

## **Certificate Course in Python Programming and Raspberry Pi**

### **Executive Summary**

The Raspberry Pi is a credit-card sized computer that plugs into your TV and a keyboard. It is a capable little computer which can be used in electronics projects, and for many of the things that our desktop PC does, like spreadsheets, word-processing and games. It also plays high-definition video. The students will also understand the fundamentals of Python programming, a language widely used in Industry today.

### **Duration**

Total Training will be for 4 Days (8 hours per days)

### **Course Contents**

- Introduction of Python as Scripting language
- Python installation, IDE Installation
- Understanding Python DataTypes
  - List
  - Tuple
  - Dictionary
  - Sequence
- Understanding Logical and Arithmetic Operators
- Using conditional Statement in Python
  - If-Else loop
  - for loop
  - While Loop
  - pass break continue
  - One line Conditional statement
- Working with User inputs
- Efficient ways for Python Scripting
  
- GPIO handling With Python
  - Digital Outputs Blinking LED
  - Interfacing buttons with Raspberry Pi
  - Interfacing Buzzer and Tone generation
  - Interfacing OLED Display with Raspberry Pi
  
- Project = Command line programs (Tic Tac Toe Game)

### **Participant Benifits**

- Participants will be introduced to exciting world of Python and Raspberry Pi
- Participants will be trained on Raspberry Pi, implementation of analog and digital peripherals.
- The training includes hands-on labs resulting in exploration of concepts.

- Eduvance will bring its own kits for participants to work on.
- Participants will work in groups of 2 with each student getting an opportunity to work hands-on.
- **Upon successful completion of course and test, participants will get a verifiable certificate endorsed by Indo-US Collaboration for Engineering Education (IUCEE).**

### **Cost**

Rs 2500 per participant

Minimum number of Students - 40

A. Host college will arrange for food and accommodation of trainers.

### **About Eduvance**

Eduvance is founded by Ph.D. alumni from U.S. universities. We are dedicated towards providing participants with state of the art training in technology. We do this by introducing participants to projects and research topics that are at par with leading universities in the United States. This will make the participants technically sound and prepare them for future challenges. We assist participants write and present technical papers. We are advised by U.S. based researchers, faculty and industry professionals that have a proven track record in their field.

