



**UNIVERSITI KUALA LUMPUR**  
MALAYSIAN SPANISH INSTITUTE

(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:</b> <b>MICROCONTROLLER FOR RADIO FREQUENCY DATA COMMUNICATION</b>		<b>Course Code</b> : <b>EEA 166</b>
<b>Course Background/Summary :</b> <p>Data communication is an important medium for engineering and control application when systems are complex and requires data to be transferred from one subsystem to another system. Such example is remote system .Communication can be done through parallel and serial data communications. A microcontroller is one of the main components in data communication whereby it uses its communication features to communicate. This course will introduce participants on how to use a PIC microcontroller for Radio Frequency wireless data communication through serial communication such as USART, SPI etc. The communication is done through microcontroller to microcontroller or microcontroller through PC or vice versa via the wireless transmitter and receiver.</p>		
<b>Course Objectives:</b> <ul style="list-style-type: none"><li>• Construct controller from scratch for data communication application.</li><li>• Control UART and SPI to allow data transfer and receive.</li><li>• Write C code algorithm to control data communication application</li></ul>		
<b>Target Audience:</b> <ul style="list-style-type: none"><li>• Electricians, Research assistant, research officer, Researcher, Academicians</li><li>• Technicians, Hobbyist</li><li>• Engineers &amp; Instructors</li></ul>		
<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 Radio Frequency theory	
2	Introduction to data communication theory	
3	Theory on PIC microcontroller for data communication	

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), University 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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4	Write C code control algorithm for data transfer and receive.
5	Testing and commissioning controllers for data communication using oscilloscope.
<b>COURSE STRUCTURE:</b>	
Practical :	65 %
Theory :	35 %

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