

Declaration by the Candidate

The information furnished in the registration form is true to the best of my knowledge and belief. I agree to abide by the rules and regulations governing the programme. If selected, I shall attend the programme for the entire duration.

Signature of the applicant with date

Sponsorship Certificate

Certified that Dr./Mr./Ms..... is a Faculty of our Institution and is hereby sponsored for the TEQIP III sponsored STTP on “**Embedded System and Smart Antennas for IoT Applications**” organized by the Department of ECE, Pondicherry Engineering College, from **20th to 24th April, 2020**. He/She will be permitted to attend the course fully, if selected.

Place: Signature of the Sponsoring

Date: Authority with seal

Contact Address

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About the Institution

Pondicherry Engineering College (PEC) is an Institution sponsored by the Union Territory of Puducherry, India. The College was started in 1984 under the VII Five Year Plan. It is an autonomous Institution for the purposes of administration, staff recruitment and College development and is managed by a Board of Governors. The College is affiliated to Pondicherry University, Puducherry for the academic purposes. The College campus is situated at Pillaichavady which is about 12 km from the Railway station and bus-stand in Puducherry town. It is about 160 km south of Chennai (Madras) on the shores of Bay of Bengal. The campus is also well connected by town buses from Puducherry. The buses that come from Chennai via East Coast Road (ECR) stop near the campus itself. The well-planned departmental buildings, library, hostels, students' amenities centre, open air theatre, residential quarters for staff with neatly laid out roads, lawns and gardens constitute the PEC campus which is about 210 acres.

About the Department of ECE

The Department of Electronics and Communication Engineering (ECE) was started in the academic year 1985-86. The department is offering a B.Tech course in ECE, two M.Tech courses (ECE and Wireless Communication) and Ph.D program. The department has a team of highly qualified and dedicated faculty members. The department has laboratories equipped with modern and state-of-the-art equipment, a well-furnished seminar hall, smart class room, excellent computing facilities and a department library with several volumes of books. The department has been recognized as a minor QIP centre for pursuing Ph.D programs.

About Puducherry

The coastal town of Puducherry with the French ambience is known for the serene atmosphere. Sri Aurobindo ashram and the nearby Auroville international township lend a unique spiritual favorite the city. Sri Manakula Vinayagar temple, Promenade beach, Ousteri lake and Chunambar boat house are some of the major tourist attractions in and around Puducherry.

**TEQIP III Sponsored
Short Term Training Programme
on**

**EMBEDDED SYSTEM AND SMART
ANTENNAS FOR IOT APPLICATIONS**

April 20– 24, 2020



Co-ordinators

Dr. K. Kumar
Dr. L.Nithyanandan

Organized by

**Department of Electronics and Communication
Engineering**

Pondicherry Engineering College

Puducherry – 605 014.

Website: www.pec.edu

Fax: 0413 - 2655101

Preamble

In the upcoming decades, Internet of Things (IoT) is geared to proliferate with the massive number of IoT gadgets predicted to surpass mobile devices permitting industrial, commercial and consumer applications. Emergence of Internet of Things brings a whole new class of applications and higher efficiency for existing services and thus can improve our daily lives and society. Application-specific requirements, as well as connectivity and communication ability of devices have introduced new challenges for IoT applications. The design aspects pertaining to embedded system and smart antennas application in IoT pose real challenges for the researchers and industries to meet out the demands such as low power consumption of hardware circuitry and excellent spectrum utilization. For IoT communication networks, apart from the sophisticated communication protocols, efficient hardware will also play a very crucial role. Embedded systems which are highly customized, developed and programmed as per user requirements will play an important role in Internet of Things (IoT) due to their unique characteristics and features such as real time computing, low power consumption, low maintenance and high availability. Smart antennas being at the front end of communication, on the other hand has the inherent potential to significantly increase the efficient use of the spectrum in IoT applications. Through intelligent control of the transmission and reception of signals, a smart antenna in IoT network application capable of adaptive beam forming can create independent beams to serve numerous IoT devices simultaneously and hence significantly improves the capacity and coverage.

This course is intended to provide the participants a comprehensive exposure to the fundamentals and recent developments of Embedded system and Smart antenna Technologies for IoT applications and the topics include

- Introduction to IoT and its Applications
- Introduction to firmware or embedded software for IoT
- Hardware Design Challenges of the Embedded IoT

- IoT and its significant impact on device design
- RTOS design requirements for IoT application
- Smart embedded systems
- Challenges faced by the traditional antenna technologies in the IoT domain
- Beam forming antenna arrays
- Study of efficient antenna systems for IoT
- Smart antennas in smart city IoT Applications
- Massive MIMO antenna systems
- Design of Miniature antennas for IoT applications

Eligibility

The faculty Members of AICTE approved Institutions/polytechnics and industry professionals are eligible to attend the STTP. Admission will be offered subject to the availability based on TEQIP III course norms. The number of seats is limited to 30. Engineers from industries have to pay a course fee of Rs.5,000/- and they must meet the TA and DA from their own organizations.

Registration

The applicants can submit their duly filled - in registration form in the given format. All the selected candidates should pay a registration fee for Rs.200/- (refundable) in the form of Demand Draft drawn in favour of "The Principal, Pondicherry Engineering College", payable at Puducherry. Registration form can be downloaded from the Institute website. Selected candidates will be informed through E-mail and college website. Candidates will be paid Sleeper Class TA and DA as per TEQIP III norms.

Important Dates

Last date for receipt of filled in Applications : 06.04.2020
Date of intimation regarding selection: 11.04.2020
(via e-mail)

TEQIP III Sponsored Short-Term Training Programme on
**EMBEDDED SYSTEM AND SMART ANTENNAS
FOR IOT APPLICATIONS**

**20.04.2020 to 24.04.2020
REGISTRATION FORM**

Name :
Designation :
Department :
Institution :
Qualification :
Specialization :
Gender :
Date of Birth :
Experience : Teaching :
Industry :
E-Mail ID :
Is the Institution approved by AICTE: Yes/No
Mailing Address:
.....
.....
.....
Telephone : Office :
Residence :
Mobile Number :
Need Accommodation : Yes/No
(For Industrial participants only)
DD No :
Date :
Amount :
Bank :