AICTE Sponsored Short Term Course (QIP) & Continuing Education Program (CEP)

on

Smart Electronics for Connected Communities (SECC – 2019)

Jan. 06-18, 2020

Course Coordinator

Dr. N. S. Rajput, ECE

Course Co-coordinator

Dr. Bhaskar Biswas, CSE

Organized by

Department of Electronics Engineering, IIT(BHU), Varanasi-221005

Quality Improvement Program Center
Indian Institute of Technology (BHU)
Varanasi – 221005, (U.P.)

Phone: 0542 - 2369434
Email: coordinator.qip@iitbhu.ac.in

About the Course

Latest urbanization will witness intelligent systems to be weaving the people's life together. With smart electronics, all the citizens, society and the businesses will enjoy unprecedented levels of collaboration, productivity, and economic growth without unattended compromises or overloads on the environment and resources. Everything will be connected, right from healthcare to education, government, buildings, physical security, in fact, any and everything.

Only the smart communities can now lead in the future, achieving significant environmental, social and economic sustainability. Today, urban infrastructure including homes, offices, cars, public transport, hospitals, schools, energy, and appliances are all getting connected via wired or wireless communication infrastructure to the Internet. The Internet has expanded into an "Internet of Things" beyond traditional computers and mobile devices reaping the fruits of improved city management, continuous economic growth, enhanced quality of life for citizens and sustainable urbanization.

It is in the same context that Indian communities and it's market is transforming in to a connected world with its real physical surroundings using smart electronics backed-up with powerful applications on Internet of Things (IoT) and Cyber Physical Systems (CPS). By 2022, there will be at least 20 billion connected devices with even about 300 million electricity meters itself, operating 24x7 with fool proof digital connectivity and real-time monitoring. The Indian government is also investing INR 100 Billion in its 100 smart cities. 50% of the spending will be driven by enterprise capabilities like manufacturing, transportation, logistics and utilities rather than consumer facing applications. On the technology front, this transformation will be very crucial and challenging as it will flourish on the complex intersection of technology with the society.

We, as the engineering community, bear the onus to create sustainable foundations and platforms to enable our future society to achieve new levels of development parameters. These simplistic societal interfaces will be developed on the top of complex engineering marvels of science and technology.

In this CEP, we would hence educate our audience to understand the way smart electronics platforms and applications will be designed to make best use of knowledge and investment and to support our communities to be Smart & Connected.

Course Content

The tentative list of topics to be covered in this course are:

- ✓ Smart Electronics System Models
- ✓ Sensing and Actuation Devices and Processor Systems
- ✓ Internet of Things (IoT) Models and Protocols
- ✓ Cyber Physical Systems (CPS) Models and Protocols
- ✓ Augmented & Virtual Reality (AR-VR) Systems
- ✓ Cloud Based Smart Electronic Systems Design
- ✓ Designing AI and ML Models on Cloud
- ✓ Project: 07 Use Case Applications with Hands-on

Hands-on Training & Experimental Kits

This course will be conducted over two week's span with at least 50% time, spent on rigorous hands-on training on selected use cases**. The participants will be required to bring a recommended set of sensors, actuators and processor boards, for doing the experimental hands-on practice. It will also be mandatory for the participants to bring a good quality personal computer (laptop) with Windows 10 operating system with 8GB RAM. A list of requisite software will also be mandatory for the participants to have installed in their PCs/Laptops.** Participants will be trained to perform research level experiments and to translate the same into industry ready products and to write project proposals based on their learning.

Industrial Partners & Invited Talks

There will be invited lectures on selected topics with series of parallel sessions on identified Smart Electronics Solutions and Open Problems. Specific list will be communicated to selected participants with details of Talks and Demonstrations.

Publication of Proceedings

Proceedings of the course will be published with publishers of prominence. Details of the same will be shared once contracts have been signed. The participants will be encouraged to write articles of premium quality, for possible publication in the proceedings.

Course Coordinator

Dr. N. S. Rajput
Department of Electronics Engineering
IIT(BHU), Varanasi-221005
Mobile: +91-9415390577
E-mail: nsrajput.ece@iitbhu.ac.in

Course Co-coordinator

Dr. B. Biswas
Department of Computer Science & Engineering
IIT(BHU), Varanasi-221005
Mobile: +91-9415619051
E-mail: bhaskar.cse@iitbhu.ac.in

Registration and Course Website

CLICK HERE TO VISIT & REGISTER

[https://sites.google.com/view/secc2019]

Last date for on-line registration at Course Website

Dec. 28, 2019

Abridged List of ST Courses during 2019-20

Click here to see the notification [https://bit.ly/2KuCYjd]

Sample Application Form for QIP SHORT TERM COURSE & CONTINUING EDUCATION PROGRAM (CEP)

on

Smart Electronics for Connected Communities (SECC-2019)

Jan. 06-18, 2020

(Please register at Course Website only)

1. Name (block letters):
2. Designation & pay scale:
3. Organization:
4. Address for communication with pin code:
Mobile No.: E-mail:
5. Highest Academic Qualification:
6. Specialization:
7. Experience (in years):
(a) Teaching: (b) Industrial:
8. Amount of TA for to-and-fro III AC railway fare (only for the AICTE approved college teachers):
9. Whether Accommodation (to be provided strictly on sharing basis) is required:

Please register me for the course on "**Smart electronics for Connected Communities**" to be held at IIT (BHU) Varanasi during **Jan. 06-18, 2020.**

Place:
Date: **Signature of the applicant**

Course Registration Fees*:

QIP Academia (AICTE approved Colleges)	**: Free**
CEP PhD/ PG/ UG Student (Full Time)	**: INR 10000**
CEP Academia (NON-AICTE Institutes)	**: INR 10000**
CEP Govt. Organisation	**: INR 12000**
CEP Industry	**: INR 15000**
CEP Overseas / Foreign National	**: INR 18000**

*** Registration Fees should be paid through DD drawn in favour of Registrar, IIT(BHU), Varanasi-221005 payable at SBI, IIT Branch (Code:11445), BHU, Varanasi**

*** Registration Fees does not include Lodging or Boarding facility for the paid category of participants.**

SPONSORSHIP for QIP-AICTE Category Participant

Prof./Dr./Mr./Ms./Mrs./_____ is an employee of our AICTE approved institute and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course on **Smart Electronics for Connected Communities (SECC-2019)** at IIT (BHU) Varanasi during **Jan. 06-18, 2020** of the Short Term Course, if selected.

Date: **Signature of Sponsoring Authority**
Designation: **(Official Seal)**

Refundable Security Deposit Details:
**DD No.: Date:
Bank:
Amount: ₹ 2000/-**

Signature of the Applicant

DD should be drawn in favor of the **Registrar, IIT(BHU), Varanasi-221005 payable at the **SBI, IT Branch (Code:11445), BHU, Varanasi**.

Participation Certificate

Certificate of participation will be issued to all the participants only after successful completion of the course.

Important Dates

Last date for on-line registration (at website)

Dec. 28, 2019 (Extended)

Last date for receiving application (at IITBHU)

Dec. 31, 2019 (Extended)

Confirmation of Participation

Dec. 31, 2019 (Extended)

Contact Details

Dr. N. S. Rajput
Department of Electronics Engineering
IIT(BHU), Varanasi-221005
Tel: 0542-2366638; Mobile: +91-9415390577
E-mail: nsrajput.ece@iitbhu.ac.in
qipstc.ece@gmail.com

REGISTRATION

Registration for QIP Sponsored Teachers from AICTE approved Institutions: Participants should bring a letter of nomination from their head of institution stating that they are being deputed for the course. There is no registration/ accommodation fee. However, a Demand Draft of INR 2,000/- (drawn in favor of "Registrar, IIT(BHU), Varanasi") should be enclosed with the application form which will be refunded to the participants attending the course. Total reserved seats for QIP candidates is 30 only. The refund amount will not be returned to those who will be absent. TA for to-and-fro III AC railway fare is admissible only for AICTE approved college teachers.

ABOUT THE DEPARTMENT

Department of Electronics Engineering came into existence as an offshoot of Electrical Engineering Department in the year 1971 (when Banaras Engineering College, College of Mining and Metallurgy and College of Technology had been amalgamated to form the Institute of Technology in its present form). The intake every year of the Department is 79 in the B.Tech. level and 47 in the M.Tech. level. Besides teaching students of our own discipline (Electronics Engineering), we also offer the basic courses in Electronics Engineering to almost all the Departments of the Institute, we also teach advanced-level courses to the students of Electrical Engineering and Computer Engineering Departments. We have a training and placement section in the Institute through which most of our students are professionally placed in various jobs.

HOW TO REACH

Varanasi Railway Station is well connected to almost all parts of the India. IIT (BHU) is also well connected to Mughal Sarai and Manduadih Railway Stations by regular auto and taxi services. The Lal Bahadur Shastri International Airport, Babatpur, Varanasi is also well connected via Air to Delhi, Mumbai, Kolkata, Hyderabad, and Bengaluru. There are frequent flight services from New Delhi. The Institute is located in the extreme south of the Varanasi city and about 7 km away from Varanasi Railway Station and 30 km from the Babatpur (Varanasi) airport. Pre-paid Taxis and Auto-Ricksaw can be hired from the airport and rail way stations.