



# COEP Technological University

(formerly College of Engineering Pune)

**Centre of Excellence in Signal and Image Processing**

**Department of Electronics & Telecommunication Engineering**

Offers

**One Year Full Time Post Graduate Diploma in  
Embedded Systems For Internet of Things  
(PG-DESIoT)**

In Association with



# About the Course

- The tech world has been going through unprecedented changes in the last few years. Big companies in Software, Operating System providers have entered the HW market through their own branded products. These companies are looking at increased business from the consumer and the actions that the consumer carries out in the internet leading to tremendous growth in the embedded markets. Some of the trends that can be seen in the embedded system design markets are as follows: Increased use of multicore processor platforms, Connectivity is driving security needs in the devices, and Demand for Video processing.
- These trends demand a new level of expertise in providing these solutions which is addressed in this PG diploma. This is the SECOND batch of ONE-YEAR FULL-TIME PG diploma offered by the department. It aims to make learners recognize importance of Embedded systems and IoT applications in various fields. It showcases and imitates sample demo projects on specific applications in industrial automation, smart cities, connected vehicles, and home automation etc., to name a few. It certainly shall provide an exhaustive and state-of-art knowledge of Embedded System Design, Debugging and Deployment to the participants with equally balanced skills on Tools and Platforms towards building IoT prototypes for various applications.



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- The four months internship and industry sponsored project is an embedded part of curriculum and will be executed with the help of our renowned Industry partners, in the domain of the program. These features shall undoubtedly provide opportunity to work with domain experts in the field for live ongoing projects which would prove crucial to realize dream of aspirants – either to grab lucrative placements or venture into startups.

# About COEP Tech.

- College of Engineering, Pune (COEP), chartered in 1854 is a nationally respected leader in technical education. The institute is distinguished by its commitment to finding solutions to the great predicaments of the day through advanced technology. The institute has a rich history and dedication to the pursuit of excellence.
- COEP Technological University is the torch bearer of Engineering education in Pune and India. The professionals of ARAI and the faculty of COEP Tech. Univ., together with other institutes and industries in India, will develop you for upcoming challenges and opportunities in the transition from ICE Mobility to Electric Mobility.
- The hallmark of COEP Tech education is its strong and widespread alumni network, support of the industry and the camaraderie that the institute shares with several foreign universities. The institute is consistently ranked amongst the top 20 technical colleges in India and its alumni have contributed a lion's share in development of national infrastructure.

# Department of Electronics & Telecommu- nication Engineering

- Established in 1948, the department has always remained at the forefront in producing quality engineers who have brought great laurels to the institute, society, and nation at large. The department has a tradition of attracting the topmost merit students at UG from across the state and is a favored destination of PG students after the IITs.
- The department offers excellent infrastructure and resources in the form of knowledgeable faculty, well-equipped laboratories.
- The stakeholders viz. faculty, UG/PG students and research scholars are working in research areas related to cutting edge technologies such as VLSI and Embedded Systems, Communication Networks, Computer vision and Pattern Recognition, Signal Coding and Communication, Power electronics and EMI/EMC, Multidimensional and Multimedia Signal Processing and Optical communication.
- The department is involved in several technical and co-curricular activities encouraging students to broaden their horizons of thoughts, innovate, ideate, and execute towards demonstrable outcomes. Moreover, it maintains a great rapport with industries and R&D organizations.
- **Dr. Vibha Vyas- HoD and Dr. R. A. Patil – Head- COESIP**
- **Dr. Prashant Bartakke- Dean,**  
**School of Electrical & Comm. Engg.**



### CoE- S & IP Objectives:

- Establishing the state-of-art research, design, development, experimentation and education facility in the domain of Signal and Image Processing.
- Developing motivated, passionate and resourceful teams of aspiring faculty members, researchers, PG students, industry participants with diversified expertise and experience.
- Imbibing the culture of collaborative research and multidisciplinary attitude of problem solving, among team members.
- Providing conclusive and cost effective indigenous solutions to the domain problems, with multidisciplinary attitude, quantifiable and measurable in terms of publications, technology transfer, product prototype and patents.
- Conduction of PGD course in Embedded System for IoT.
- Providing training in the areas of cutting edge technologies, for wider cross-section of the society.
- Developing the BRAND of the facilitation Center, as "one of its own kind" and "the most sought after" by respective stakeholders for technology development and education.

### Contact Details:

**Dr.Rajendrakumar Patil**  
Head COE S & IP  
COEP Technological University,  
Pune.

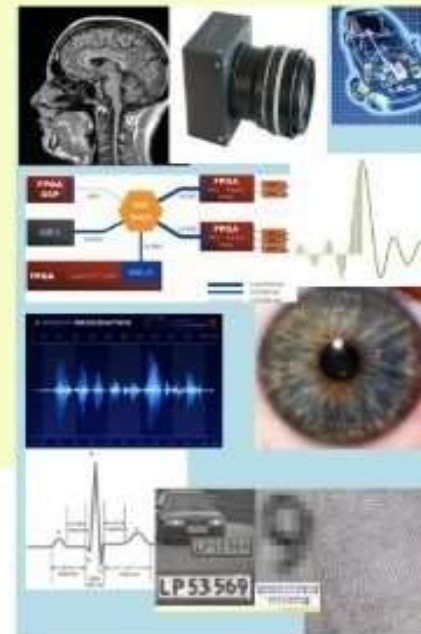
## Center of Excellence Signal & Image Processing [CoE- S & IP]

Department of Electronics and Telecommunication  
School of Electrical and Communication Engineering

COEP Technological University(COEPTech)

*A Unitary Public University of Government  
of Maharashtra (Formerly College of  
Engineering Pune)*

*(Established in 2013 under TEQIP)*



Centre of Excellence  
for  
**S&IP**

**SIGNAL &  
IMAGE PROCESSING**

*A joint project of  
Electronics & Telecommunication,  
Instrumentation & Control,  
Computer and Electrical  
Departments of COEP*

# What you will learn?

- It showcases and imitates sample demo projects on specific applications in industrial automation, smart cities, connected vehicles, and home automation etc., to name a few.
- Provide an exhaustive and state-of-art knowledge of Embedded System Design, Debugging and Deployment to the participants with equally balanced skills on Tools and Platforms towards building IoT prototypes for various applications
- The four months internship and industry sponsored project is an embedded part of curriculum and will be executed with the help of our renowned Industry partners, in the domain of the program.
- Provide opportunity to work with domain experts in the field for live ongoing projects which would prove crucial to realize the dream of aspirants – either to grab lucrative placements or venture into startups.



# About PGDEM

**Faculty:**

In-house as well as renowned and experienced faculty from the industries, R&D organizations and other reputed institutes will be involved in teaching-learning process of the entire program.

**Eligibility Criteria:**

B.E/ B. Tech. from circuit branches such as Electronics/ Electronics and Telecommunication /Electronics and Communication Engineering/ Computer/ Information Technology/ Electrical/ Instrumentation/ Mechatronics/ Any other circuit allied branches.

- Masters in Science (MSc) (Electronics/ Computer/ IT or Equivalent), Masters in Computer Applications (MCA), Masters in Computer Science (MCS).
- Bachelors in Science (BSc) (Electronics/ Computer/ IT or Equivalent), Bachelors in Computer Applications (BCA) / Bachelors in Computer Science (BCS).
- Freshers and Candidates with prior work experience both can apply.
- Those appearing for their Final year degree examination may also apply. On selection, such candidates will have to fill a Notarized undertaking on Rs. 100/- Non-Judicial stamp paper and submit it to PGDESIoT office at the time of payment of Program Fees.

**Selection Criteria for Admission:**

Candidates shall be admitted as per the selection procedure mentioned on the Institute's website.

**Total Number of Seats: 30**

**Application Fees:Rs.1200/-(Non Refundable)**

**Course Fees:**

Rs. 1,20,000/- (Rupees One Lakh Twenty Thousand only) for full course

**Course Commencement Date: August 2024**

# Admission Dates

## Proposed dates for admissions process of PGDESIoT 2024-25.

| <b>Activity</b>                     | <b>Date</b>  |
|-------------------------------------|--|
| <b>Online application</b>           | <b>Monday, 8<sup>th</sup> July 2024 to 31<sup>st</sup> July 2024</b> |
| <b>Technical Interview</b>          | <b>2<sup>nd</sup> to 5<sup>th</sup> August 2024</b>                  |
| <b>Final Merit List</b>             | <b>5<sup>th</sup> August 2024</b>                                    |
| <b>Last date to pay Program fee</b> | <b>12th August 2024</b>  |
| <b>Program Commencement</b>         | <b>16<sup>th</sup> August 2024</b>                                   |

For more details click on : [PG Diploma – COEP Technological University \(COEP Tech\)](#)

# Syllabus

| Trimester I |             |  |         |          |
|-------------|-------------|--|---------|----------|
| Sr. No.     | Course Code |  |         |          |
|             |             | Course Name  | Credits | Duration |
| 1           | Core        | Deep Dive in C and C++                             | 4       | 15 Weeks |
| 2           | Core        | System Design with ARM Microcontrollers            | 3       |          |
| 3           | Core        | IoT Communications and Protocols                   | 4       |          |
| 4           | Core        | Device Driver Development for Sensors and Actuator | 4       |          |
| 5           | HSMC        | Enhancing Communication and Soft Skill             | 2       |          |
|             |             | Total Credits                                      | 17      |          |



# Syllabus

| Trimester II |             |                                       |         |          |
|--------------|-------------|---------------------------------------|---------|----------|
| Sr. No.      | Course Code |                                       |         |          |
|              |             | Course Name                           | Credits | Duration |
| 1            | Core        | Software Tools and Programming in IoT | 4       | 15 Weeks |
| 2            | Core        | Data analytics and Cloud Computing    | 4       |          |
| 3            | Core        | Embedded OS and Debugging Techniques  | 4       |          |
| 4            | Core        | Linux in Embedded Systems             | 4       |          |
|              |             | Total Credits                         | 16      |          |

# Syllabus

| Trimester III       |             |   |         |          |
|---------------------|-------------|---|---------|----------|
| Sr.<br>No.          | Course Code |   |         |          |
|                     |             | Course Name                                 | Credits | Duration |
| 1                   | Core        | IoT: Industry Project                       | 12      | 15 Weeks |
|                     |             | Total Credits                               | 12      |          |
|                     |             | Total Academic<br>Engagement and<br>Credits | 12      |          |
| Course Total Credit |             |   | 45      | 45 Weeks |

# Fee Structure

## COEP TECHNOLOGICAL UNIVERSITY,PUNE

One Year Full Time  
Post Graduate Diploma in Embedded Systems for IoT (PGD in ESIoT)  
Batch 2024-25

### FEES STRUCTURE

| SR. No.       | HEAD            | AMOUNT (INR) |
|---------------|-----------------|--------------|
| A             | Tuition Fee     | 75,000.00    |
|               |                 |              |
| B             | Development Fee | 15,000.00    |
|               |                 |              |
| C             | Other Fee       | 30,000.00    |
|               |                 |              |
| Total (A+B+C) |                 | 1,20,000.00  |



**Address for  
Communication**

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Thank You

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