

# **College of Engineering, Pune**

## **Department of E & TC**

### **Vision:**

“To achieve excellence in Electronics and Communication engineering through quality education, research contributing to the emerging technologies and innovation to serve industry and society”

### **Mission:**

- To enhance the teaching-learning process by implementing innovative practices to create globally competent engineers.
- To strengthen research culture providing sustainable solutions in the domain of Communication, Signal Processing and VLSI for the benefit to industry.
- To inculcate professional ethics, values and entrepreneurial attitude addressing needs of industry and society.

## **Degree: M. Tech. (Electronics – VLSI and Embedded Systems)**

### **Programme: VLSI and Embedded Systems**

#### **Program Education Objectives (PEOs)**

##### **The Postgraduate students will demonstrate..**

- PEOI. Employability in the diversified sectors of core industry, public sector or multinational corporations, Education sector, pertaining to the domain of Semiconductor Technology, ASIC Design and Verification, Embedded Systems- Hardware and Software Development.
- PEOII. Ability to pursue higher education in technologies related to VLSI and Embedded Systems at institutes of repute and high standard leading to contributions to the field, in the form of generation of IPR and Transferable technologies.
- PEOIII. Ability to innovate, incubate and lead on Entrepreneurial fronts by indulging in activities such as in-house Start-ups and social initiatives such as Make-in-India or Digital India.
- PEOIV. Attitude of lifelong learning and skills of effective inter-person communication resulting in leading diverse teams, with ethical and social behavior.

#### **Program Outcomes (POs)**

##### **Students will be able to..**

- PO1. Ability to apply the knowledge of science, mathematics, and engineering principles for developing problem solving attitude.
- PO2. Ability to identify, formulate and solve engineering problems in the broad areas like System Design using VLSI and Embedded Platforms and tools, Semiconductor Technologies, Applications in Signal Processing, Machine Vision, Automotive Electronics and Communication Networks.

PO3. Ability to identify and use different software tools in the domain of VLSI and Embedded Systems such as GNU tool chain, Embedded Linux, Analysis and Verification such as Design entry, Synthesis, Functional and Timing Simulation, Floor-planning, Place and route, Layout editors, RTL schematic, Platform specific EDA sets, MATLAB.

PO4. Ability to design and conduct experiments, analyze and interpret data, imbibe programming skills for development of simulation experiments.

PO5. Ability to function as a member of a multidisciplinary team with sense of ethics, integrity and social responsibility.

<b>PEO↓</b>	<b>PO→</b>	<b>PO1 Apply Knowledge</b>	<b>PO2 Identify, Formulate, Solve Problems</b>	<b>PO3 Skills – S/w and H/w platforms</b>	<b>PO4 Experimentation ability</b>	<b>PO5 Team member</b>
<b>PEOI Employability</b>		√	√	√	√	
<b>PEOII Higher Education</b>		√	√	√		√
<b>PEOIII Entrepreneurship</b>		√	√	√	√	√
<b>PEOIV Life Long Learning, Inter Person Communication</b>						√