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**Module details of Embedded Systems & Interfacing hands-on**

S.No.	Module Name	Topics
1.	<b>Embedded Hardware &amp; architecture</b>	Introduction, design characteristics, IO device, ADC/DAC, sensors, actuators, interrupts; ARM architecture fundamentals, ARM instruction set, Thumb set, assembly programming
2.	<b>Interfacing C-Programs with ARM Core Microcontrollers</b>	Bit manipulation, IO port configuration
3.	<b>Processing Elements of an Embedded System</b>	Reconfigurable architectures & FPGAs, ARM and $\mu$ Cs
4.	<b>Embedded OS</b>	how memory is managed, how tasks are scheduled, what interrupts are and how they are handled Linux (monolithic) kernel, micro kernel and modular kernel
5.	<b>Hands-on including-</b>	Build your own input/output system with the ARM Build your own ADC using ARM Learn how to use serial communication using the ARM Create a timer for polling using the ARM

Principal Coordinator Academy	Co- Principal Coordinator - Academy	Participating Academies and Local Coordinator Details
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