

## 9<sup>th</sup> SUMMER TRAINING PROGRAM



### Build Your Own Smart Devices based on Open Source Platforms (Android and Linux (Raspbian, Debian, Ubuntu)) and Windows IOT

Organized by Department of CSE, Indra Gandhi Delhi Technical University for Women (Formerly IGIT), Kashmere Gate Delhi-110006) in collaboration with Microsoft, Finland

From 11-06-18 to 21-07-18

#### ABOUT US

There has been tremendous growth in the field of mobile and handheld device technologies due to availability of various open source software tools and easy availability of hardware that drives these systems. It has been observed that most of the users are now accessing the mobile devices than desktop systems for their day to day activities that includes communication, game playing, sending mails, web browsing, social networking, m-commerce, entertainment and computing to name a few. These smart devices are becoming a vibrant and a very exciting platform for teaching, learning and application development for any individual student and develop end user project to meet the changelings of the present generation. However, the complete know how of such devices in terms of software or hardware usage is not very common.

The training will empower and enable the students, programmers and researchers to use the mobile device as an instrument for diversified applications like Agriculture, E-learning, Health Care, Games, Defence and Navigation to name a few. Especially the student community gets the familiarity in programming the on-device peripherals and thereby ended up with development of various applications for mobile and hand-held devices more efficiently.

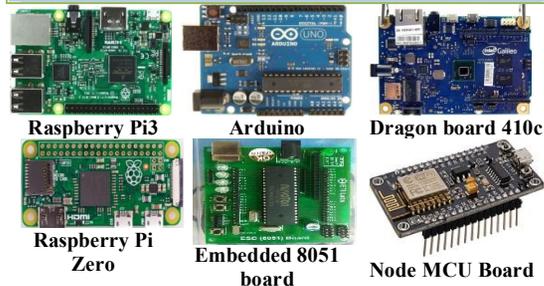
#### OBJECTIVES

Device Development and Programming for various application domains: -

- Entertainment
- Real-Life Applications
- Emergency Needs
- Information Retrieval
- Communication Media
- E-Learning
- Handheld Device Development

Programming of on-device peripherals e.g. Camera, Audio/Video, GPS, GSM, Bluetooth, Accelerometer, Gyroscope, Microphone etc. based on

#### HARDWARE USED



#### OS USED



#### SENSORS

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Temperature &amp; Humidity</li><li>• Ultra-sonic</li><li>• Bluetooth Module</li><li>• Accelerometer</li><li>• Light Sensor</li><li>• PIR Sensor</li><li>• IR sensor</li><li>• GPS</li><li>• GSM</li></ul> | <ul style="list-style-type: none"><li>• Sound card</li><li>• Voice sensor</li><li>• Zigbee</li><li>• LDR Sensor</li><li>• ADC</li><li>• Touch Sensor</li><li>• Easy Pulse Sensor</li><li>• Relay ,LCD, Buzzer</li><li>• Heartbeat Sensor</li></ul> |
|---|--|



#### Product Design Facilities



#### PROGRAM MODULE

- Smart Device Architecture
- Mobile Application Development
- Embedded board 8051
- IOT and Embedded System
- Hardware platform Raspberry Pi, ARM, Snapdragon and 8051Board.
- Android Studio and Android Programming.
- Python programming and App development
- Cloud Computing and Introduction to Fuzzy Logic
- Product designing and development.
- Working on live project.

**TRAINING MATERIAL:**

Training material and the software required for developing the mobile applications and embedded system will be provided.

**RESOURCE PERSONS:**

Internal Staff from IGDTUW, external experts from IIT Delhi, IIIT Delhi, SNU, NSIT and experts from industries like Microsoft, Intel, TI, ARM, ATMEL etc.

**COURSE CONTENT:** Topic wise detailed schedule is attached.

**CERTIFICATE:** All successfully completed participants will get the certificate jointly from Indira Gandhi Delhi Technical University for Women and Microsoft University Relations.

**REGISTRATION & SELECTION PROCESS:** Candidates (Male or female) from any university or college are eligible who are willing to attend the program need to apply through Registration form by paying a DD of Rs. 6,500/- on or before 31-05-2018. Only 50 seats are available. The selection will be based on first come first serve. 30 % of the seats are reserved for IGDTUW students. All selected participants will be informed on or before 08-06-2018 through E-mail.

**WHO CAN ATTEND THE PROGRAM:**

Students studying or completed B.Tech. (preferably those who have completed three semesters)/ M.Tech (CSE, ECE, IT)/ MCA. Faculty members who are teaching (or planning to teach) Embedded Systems/ Device development and interfacing peripherals etc. can be benefited by this training.

**CONTACT PERSON:**

For any enquires you can contact course coordinator in the following address:

**Prof. S. Ramanarayana Reddy**  
CSE Department

Electrical Block, Room No.E-107, IGDTUW,  
Kashmere Gate, Delhi 6 110 006  
Tele: +91 9810101742, 011-23869784,  
011-23900253  
Email: [stp.igdtuw@gmail.com](mailto:stp.igdtuw@gmail.com)

Please visit [www.mobileeducationkit.net](http://www.mobileeducationkit.net) or [www.igdtuw.ac.in](http://www.igdtuw.ac.in) for further updates and correspondence.

**REGISTRATION FORM**

Paste your recent photograph with self-attested

- Name of the applicant: \_\_\_\_\_
- Branch/ Semester/ College: \_\_\_\_\_
- Name of the Dept./ Designation: \_\_\_\_\_
- Mailing address: \_\_\_\_\_
- Mobile No: \_\_\_\_\_
- Email: \_\_\_\_\_
- Details of DD: Amount: 6500/- (DD should be drawn in favour of Registrar, IGDTUW, payable at Delhi and mailed it to **Dr. S. Ramanarayana Reddy, HoD,**

**CSE Department, Room No E-107, Electrical Block, IGDTUW, Kashmere Gate, Delhi – 110006** either by post or by person on or before 31-05-2018).

8. DD No.: \_\_\_\_\_ Drawn on : \_\_\_\_\_

9. Please write a statement of purpose about “**why you would like to attend this course**”:

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**Signature of the Applicant**

**Date:**

**Place:**