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# Course Syllabus

**Department offering the program**: Industrial electronics and Control Engineering
**Department offering the course**: Industrial electronics and Control Engineering

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| **Course basic information :** | | |
| **Course Code: AC344** | **Course Title:** Microcontrollers | **Level : (3)**<br>**Semester : 1** |
| **Department requirement** | **Teaching hours: Lecture [2] Tutorial [ 0 ] - Lab [ 3 ]** | |
| **Course objectives** | 1. To provide students with the several ways of accomplishing , utilizing and manipulating the different types of a microcontrollers.<br>2. Programming the microcontroller with high efficiency and reliability using different embedded languages.<br>3. Having acquired a good knowledge of improving interfacing of the microcontroller with the outer media. And to connect with the PC.<br>4. To analyze embedded devices and analyze the microcontroller different units. | |
| **Course Contents** | Introduction and review - Logic design - Microprocessor architecture – Memory - Arithmetic logic unit - PIN/PORT operation - Programming - interfacing methods – Applications | |
| **Assessment** | | |
| **Weighting of Assessment** | - Lab. tutorial and quizzes : 4 %<br>- Mid-term examination: 12 %<br>- Case study and/or practical exam: 20 %<br>- Final – term examination: 60 %<br>- Other types of assessment: 4 %<br>Total 100 % | |
| **List of text books and references:** | | |
| **Text books** | • Frederick M Cady "Microcontrollers and Microcomputers Principles of Software and Hardware | |

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| | Engineering", Prentice Hall, Jun 19, 2009. |
| **Recommended books** | • Myhe paedho, Handbook of microcontrollers, McGraw Hill, 1999.<br>• Fundamentals and Applications with PIC , Fernando E. Valdes-Perez and Ramon Pallas-Areny, Feb 11, 2009 |