



(The contents and other related details in this form is used for publication purpose only. Training module will be given to participants upon registration)

<b>Course Title: TROUBLESHOOT &amp; TESTING AUTOMATION EQUIPMENT USING WATCHDOG TIMER METHOD</b>	<b>Course Code : EEA 132</b>
<b><u>Course Background/Summary :</u></b>	
<p>Numerous machines and systems are used in of electro pneumatic drives and PLC-controlled requires great demands on maintenance and service. This course gives you a thorough understanding about troubleshooting and fault finding knowledge with respect to the digital electronics, PLC and electrical control based systems failures.</p> <p>The participants will learn about how to troubleshoot (and failure prevention) control devices and do proper troubleshooting procedures in finding and fixing the problem due to failure.</p> <p>The participants will be exposed to WATCHDOG TIMER and its application (software and hardware) to fasten step of doing troubleshooting and fault finding due to maintenance.</p>	
<b><u>Course Objectives:</u></b>	
<ul style="list-style-type: none"><li>• Check electromechanical components of automation system by carrying out physical inspection of components</li><li>• Troubleshoot fault on electromechanical components of automation system by analyzing the symptoms of malfunction using a multimeter and bypass bulb indicator.</li><li>• Understand Watchdog timer and its functionality.</li><li>• Introduce WATCHDOG timer in PLC program as tools for troubleshooting.</li><li>• Watchdog timer in hardware control circuit for motor control system.</li><li>• Watchdog timer in Electro pneumatics and electro hydraulics application.</li><li>• Extra- watchdog timer in digital electronics and microcontroller based system.</li></ul>	
<b><u>Target Audience:</u></b>	
Maintenance, Design/Engineering, Trainers	

*UniKL MSI can also customize existing short courses and develop new courses to meet your personal training needs and requirements. The course duration serves as a guideline for your reference.*

*Please forward enquiries to Centre for Advancement & Continuing Education (ACE), Universiti Kuala Lumpur (Malaysian Spanish Institute), Kulim Hi-Tech Park, 09000 Kulim, Kedah or via fax to:04-4032539 or email to [syazrah@unikl.edu.my](mailto:syazrah@unikl.edu.my) or call 04-4035199 / 200 (ext:112 / 185)*



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<b>Course Duration :</b>	<b>Min: 3 days, Max:5 days</b>
<b>Course Contents :</b>	
<b>No</b>	<b>TOPICS</b>
1	Introduction to automation systems
2	Watchdog timer theory
3	Watchdog timer in PLC application
4	Watchdog timer in motor control application
5	Watch Dog timer in electropneumatics and hydraulics application
6	Extra- Watchdog timer in Labview software application.
7	Extra- Watchdog timer in digital electronics and microcontroller based system.
<b>COURSE STRUCTURE:</b>	
Practical :	60 %
Theory :	40 %

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