



PIMPRI CHINCHWAD EDUCATION TRUST'S

(A Trusted Brand in Education Since 1990)



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**PIMPRI CHINCHWAD COLLEGE OF ENGINEERING
AND RESEARCH RAVET, PUNE - 412101.**

Department of Electronics & Communication



Electronica – Year

A.Y. 2017-18 (Sem-I)

Department at a Glance

Department of Electronics & Telecommunication

About Department :

The Bachelor of Engineering Program in Electronics and Telecommunication has commenced from the academic year 2014-15. The current student intake capacity is 60. The department is consisting of 03 class rooms and 09 well-equipped laboratories in the department. The Electronics and Telecommunication department is having online access to top journals through J-GATE. The department is having latest software's needed as per the academic curriculum. One practical batch is limited to 15 students and students are encouraged to perform practical individually. For each experiment a group of maximum 02 students performs the practical.

Vision :

* To be a premier department in the field of Electronics and Telecommunication Engineering with emphasis on hands on activities.

Mission :

- * M1 : Producing Engineers of academic excellence, ready with skill sets required to handle the state of art technologies in the field of electronics and telecommunication engineering.
- * M2 : Imparting research and innovative aptitude with moral and professional ethics for overall development of students to achieve desired outcome.

Program Educational Objectives (PEO's) :

- *PEO1: To provide learning environment and hands on training in each area of Electronics and Telecommunication Engineering to achieve skill up-gradation of the human capital.
- *PEO2: To inculcate research capabilities in the Electronics and Telecommunication Engineering and allied interdisciplinary domains and adopt themselves to rapidly evolving technology.
- *PEO3: To impart moral and professional ethics among the students so as to transform them into capable, adaptable and responsible citizens.

Program Specific Outcomes (PSOs) :

- *PSO1: Graduate will be able to identify, design, prototype and test electronics and communication systems using software and hardware tools for real life problems.
- * PSO2: Graduate will be able to develop and support systems based on embedded, automation, microwave, signal and image processing.

Technical Article :

Internet of Things: Let's Bring the World Together

The Internet of Things (IoT) is changing how we live, work, travel, and do business. It is even the basis of a new industrial transformation, known as Industry 4.0, and key in the digital transformation of organization, cities and society overall. Reason enough to understand the essence of the Internet of Things.

What is the Internet of Things, also known as IoT? You can find many definitions below. But let's start simple. Look at it this way: people can connect to digital networks and the Internet with devices such as smart phones & computers, in order to share information, chat, buy, and so forth.

The Internet of Things essentially enables us to connect 'things' to the Internet (and to networks that use Internet technology).

Message from HOD's Desk

Dear All,

Greetings for the E&TC department....

Department of Electronics & Telecommunications is located on fourth floor of Pimpri Chinchwad College of Engineering & Research, Ravet, Pune. The department works with the objective of addressing critical challenges faced by the Industry, society and the academia. The department is equipped with 04 software labs and 05 hardware labs with all necessary infrastructure and instruments for Signal Processing, Power Electronics, Antenna and wave, Digital Communication,

Embedded systems. The department faculty work with excellent team spirit with specialization in different areas like Electronics, Communication, Signal processing, VLSI, Embedded System, Wireless Sensor Network etc. Teachers give importance to quality teaching and learning process adapting various innovative techniques and soft skill programmes for students. Special care is taken about the students whose performance is poor in the examinations through counseling and extra classes.



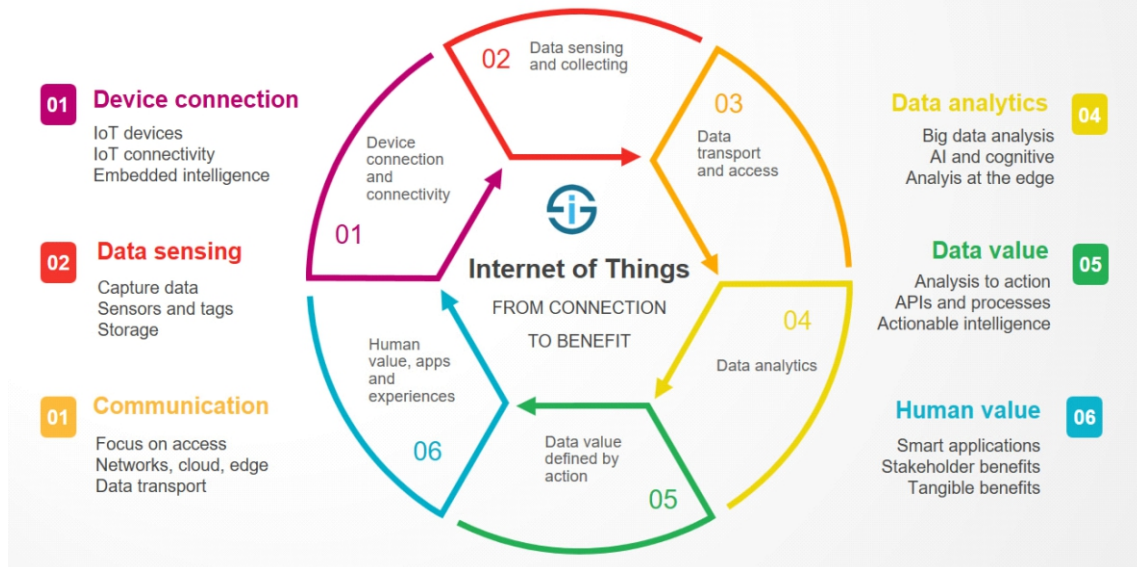
Prof. Dr. Rahul Mapari

Faculty and Staff Members

Sr.No.	NAME OF THE STAFF	SPECIALIZATION	DESIGNATION
1.	Mr. Chandrashekhar Bhavsar	ME (Electronics & Telecommunication)	Asst. Prof. & HOD
2.	Mr. Rahul Ganpat Mapari	PhD (Electronics & Telecommunication)	Associate Professor
3.	Mrs. Vijayalaxmi Sandeep Kumbhar	ME (Electronics & Telecommunication)	Assistant Professor
4.	Mr. Santosh Nagnath Randive	M.Tech (Electronics)	Assistant Professor
5.	Mrs. Maithili Shailesh Andhare	ME (Electronics)	Assistant Professor
6.	Mr. Kiran Malhari Napte	ME (Electronics & Telecommunication)	Assistant Professor
7.	Mrs. Triveni Deepak Dhamale	ME (Electronics & Telecommunication)	Assistant Professor
8.	Mrs. Arti Avinash Tekade	ME (Electronics)	Assistant Professor
9.	Ms. Rupali Ramdas Kawade	ME (Electronics)	Assistant Professor
10.	Mr. Kishor Bhaskar Wane	ME (Electronics & Telecommunication)	Assistant Professor
11.	Mrs. Snehal Rushikesh Pawar	ME (Electronics & Telecommunication)	Assistant Professor
SUPPORTING STAFF			
12.	Mr. N. S. Kathale	Diploma (Digital Electronics)	Lab Assistant
13.	Mr. K. D. Bhalekar	Diploma (E&TC)	Lab Assistant
14.	Mrs. S. B. Gholap	BE (E&TC)	Lab Assistant
15.	Mrs. B. L. Gawali	Diploma (E&TC)	Lab Assistant
16.	Mr. M. S. Garade	I.T.I (Electrician)	Peon

The Internet of Things

From connecting devices to human value



These things or items can exchange information between them and transmit data to other devices and systems. They can usually also receive data. The information they share can be about objects to which they are attached & the environment they are in (through sensors that come in many shapes for different parameters). Smart devices and machines can also share information about their internal state.

So, they don't play games or buy online but capture data, share it and, depending on the precise thing, can act upon data they receive. In other words: physical objects and lots of them, far more than there are people.

The physical things can dispose of embedded technologies enabling them to do all this (hence often called 'smart') or can be rather 'dumb' as such but get equipped/tagged to be connected. The Internet of Things is a collective term for these connected things, how they communicate and transmit data, the technologies enabling them to do so, and the reasons/goals why this is done.

While the Internet of Things starts with the infrastructure of connected things, both its benefits and risks are mainly related to the network technologies, systems, and applications built upon this underlying layer. In theory, anything can be connected to the Internet using IoT technologies: physical objects and living creatures, including animals and people as 'beings'. All things or connected components of more complex physical objects can be uniquely identified and addressed via the Internet of Things.

Examples of things range from consumer-oriented devices such as wearables and smart home solutions (Consumer IoT) to connected equipment in the enterprise (Enterprise IoT) and industrial assets such as machines, robots, or even workers in smart factories and industrial facilities (Industrial IoT, the essential component of Industry 4.0)

The question is not what you can connect but why you would do so: the purpose, the outcomes. And here is well there are a lot of potential goals which determine what things you want to connect so you can capture data from them (and have sent from, between and/or to them). That's why often you'll see distinctions being made between Industrial IoT, Consumer IoT and far more terms which are mentioned in this overview.

The Internet of Things is the network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment (Gartner's definition)

So, IoT is an umbrella term with many use cases, technologies, standards and applications. Moreover, it's part of a bigger reality with even more technologies. The things and data are the starting point and essence of what IoT enables and means. IoT devices and assets are equipped with electronics, such as sensors and actuators, connectivity/communication electronics and software to capture, filter and exchange data about themselves, their state and their environment.

The connection of IoT 'things' and usage of IoT data enables various improvements and innovations in the lives of consumers, in business, healthcare, mobility, cities and society. The potential goals of IoT are often segmented into IoT use cases: reasons for which IoT is deployed. Examples: health monitoring, asset tracking, environmental monitoring, predictive maintenance and home automation.

There are hundreds of IoT use cases, depending on the industry and/or type of application. Some IoT use cases exist across industries, others are more vertical. An example: asset tracking is a universal use case. It could be a consumer application to know where your pet or skateboard is. But it could also mean tracking containers on a huge cargo ship. Same basic principle, a world of difference regarding technologies & context.

IoT is an essential driver for customer-facing innovation, data-driven optimization and automation, digital transformation, R&D and entirely new applications, business models and revenue streams across all sectors. In this IoT business guide you can learn about the origins, technologies and evolutions of IoT with business examples, applications and research.

The Internet of Things is the logical next step in the evolution of the Internet and is a continuation of M2M (machine - to - machine) networks and technologies, building upon and extending technologies in M2M, mobile technologies, RFID and more.

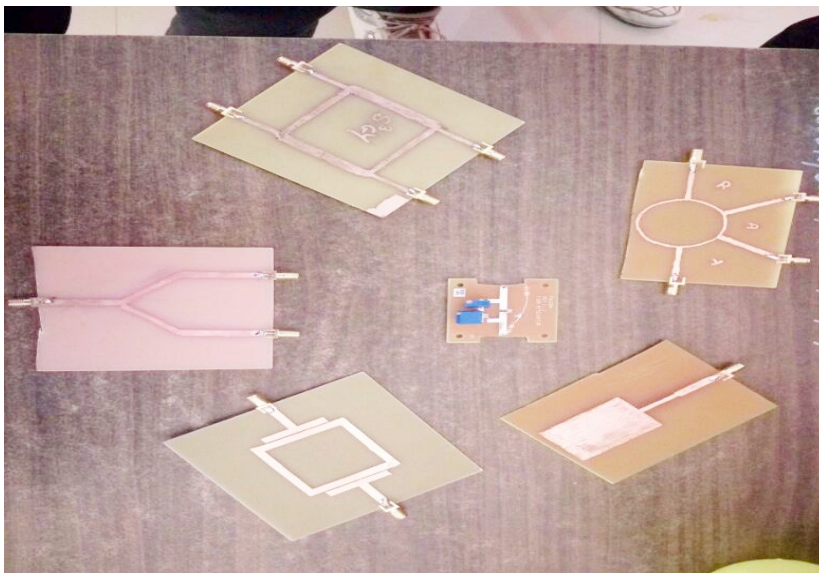
Worldwide spending on the Internet of Things (IoT) is forecast to pass the \$1.0 trillion mark in 2022, reaching \$1.1 trillion in 2023 (IDC). IoT stretches further than these roots while encompassing them and became ever more popular due to several factors, including the lower costs of sensors and enabling technologies and networks.

(Source : <https://www.i-scoop.eu/internet-of-things-guide>)

Departmental Activities

Workshop on "Microwave Systems Design and Testing"

Department of E&TC organized One day Workshop on "Microwave Systems Design and Testing" on 28th July, 2017 for BE Students. Resource Person was Mr. Aniruddha Kulkarni, Mumlab Technology, Pune. The Workshop was inaugurated by Dr. H.U. Tiwari, Principal, PCCOE&R. Total 50 students participated in this workshop.



Workshop on "Electronic System Design"

Department of E&TC organized Two days Workshop on "Electronic System Design" on 18th & 19th August, 2017 for TE Students. Resource Person was Mr. Sanjay Jogalekar, Solapur. Total 70 students participated in this workshop. In this workshop students learned designing and making of circuits, SMPS (Switch mode power supply), Data acquisition system.



Workshop on "Arduino Interfacing Hands-On"

Department of E&TC organized Two days Workshop on "Arduino Interfacing Hands - On" on 21st & 22nd August, 2017 for SE Students. Resource Persons were department Faculties Prof. Rupali Kawade & Prof. Maithili Andhare. Total 60 students participated in this workshop. In this Workshop, students learnt programming language for Arduino Board, how to interface Arduino Board to different peripherals for different applications.



Teachers Day Celebration

Teachers Day was celebrated on 9th September, 2017 in E&TC Department. ETeSA Committee and students for all staff members organized event. Celebration includes different types of games, tasks, Cake cutting Ceremony with our beloved Principal Sir, Dr. H. U. Tiwari.





Swadeshi Jagran

Swadeshi Jagran is the activity to increase the awareness among Indian peoples to use make in India products. For the same, Department of E&TC organized activity "Swadeshi Jagran", under this, SE students made LED lightening series on the occasion of DIWALI. ETeSA invested fund required for raw material. From this activity, Students gifted lightening series to Principal Sir Dr. H.U. Tiwari and all College Trustee Members.



Faculty Orientation Workshop

Department of Electronics and Telecommunication organized Faculty Orientation Workshop on TE (E&TC) Revised Syllabus 2015 Course under the aegis of BoS Electronics, University of Pune during 14th December to 16th December, 2017. The objective of this workshop was to orient the entire faculty towards the revised syllabus of TE (E&TC/Elex) and to bring in uniformity in teaching across all the colleges under the University of Pune. Expert teachers in concerned subjects covered entire syllabus. All the six units were discussed in depth in these three days with very lively and interactive session.





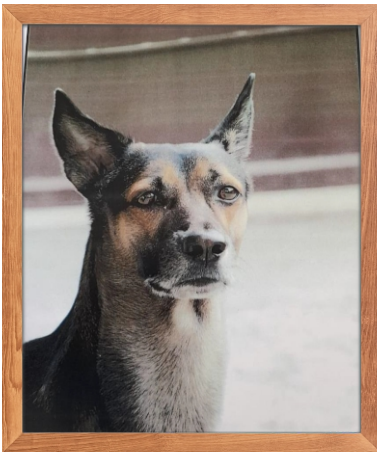
Students Corner



Sanket Shetgaonkar
SE E&TC



Kedar Prakash Doke
TE E&TC



Shubham Avinash Balwadkar
BE E&TC



Sumit Pandhare
TE E&TC

Testimonials

My name is Ashish Hatkar. Learning in PCCOER is great opportunity that will teach you lifelong lesson. Department of E&TC provide numerous curricular and extra-curricular opportunities to students to enhance their skills. Department has excellent faculties, lab equipment, classrooms and cultural clubs. Trust your instincts a lot and Believe in good, do good and good will happen to you certainly

Ashish Hatkar
BE E&TC