



## PIC-C Course Outline

Lecture	Time (h)	Topics that will be covered
<u>1</u>	3	<ul style="list-style-type: none"> <li>✓ Introduction to course</li> <li>✓ Discover the course outline</li> <li>✓ What is PIC, PIC_C?</li> <li>✓ Why we take this course</li> <li>✓ Where can I benefit from this course?</li> <li>✓ Overview about tools required</li> </ul>
<u>2</u>	3	<ul style="list-style-type: none"> <li>➤ PIC chips, types, names</li> <li>➤ PIC main parts</li> <li>➤ Describe the basic functionality of PIC</li> <li>➤ Looking on PIC datasheet and how we can use it</li> </ul>
<u>3</u>	3	<ul style="list-style-type: none"> <li>✓ PIC Programming</li> <li>✓ Assembly vs. C programming</li> <li>✓ PIC_C installation</li> <li>✓ Using PIC_C</li> <li>✓ Build the first and simple example</li> </ul>
<u>4</u>	3	<ul style="list-style-type: none"> <li>➤ Building the basic circuit</li> <li>➤ How can we transfer the code to PIC CHIP?</li> <li>➤ What are boot loader and TR?</li> <li>➤ Serial interfacing</li> </ul>
<u>5</u>	3	<ul style="list-style-type: none"> <li>✓ PIC interface with other devices and around world</li> <li>✓ Using I/O ports</li> <li>✓ Digital vs. Analog inputs</li> <li>✓ ADC (analog to digital convertor) module (Sensors interfacing)</li> </ul>
<u>6</u>	3	<ul style="list-style-type: none"> <li>➤ Concept of interrupts</li> <li>➤ Using Timer in PIC</li> </ul>
<u>7</u>	3	<ul style="list-style-type: none"> <li>✓ Keypad interface using scanning code</li> <li>✓ Using standard LCD</li> </ul>
<u>8</u>	3	<ul style="list-style-type: none"> <li>➤ Motor control and interfacing</li> <li>➤ DC, AC motor</li> <li>➤ Stepper motor</li> </ul>
<u>9</u>	3	<ul style="list-style-type: none"> <li>✓ Using CCP module (capture, compare, pulse width modulation)</li> <li>✓ Review interrupts here</li> </ul>
<u>10</u>	3	<ul style="list-style-type: none"> <li>➤ Memory interfacing</li> <li>➤ Internal EEPROM</li> <li>➤ External Serial EEPROM</li> <li>➤ Using PIC_C drivers for such CHIPS</li> </ul>

		<ul style="list-style-type: none"> <li>➤ How can we update an existing code to meet our requirements?</li> <li>➤ Understanding the timing diagrams</li> </ul>
<u>11</u>	3	<ul style="list-style-type: none"> <li>✓ Putting all together, and making a complete example</li> <li>✓ Talking about some important Topic and CHIPS required as GLCD, RTC, DAC, Ethernet, Wireless, Bluetooth, SPI, etc...</li> </ul>
<u>12</u>	3	<ul style="list-style-type: none"> <li>➤ How to make your project interact with computer?</li> <li>➤ How to make a computer application to support your Hardware system?</li> </ul>
<u>13</u>	4	<ul style="list-style-type: none"> <li>✓ Make example on PIC / Computer interaction</li> <li>✓ Review</li> </ul>