

1. Title	Use new technologies and methods to support fault finding in trains
2. Code	EMRAOR502A
3. Range	Make use of the instruments and equipment developed by new technologies to judge the condition of train equipment and record the operational data of train equipment in order to support the finding of train faults; make use of the information network to obtain information on railways of other countries for finding and analyzing train faults.
4. Level	5
5. Credits	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Information on technological development and operation of railways of other countries</p> <ul style="list-style-type: none"> ◆ Search technological developments related to railway operation and engineering, and understand their application ◆ Liaise with railways and relevant organizations of other countries to acquire information on railway operation especially that related to railway engineering <p>6.2 Methods and procedures of using instruments and equipment developed by new technologies and information technology in finding faults</p> <ul style="list-style-type: none"> ◆ Capable to use instruments and equipment developed by new technologies to support monitoring the condition on the train roof and under the train so as to improve the fault finding rate for train equipment, such as using <ul style="list-style-type: none"> • Video equipment to monitor the condition of brake shoe and bow collector • Thermal or infrared instrument to monitor the temperature of the train equipment (e.g. temperature of axle bearing) ◆ Capable to use recording instruments developed by new technologies to record operational data of train equipment to support finding of recurring and hidden faults ◆ Capable to use information network to collect data of operation and faults for identical train equipment used by railways of other countries ◆ Capable to use computer technology to analyze information on faults in train equipment and systems so as to provide data for finding faults in train equipment
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to use new technologies and methods to monitor the dynamic performance of and find hidden faults in major train equipment effectively; and</p> <p>(ii) Capable to collect information on operational performance and faults of similar train equipment used by railways of other countries.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person is familiar with the operation and development of different disciplines in railway engineering.