

TEQIP Short Course – Spring 2015 – May 11 to May 15

Designing Embedded Systems

In Rapidly Changing Technological Environment

The seminar is concerned with technical and pedagogical aspects of teaching Embedded Systems in rapidly changing technological environment. A decade ago, embedded systems were primarily based on 8-bit microcontrollers. However, nowadays embedded systems have become very complex. A tentative topical outline is as follows, but it is open to change based on the needs of the participants.

1. Overview of Designing Embedded Systems in Current Technological Environment
2. ARM Architecture and Comparison of ARM with Other Microcontrollers
3. ARM Assembly and C and an Introduction to RTOS (if time permits)
4. ARM - I/O Interfacing and Serial Communication
5. Designing an Embedded Systems Based on ARM Controller

Participants will have opportunities to discuss various issues - technical as well as pedagogical. Most topics will include presentation, discussion, and hands-on experience. The format of the seminar will be similar to that of the last year's seminar: lecture – discussion – followed by hands-on experience or demonstration.

Lab Equipment: Labs will be based on ARM-controller based boards - Freedom Boards from ARM University. Each participant will be given one ARM board to continue with lab work in their individual college.

Short Course Size: The Short Course is limited to 40 participants

Short Course Dates: Monday, May 11 to Friday, May 2015

Presenters:

Faculty: Ramesh Gaonkar, Indian Institute of Technology, Gandhinagar

Prakash Dandekar, Indian Institute of Technology, Gandhinagar

Lyla B. Das, National Institute of Technology, Calicut