

## TWO WEEKS ONLINE FACULTY DEVELOPMENT PROGRAMME

**Organized by:** E&ICT Academy of NIT Warangal (Sponsored by Ministry of Electronics and Information Technology (MeitY), GoI) in association with the Department of ECE, IIITDM Kurnool

### Lecture Schedule

S.No	Date	Session-1 (2 Hours)	Session-2 (2 Hours)
1	16/08/2022	Inauguration, Introduction to Embedded Systems	Introduction to Computer Architecture
2	17/08/2022	Instruction Set Architecture: Instruction Pipeline, Data/Control Hazards, Data Hazard Resolution Techniques,	Instruction Set Architecture: Branch Predictors, Dynamic Instruction Scheduling Techniques.
3	18/08/2022	ARM 7: Architecture, Arm/Thumb Modes, Instruction Set,	ARM 7: Addressing Mode, Simulation using Keil IDE.
4	19/08/2022	Cache Memory Organization: Cache Memory Mapping Techniques, Cache Memory Optimization Techniques.	Cache Memory Organization: Cache Coherence Protocols.
5	20/08/2022	Real Time Operating System (RTOS): Inter-task Communication using FIFO, Priority Inversion, freeRTOS Demonstrations using TIVAC Launch PAD.	Real Time Operating System (RTOS): Inter-task Communication using FIFO, Priority Inversion, freeRTOS Demonstrations using TIVAC Launch PAD.
6	21/08/2022	Hardware-Software Codesign: Trade-offs	Hardware-Software Codesign: Demo using Zed Board with Xilinx Vivado.
7	22/08/2022	Computer Bus Standards: Classification, I2C	Computer Bus Standards: SPI
8	23/08/2022	Computer Bus Standards: UART	Computer Bus Standards: AXI and Others
9	24/08/2022	Introduction to IoT: Components of IoT, Protocols, and so on.	Introduction to IoT: Protocols and so on.
10	25/08/2022	Introduction to IoT: Demonstration	Online Test and Valedictory