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| **Sl. No** | **Syllabus** | **Curriculum** | **Deployment Strategy and**  **Tool** | **Cross-cutting issues**  **integrated** | **PO, PSO and CO** | **Attainment Verification** |
| 1. | MICRO CONTROLLER AND EMBEDDED SYSTEMS | * Students will learn that it has very wide applications in the field of instrumentation in systems like in the control panel of press printing machines, digital kiosks, credit card processing, security systems etc. It is also used in medical instruments like ECG (electronic cardiogram) etc making the device smart. * Students will learn that microcontrollers are light sensing & controlling devices. Temperature sensing and controlling devices. Fire detection & safety devices. Industrial instrumentation devices. Process control devices. * The microprocessor has a limitation on the size of data. Most microprocessors do not support floating point operations. The main disadvantage is it's overheating physically. It should not contact with the other external devices | 1. Chalk and   Talk method   1. PPT | * Business   Ethics   * Human   values | PO1:Engineering Knowledge  PO2:Problem Analysis  PO3:Design/Development Of Solutions  PO4:Conduct Investigations Of Complex Problems  PO5:Modern Tool Usage |  |
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|  |  | PSO1:Professional Skills  PSO2:Problem Solving Skill |
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|  |  | **CO1:Describe** the architectural features and instructions of ARM microcontroller.  **CO2:Apply** the knowledge gained for programming ARM for different applications and CO3:**Interface** external devices and I/O with ARM Microcontroller.  **CO4:Interpret** the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.  **CO5:Develop** the hardware/software co-design and firmware design approaches.  **CO6: Demonstrate** the need of real time operating system for embedded system applications. |
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