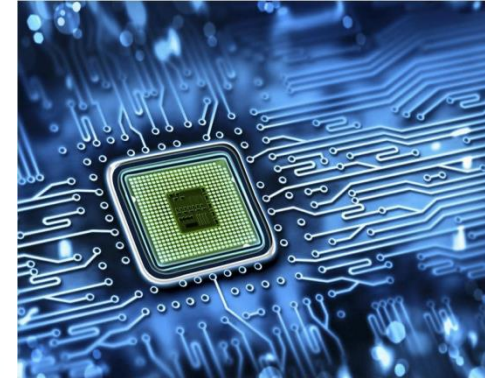


Bachelor of Technology (B. Tech.) Electronics and Communication Engineering

Course Structure

Academic Year: 2018 - 19



How will this program be taught?



Duration

- Four Years, Full Time Program

Pattern

- Trimester System
- Twelve Trimesters

Credit System

- Choice based Credit Systems
- 166 Credits



UNESCO Chair for
Human Rights, Democracy,
Peace & Tolerance
World Peace Centre
(Alandi) Pune, India

Tracks: B. Tech. (Electronics and Communication Engineering)



Signal
Processing

Communication
Networks

VLSI and
Embedded
Systems



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Program Structure



First Year B. Tech.

Trimester - I	Trimester - II	Trimester - III
Mathematics -I	Mathematics II	Chemistry
Physics	Biology	Engineering Design Principles
Applied Mechanics	Material Science For Engineers	Engineering Science Elective Course I*
Workshop Practices	Engineering Graphics	Engineering Science Elective Course II*
Effective Communication	Computer Programming	Philosophers, Great Kings & Dynasties
Practicing Yoga and Meditation	Indian Culture and Heritage	Practicing Yoga and Meditation
	Rural Immersion Programme	
	Practicing Yoga and Meditation	
Credits: Theory: 10 Practical: 4 Total: 14	Credits: Theory: 12 Practical: 3 Total: 15	Credits: Theory: 10 Practical: 4 Total: 14



Program Structure



Engineering Science Elective Courses

Any two courses other than parent/ home discipline can be chosen from the list given below:

Sr. No.	Title of Course
1	Introduction to Civil Engineering
2	Introduction to Mechanical Engineering
3	Introduction to Computer Science and Engineering
4	Introduction to Electrical Engineering
5	Introduction to Electronics Engineering
6	Introduction to Polymer Engineering
7	Introduction to Petroleum Engineering
8	Introduction to Chemical Engineering



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Program Structure



Second Year B. Tech. (Electronics and Communication Engineering)

Trimester - I	Trimester - II	Trimester - III
Mathematics - III	Signals and Systems	Analog Communication
Electronic Devices and Circuits	Electrical Machines	Object Oriented Programming
Digital Electronics	Linear Integrated Circuits	Microcontrollers
Data Structures and Algorithms	Computer Organization and Microprocessors	Control Systems
Indian Constitution/ Environmental Science	Hardware/Software Tools for Electronics Engineering	Environmental Science / Indian Constitution
	Science and Spirituality	
	National Study Tour	
Credits: Theory: 10 Practical: 4 Total : 14	Credits: Theory: 11 Practical: 4 Total : 15	Credits: Theory: 10 Practical: 4 Total : 14



Program Structure



Third Year B. Tech. (Electronics and Communication Engineering)

Trimester - I	Trimester - II	Trimester - III
Digital Signal Processing	Embedded Systems and RTOS	Electromagnetics and Radiating Systems
Digital Communication	Computer Networks	System Programming and Operating Systems
Professional Elective - I	Professional Elective - II	Professional Elective - III
Open Elective - I	Open Elective - II	Open Elective - III
Electronic Design and Testing	Finance and Accounting	Seminar/ Mini Project
Human Values & Professional Ethics	Spirit and Mind	Gandhian Philosophy
		International Study Tour
Credits: Theory: 10 Practical: 5 Total: 15	Credits: Theory: 12 Practical: 4 Total: 16	Credits: Theory: 10 Practical: 5 Total: 15



Program Structure



Final Year B. Tech. (Electronics and Communication Engineering)

Trimester - I	Trimester - II	Trimester - III
Professional Elective - IV	Professional Elective - VI	Capstone Project with/without Internship: Stage II
Professional Elective - V	Open Elective - V	
Open Elective - IV	Open Elective - VI	
Mini Project/Interdisciplinary Project	Capstone Project: Stage I	
Strategic Planning & Leadership		
Credits: Theory: 8 Practical: 5 Total: 13	Credits: Theory: 6 Practical: 5 Total: 11	Credits: Practical: 10 Total: 10

Program Structure



Professional Elective Courses

Any one course can be chosen for each professional elective.

Professional Elective	Name of Course
PE - I	Information Theory and Coding Techniques, Power Electronics
PE - II	Wireless Communication, VLSI Design, Advanced Digital Signal Processing
PE - III	Microwave and Satellite Communication, Network Programming, Digital Image Processing
PE - IV	Speech Processing, Multimedia Technologies, Wireless Networks, ASIC Design
PE - V	Artificial Neural Networks, Wireless Sensor Networks, Software Defined Radio, MEMS
PE - VI	Computer Vision, Internet of Things, Video Processing, Mixed Signal CMOS



Program Structure



Open Elective Courses

Any one course can be chosen for each open elective. Currently, the below list has only the open electives offered by ECE/EE. Additional options for each open elective option would be provided by other schools.

Open Elective	Name of Course
OE – I	Automotive Electronics
OE – II	Broadband Communication
OE – III	Mechatronics, Network Security
OE – IV	ASIC Design
OE – V	Artificial Intelligence
OE - VI	Cloud Computing

