	Site Visit	KK Lee

## Course Assessment

Assessment Methods	Weight
<i>Assignment</i>	<i>20%</i>
<i>Test</i>	<i>20%</i>
<i>Examination</i>	<i>60%</i>
<i>Total</i>	<i>100%</i>