

1. Title	Formulate instructions and plans for the overall inspection, testing and commissioning of railway signal and control systems
2. Code	EMRAIT603A
3. Range	Refer to the overall design of railway signal and control systems and review the scope of instructions for inspection, testing and commissioning of signal and control systems to formulate instructions and plans for the overall inspection, testing and commissioning of railway signal and control systems.
4. Level	6
5. Credits	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Overall design, performance requirements and overall commissioning of railway signal and control systems</p> <ul style="list-style-type: none"> <li>◆ Master the techniques of reviewing, assessing, integrating and developing performance requirements and overall design guidance information for railway signal and control system equipment</li> <li>◆ By applying specialized railway signal system engineering knowledge, integrate and develop the requirements for the overall design of railway signal and control systems into performance standards for various component system equipment</li> <li>◆ Master the techniques of designing overall testing of railway signal and control systems according to performance standards</li> </ul> <p>6.2 Methods and procedures of formulating instructions and plans for the overall inspection, testing and commissioning of railway signal and control systems</p> <ul style="list-style-type: none"> <li>◆ Capable to formulate the following testing instructions for railway signal and control systems by referring to the overall railway design and the overall design of railway signal and control systems: <ul style="list-style-type: none"> <li>• Comprehensive testing of the control function of the signal and control system</li> <li>• Comprehensive testing of the interlocking functions of the signal and control system</li> <li>• Testing the operation of the signal and control system under special conditions such as single track running</li> <li>• Testing the operation of the signal and control system when part of the signal system breaks down</li> </ul> </li> <li>◆ Capable to perform comprehensive function tests, interlocking function tests and operation tests for signal control systems under special conditions according to testing instructions</li> <li>◆ Capable to analyze testing data</li> <li>◆ Capable to use the inspection instruments of railway signal equipment effectively, including some specialized testing instruments</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Capable to formulate commissioning procedures and verification reports required for railway signal and control systems, including <ul style="list-style-type: none"> <li>• Various system inspection, testing and commissioning reports</li> <li>• Comprehensive control function and interlocking function testing reports for signal and control systems</li> </ul> </li> </ul> <p>6.3 Professionalism in formulating instructions and plans for the overall inspection, testing and commissioning of railway signal and control systems</p> <ul style="list-style-type: none"> <li>◆ Formulate instructions and plans for the inspection, testing and commissioning of railway signal and control systems according to the standards and requirements for safety, health, environmental protection and quality management of railway works</li> <li>◆ Understand the safety guidelines as required by the law and codes of practice in formulating instructions and plans for the inspection, testing and commissioning of railway signal and control systems</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to draft an overall testing instruction for signal and control systems that complies with the commissioning requirements for signal and control systems; and</p> <p>(ii) Capable to perform overall testing for railway signal and control systems and analyze testing data effectively, and capable to formulate requirements for overall commissioning procedures and verification reports for railway signal and control systems effectively.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of railway signal engineering.</p>