



**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>PIC MICROCONTROLLER IN C LANGUAGE</b>		<b>Course Code</b> : <b>EEA 111</b>
<b>Course Background/Summary :</b> Microcontrollers are small, inexpensive computers that are used in a wide range of applications including portable communication devices, appliances, industrial control, and data logging systems. They eliminate the expense and complexity of using a full microprocessor when sensing and processing information. This subject will expose the participant to hardware, software, design and interfacing aspects of single-chip microcontroller which are used as controllers in embedded system.		
<b>Course Objectives:</b> <ul style="list-style-type: none"> <li>• Enhanced knowledge of PIC and programming in C language.</li> <li>• Develop and program controlling devices using C language.</li> <li>• Create and perform wiring connections from and to the devices.</li> <li>• Download programs into PIC, test and display output results.</li> </ul>		
<b>Target Audience:</b> <ul style="list-style-type: none"> <li>• Professionals who will be involved in creating and developing an embedded application systems that contain microcontrollers.</li> <li>• Lecturers/ Academicians/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 Microcontroller <ul style="list-style-type: none"> <li>• Microcontroller Architecture</li> <li>• PIC16XXX Data Sheet, Pin Configurations</li> </ul>	
2.	Basic structure of C- programming <ul style="list-style-type: none"> <li>• Elementary data structures</li> <li>• Preprocessor directives</li> <li>• Input and output</li> </ul>	

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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3.	Variable & Constants <ul style="list-style-type: none"> <li>• Identifier (Variable, Constants)</li> <li>• Data Type</li> <li>• Constants</li> <li>• Expression</li> </ul>
4.	Operators <ul style="list-style-type: none"> <li>• Arithmetic Operators</li> <li>• Conditional Operators</li> <li>• Logic Operators</li> </ul>
5.	Program Control Structures <ul style="list-style-type: none"> <li>• Sequence Structure</li> <li>• Selection Structure</li> <li>• Looping Structure</li> <li>• Jump</li> </ul>
6.	Function <ul style="list-style-type: none"> <li>• Predefined Function</li> <li>• User-Defined function</li> </ul>
7.	Pointers and Array
8.	Projects
<b>COURSE STRUCTURE:</b>	
Practical :	50%
Theory / Lab Works :	50%

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