

# USPs

## BOOKS & CDS

## LABS

## LIVE PROJECTS

## COURSE CERTIFICATE

## CONFIRMATION LETTER, TRAINING LETTER, /PROJECT LETTER

For Degree Pursing Candidates To Submit in Colleges

## UPGRADED COURSE CONTENTS (UCC)

Regular updated course content according to Industry

## CONSULTANTS/FACULTIES

Best part of the industry who is taking corporate batches eg. SDG, HCL, WIPRO, GENPACT, ACCENTURE & Manym...

## INDUSTRY COLLABORATION & AWARENESS

From Bangalore, Hyderabad & Pune

## 100% JOB ASSISTANCE

Outsourcing  
Resourcing Through Consultancy Services  
Regular Walk Ins  
Exclusive Walk Ins For DUCATiens  
Campus Interviews  
Resume Sending  
References



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# EMBDROID

(Integrating-Embedded & Android)

## CURRICULUM

### INTRODUCTION

A revolutionary concoction of the technology is at the doorstep of the world. It is the integration of Embedded and Android.

The digital revolution now has reached to a stage where we cannot conduct our normal modern daily lives without this technology. Indeed, it is reasonable to say that everyone already owns at least one piece of equipment, which contains a processor; whether it is a phone, a television, an automatic washing machine, an MP3 player, microwave oven or anything such. So as the idea of conjoining Embedded and Android leads to achieve smart and easy interface, pre-integrated features/capabilities, eco-effective module generation etc

**DUCAT** has an ideology which conjoins the professionals & students with latest of the technologies. So in the same series **DUCAT** offers 6 weeks program on the emerging technology" **EMBDROID (integration of Embedded System and Android)"**

### EMBEDDED SYSTEM

- Brief idea of Embedded Systems & Industrial applications
- Application/Area wise need of Embedded
- Hardware classification for Embedded

### BRAIN OF EMBEDDED APPLIANCES

- Brief idea of Micro-controller/processor
- Why microcontroller?
- Architecture of microcontroller
- System architecture – RISC, CISC, Harvard, Von-Neumann
- Architecture of Microcontroller

### BASIC ELECTRONICS (Hands on Practical)

- Classification of different electronics components
- Description of IC's and their utilization
- Bread boarding
- Practical Sensor implementation on breadboard

### 'C' LANGUAGE

- Introduction classes
  - Basic syntax & programming structure
  - Data types, variables & operator
  - if-else & switch selection statement
- Conditional statements or looping
  - While, do-while
  - For, nested-for statements
  - Infinite loops
- C – Array
  - Introduction to array
- C – Functions
  - Need of function
  - Function types & categories

### 8 bit MICROCONTROLLER (8051/AVR/PIC/ARM)

- Features of microcontroller
- Pin out of microcontroller
- GP I/O Port specification
- Description about all Ports
- Description about IDE for programming
- Proteus Simulation for microcontroller
- I/O programming using Embedded C
- Led on/off programming
- Delay generation through function
- Led pattern programming
  - Data shifting from left to right & right to left
  - Curtain open/close programming
  - Even/odd bit toggling

# EMBDROID

(Integrating-Embedded & Android)

- Sensor interfacing with microcontroller
- Motor interfacing
  - Program for controlling direction of DC motor
  - Stepper motor
- 16x2 LCD Display
  - 16x2 LCD command & data register
  - Name/Data printing over LCD
  - Moving message display

## ADVANCED FEATURES OF MICROCONTROLLER

- TIMER
  - TIMER register explanations
  - Programming of TIMER
- ADC
  - ADC register explanations
  - Programming of ADC
  - Interfacing of temperature sensor
- Serial communication
  - Communication between microcontroller & computer system
- Accelerometer based controlling system



## Android

### Introduction to Android

#### Android Layers and their Work

- Application
  - Home
  - Contacts
  - Phone
  - Browser
- Application Framework
  - Activity Manager
  - Windows Manager
  - Content Manager
  - Views System
- Libraries
  - Surface Manger
  - Media Framework
  - Free Type
- Android Runtime
  - Core Libraries
  - Dalvik virtual machine
- Linux Kernel
  - Display Driver
  - Camera Driver
  - Audio Driver
  - Flash Driver
  - Power Management

### OS Architecture

#### Services Numerous

#### Services Block

#### Android Views

- Buttons and Their properties
- Edit Text and Their properties
- Checkboxes and Their properties
- Radio Buttons , Radio Groups and Their properties
- Internet
- Sensors

#### Services

- Text-To-Speech
- Speech-To-Text
- Camera
- Bluetooth
- Bluetooth Adapter

## PROJECT BASED ON THE INTEGRATION OF EMBEDDED SYSTEM AND ANDROID



## FEE STRUCTURE

### EMBEDDED

Rs.7,800 + Tax

### EMBEDDED AND ANDROID

Rs.10,000 + Tax