1. Title	Formulate the inspection, commissioning and testing guidelines and standards for the trackside equipment of the railway signal system and the SCADA System	
2. Code	EMRAIT511A	
3. Range	Refer to the design of the trackside equipment of the railway signal system and points and the functions and standards of the Supervisory, Control and Data Acquisition (SCADA) System and the overall design of the railway signal and control system, and apply knowledge and techniques of electronic control circuit, electrical circuit and equipment so as to formulate the inspection, commissioning and testing guidelines and standards for the trackside equipment of the railway signal system, points and the SCADA System.	
4. Level	5	
5. Credits	6	
6. Competency		Performance Requirements
	6.1 Design, working principles and standards of the trackside equipment of the railway signal system and the SCADA System	♦ Understand the working principles of the railway signal system ♦ Understand the design, structure and working principles of the trackside equipment of the railway signal system including points ♦ Understand the functions and application principles of the SCADA System ♦ Know about the application of the inspection and testing guidelines of manufacturers ♦ Master the techniques of working out the inspection, commissioning and testing standards for the railway signal system equipment ♦ Understand the application of typical measuring and testing instruments and tools for the railway signal system equipment
	6.2 Methods and procedures of formulating the inspection, commissioning and testing guidelines for the trackside equipment of the railway signal system and the SCADA System	♦ Refer to the design of the railway trackside equipment and the overall signal control design and draft, test and formulate the inspection, commissioning and testing guidelines and standards for the trackside equipment including train location detecting devices, platform screen door control devices, railway signal display devices, control components and interface devices. Aspects to be covered are: • Inspection procedures and standards • Function tests and standards • Interlock tests and standards • Standards for equipment setting • Important points for inspection, testing and setting

		• Draft, test and formulate the inspection, commissioning and testing guidelines and standards for points equipment including electric motors, mechanical devices, locking devices and indicators, and control and protection circuits • Draft, test and formulate the inspection, commissioning and testing guidelines and standards for the functions of remote control and signal data acquisition of the SCADA System
	6.3 Professionalism in formulating the inspection, commissioning and testing guidelines for the trackside equipment of the railway signal system and the SCADA System	♦ Formulate the inspection, commissioning and testing guidelines for the trackside equipment of the railway signal system and the SCADA System according to the standards and requirements for work safety, health, environmental protection and quality management of railway works ♦ Understand the safety guidelines as required by the law and codes of practice in formulating the inspection, commissioning and testing guidelines for the trackside equipment of the railway signal system and the SCADA System
7. Assessment Criteria	The integrated outcome requirement of this unit of competency is: (i) Capable to draft a set of inspection, commissioning and testing guidelines and standards for a trackside system equipment with specified functions according to commissioning requirements; and (ii) Capable to draft a set of inspection, commissioning and testing guidelines and standards for points according to commissioning requirements.	
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of electronic control circuit and railway signal system.	