ARM 7 COURSE –SYLLABUS

INTERACTIVE PROGRAM

Duration – 30 to 45 days

Chapter 1: INTRODUCTION TO ARM PROCESSOR (2 CLASS – 4 HOURS)

- Introduction to embedded system and ARM Processor.
- ARM related Companies and its opportunities.
- ARM processor family.
- Application of ARM Processor.
- Compiler.
- Emulation and Debugging.
- Difference between RISC & CISC.

Chapter 2: LPC2148 MICROCONTROLLER PIN DETAILS, MEMORY (2 CLASS – 4 HOURS)

- LPC2148 ARM 7 microcontroller.
- Features of LPC2148.
- Block diagram of LPC2148.
- Pin diagram of LPC2148.
- Architectural overview.
- On-chip flash program memory.
- On-chip static RAM.

Chapter 3: SYSTEM CONTROL (2 CLASS – 4 HOURS)

- Crystal Oscillator.
- PLL.
- Reset and Wake-up Timer.
- Brownout detector.
- Code Security.
- External Interrupt input.
- Memory Mapping Control.
- Power Control, VPB.

Chapter 4: MEMORY MAP, PIN CONNECT BLOCK, GPIO (10 CLASS – 20 HOURS)

- Memory map.

- Pin Connect Block.
- General Purpose Parallel I/O: Features
  - 8 Bit LED's and switches
  - Relay and Buzzer
  - Seven Segment Led
  - Keypad
  - LCD

Chapter 5: TIMER, ADC, DAC, UARTs (12 CLASS – 24 HOURS)

- General purpose timer/ External event counters : Features
  - Interfacing Timer and Counter Operation.
- 10-bit ADC: Features
  - Interfacing Temperature Sensor LM35.
- 10-bit DAC: Features
  - Interfacing DAC.
- UARTs: Features, Serial Communication.
- Interrupt Controller.
- Interrupt Sources.
- External Interrupt.

Chapter 6: I2C, SPI, PWM, RTC, WATCHDOG TIMER (8 CLASS – 16 HOURS)

- I2C – bus serial I/O Controller : Features
  - Interfacing with AT24C1024.
- SPI- Serial I/O Controller : Features
  - Interfacing with 25LC040.
- Watchdog timer : Features
- Real Time Clock : Features
- Pulse Width Modulator : Features
  - PWM.