

1. Title	Formulate strategies and plans for reducing the faults in railway signal and control system equipment
2. Code	EMRAOR603A
3. Range	Assess the development of new technologies in signal and control system and its maintenance and the change of railway environment, and formulate strategies and plans for reducing the faults in railway signal and control system equipment according to the analysis of fault records and operation performance of such system.
4. Level	6
5. Credits	20
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Studies and techniques for reducing the faults in railway signal and control system equipment</p> <ul style="list-style-type: none"> ◆ Analyze and assess from different aspects the information and records of the faults and performance of railway signal and control system equipment and apply the railway signal and control engineering knowledge to formulate plans for reducing the faults in such system equipment ◆ Master the techniques of reviewing, integrating and extending the knowledge of new technologies and development and apply it to formulate plans for reducing the faults in railway signal and control system equipment ◆ Master the application of management knowledge and skills so as to formulate plans for improving persistently the performance of railway signal and control system equipment ◆ Analyze and assess the cost-effectiveness of improvement plans <p>6.2 Methods and procedures of formulating strategies and plans for reducing the faults in railway signal and control system equipment</p> <ul style="list-style-type: none"> ◆ Formulate the strategies for improving the reliability of the railway signal and control system based on the analysis of system fault records, including: <ul style="list-style-type: none"> • Improving the design of signal and control system equipment • Improving the methods of maintaining the system and equipment • Improving the environment of railway signal operation so as to reduce the impact of the environmental factor ◆ Apply the instruments and equipment developed by new technologies as well as the improvements in network programmes to monitor the operation of the signal and control system so as to reduce the faults in such equipment ◆ Apply the instruments and equipment developed by new technologies as well as computer and network programmes to upgrade the fault-alerting functions of signal and control equipment

	<ul style="list-style-type: none"> ◆ Formulate strategies for persistently reducing the faults in signal and control system equipment, including: <ul style="list-style-type: none"> • Establishing good communication and cooperation among departments • Negotiating with staff on formulation of training programmes and providing adequate and upgrading training for them • Formulating review mechanism for the operation and make improvements <p>6.3 Professionalism in formulating strategies and plans for reducing the faults in railway signal and control system equipment</p> <ul style="list-style-type: none"> ◆ Formulate strategies and plans for reducing the faults in railway signal and control system equipment 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 strategies and plans for reducing the faults in railway signal and control system equipment
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> (i) Capable to formulate strategies and plans efficiently for reducing the faults in railway signal and control system equipment; and (ii) Capable to formulate strategies and plans efficiently for persistently reducing the faults in signal and control system equipment.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the professional knowledge of railway signal and control engineering.</p>