

1. Title	Measure noise and vibration of air-conditioning and refrigeration systems	
2. Code	EMACIT302A	
3. Range	Use measuring instruments to measure noise and vibration of air-conditioning and refrigeration systems, at air-conditioning and refrigeration system machine rooms or work sites, in order to carry out the inspection, commissioning and testing of the systems.	
4. Level	3	
5. Credit	6	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of measuring noise and vibration of air-conditioning and refrigeration systems</p> <ul style="list-style-type: none"> <li>◆ Understand the causes and harm of noise, including being able to: <ul style="list-style-type: none"> <li>• Illustrate the causes of noise generated by air-conditioning and refrigeration equipment</li> <li>• Illustrate the definition of sound pressure, sound pressure level, sound intensity, sound intensity level, sound power, sound power level, sound spectrum and sound level</li> <li>• Illustrate the harm of noise to human beings</li> </ul> </li> <li>◆ Understand the working principles of sound level meter</li> <li>◆ List air-conditioning and refrigeration equipment that generally need to measure noise level</li> <li>◆ Understand the causes and harm of vibration, including being able to: <ul style="list-style-type: none"> <li>• Illustrate the causes of vibration generated by air-conditioning and refrigeration equipment</li> <li>• Illustrate the harm of vibration to air-conditioning and refrigeration equipment and human beings</li> </ul> </li> <li>◆ Understand the working principles of vibration sensor</li> <li>◆ List air-conditioning and refrigeration equipment that generally need to measure vibration level</li> </ul> <p>6.2 Methods and procedures of measuring noise and vibration of air-conditioning and refrigeration systems</p> <ul style="list-style-type: none"> <li>◆ Use sound level meter to measure the noise level of air-conditioning and refrigeration equipment</li> <li>◆ Use vibration sensor to measure the vibration level of air-conditioning and refrigeration equipment</li> </ul> <p>6.3 Professionalism in measuring noise and vibration of air-conditioning and refrigeration systems</p> <ul style="list-style-type: none"> <li>◆ Understand the legal requirements and code of practice in order to undertake the tasks of measuring the noise and vibration of air-conditioning and refrigeration systems</li> </ul>	

7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>(i) Capable to complete the measurement of the noise and vibration of various types of air-conditioning and refrigeration systems systematically and efficiently; and</li> <li>(ii) Capable to follow the code of practice in order to undertake the tasks of measuring noise and vibration of various types of air-conditioning and refrigeration systems.</li> </ul>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses elementary knowledge of air-conditioning and refrigeration.</p>