1. Title	Formulate maintenance plans for railway signal and control system equipment	
2. Code	EMRAMA606A	
3. Range	Calculate the wear rates of different spare parts of railway signal and control system equipment, compare the cost of the spare parts with the maintenance cost and consider the inspection cycle for the equipment and the safety requirements for railway signal and control system, identify the critical factors in order to calculate the maintenance cycle and formulate maintenance plans.	
4. Level	6	
5. Credits	20	
6. Competency		Performance Requirements
	6.1 Studies and techniques of formulating maintenance cycles for railway signal and control system equipment	♦ Select the best way of railway signal and control system equipment maintenance such as regular maintenance, monitoring of operation condition, regular replacement, etc. by applying maintenance knowledge of signal and control system and considering the operation mode of railway signal and control system ♦ Master information about review, integration and development of the functional performance of railway signal and control system equipment and the wear of consumable parts so as to apply the information in formulating maintenance cycles ♦ Master the calculation of the deterioration rate of equipment including the consideration of environmental factors ♦ Calculate, analyze and assess the cost effectiveness of adopting different maintenance cycles
	6.2 Method and procedures of formulating maintenance cycles for railway signal and control system equipment	♦ Capable to identify signal and control equipment parts of higher wear rates, and monitor and calculate their wear rates by applying knowledge and experience in maintaining electrical and mechanical equipment and signal and control equipment ♦ Capable to calculate the cost of spare parts and the maintenance cost based on the equipment parts of higher wear rates ♦ Capable to identify the critical factors for maintenance cycles of railway signal and control system equipment and calculate their maintenance cycles by fully considering factors like the equipment performance, wear rates of critical consumable parts, wear cost and maintenance cost ♦ Capable to formulate basic maintenance plans based on the critical factors and the maintenance cycle calculated for the signal and control system equipment ♦ Capable to identify other factors of consideration and calculate the cycles for different levels of maintenance

		♦ Capable to formulate a comprehensive plan for various equipment of the railway signal and control system according to maintenance cycles for different levels
	6.3 Professionalism in formulating maintenance plans for railway signal and control system equipment	♦ Formulate maintenance plans for railway signal and control system equipment according to the standards and requirements for 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 maintenance plans for railway signal and control system equipment
7. Assessment Criteria	The integrated outcome requirement of this unit of competency is: (i) Capable to formulate maintenance cycles for different levels of train maintenance and the basic content of maintenance of related equipment effectively and accurately based on data about the wear of railway signal and control system equipment parts and some critical factors.	
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of railway signal and control system engineering and railway operation.	