

REAL TIME EMBEDDED SYSTEMS



ABOUT THE COURSE :

In several software applications, especially in embedded applications, the operating system is required to support the application to meet the timing constraints. The operating system achieves this by deploying suitable scheduling algorithms. This course will build foundation for learning real time embedded systems. The theory sessions are assisted by hands on implementations on ARM Beagle bone and Raspberry-Pi.

Come and learn to develop your own real time embedded applications



COURSE CONTENTS :

- ▶ Real-time Embedded Systems Fundamentals, Introduction to ARM
- ▶ General Purpose I/O's, LPC2148 and LPC1768 Board Details, Interfacing, LED and LCD
- ▶ Interfacing, Serial Communication, ADC
- ▶ Structure of uCOS II, Porting to Rt Linux
- ▶ Multi-tasking and Task Scheduling of 3 tasks
- ▶ Tasks switching using Semaphore of 3 tasks
- ▶ Control of shared resources – mutual exclusion
- ▶ Inter-task Communication (messages, mailbox, message queue)
- ▶ Memory management for 3 tasks

PROJECTS :

- 1) Traffic Light Control System Implementation using of uCOS II
- 2) Data Acquisition, Processing and Visualization System using of uCOS II (Touch Screen Control)
- 3) Implementation of CAN Protocol on LPC 1768

The Complete Solution to Projects including Algorithms and Working Codes will be shared with Course Participants.

COMMENCEMENT DATE:

20th January, 2018

CONCLUSION DATE:

4th February 2018

BATCH 1

12:00 AM to 3:00 PM
(Saturday to Sunday)

BATCH 2

1:00 AM to 2:00 AM
(Monday to Friday)

COURSE FEE: RS. 1534/- (INCLUDING SERVICE TAX)

Course Instructors

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