



## WHY VLSI IN SAEC?

### ● Strong Academic Foundation

SAEC offers VLSI as part of the Electronics and Communication Engineering (ECE) program with:

- Curriculum aligned with industry needs & Technology.
- Exposure to semiconductor models.
- Core subjects like CMOS design, IC design, Embedded systems, etc.

### ● Industry-Relevant Skills

Focus on practical learning to prepare students for:

- Semiconductor industries
- Chip design companies
- Embedded system development
- IoT and AI hardware
- Design engineer roles
- Verification engineer roles
- FPGA/ASIC design careers

### ● Lab & Software Exposure

Students get exposures on:

- Simulation and modeling tools
- Digital design platforms
- Hardware implementation practice
- VLSI Models

### ● Placement Opportunities & Roles

Firms:

- Core electronics companies
- Semiconductor design firms
- IT companies with hardware roles

Aspirant Roles:

- Chip design Engineer
- Testing & verification Engineer
- PCB design Engineer
- Embedded Engineer

### ● Growing Semiconductor Industry in India

- NVIDIA
- Qualcomm India
- Micro Technology
- Intel Technology
- AMD & NXP Semiconductors
- HCL Technology
- Tata Elxsi Limited

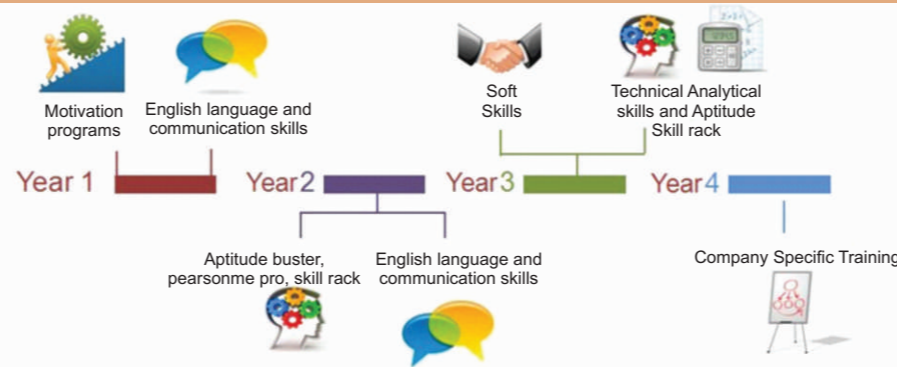
## VISION

- To emerge as a Centre of Excellence in Electronics Engineering promoting research and innovation inculcating highest professional and ethical standards.

## MISSION

- To impart quality technical education delivering state of the art technologies and research in frontier areas to meet the growing challenges.
- To provide conducive learning environment to promote interdisciplinary interaction teamwork among the students contributing to the progress of the nation.

## SKILL DEVELOPMENT



## CONTACT US

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☎ 044-2680 1999 / 2680 1499

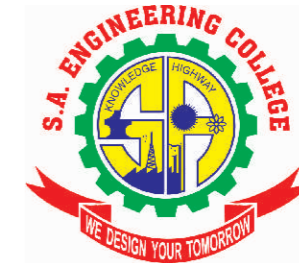
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# S.A. ENGINEERING COLLEGE

(Autonomous - Institute Level Research Centre, Affiliated to Anna University, Chennai)

Accredited by NAAC with 'A' Grade & ISO 9001:2015 Certified Institution

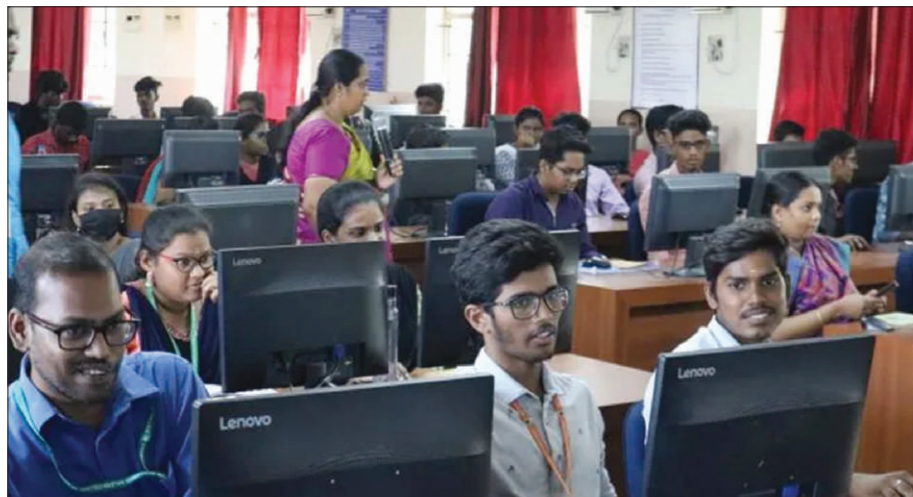
Poonamallee - Avadi Main Road, Veeraraghavapuram, Thiruverkadu, Chennai - 600 077.

## DEPARTMENT OF ELECTRONICS ENGINEERING (VLSI DESIGN & TECHNOLOGY)



# Counselling Code : 1114

## LABORATORIES



## OTHER EVENTS



## CAREER OPPORTUNITIES

- ASIC Design & Verification Engineer
- VLSI Technical SOC/TOP Level Design and Integration Engineer Technologist
- VLSI Design Engineering
- RTL Design Engineer
- Silicon Logic Formal Verification Engineer
- Analog Circuit Design Engineer
- VLSI - Architect
- Physical Design Engineer (Synthesis, Placement and Routing)
- Principal Engineer
- VLSI Design Engineer
- RTL Micro-Architecture Design Engineer Silicon Design Engineer

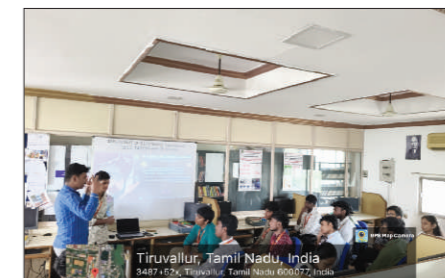
## ACQUIRING SKILLS

- **Core Technical Skills**
- **Digital & Analog Design**
  - CMOS logic design
  - Combinational and sequential circuit design
  - Low-power circuit techniques
  - Analog building blocks (amplifiers, current mirrors, oscillators)
- **VLSI Design Skills**
  - RTL design using Verilog / VHDL
  - Logic synthesis and optimization
  - Static Timing Analysis (STA)
  - Clock Tree Synthesis (CTS)
  - Floor planning and physical design
  - Power analysis and optimization
  - Design for Testability (DFT)
- **Semiconductor & Device Knowledge**
  - MOSFET operation and modeling
  - CMOS fabrication process
  - Semiconductor physics
  - Process technology nodes

## COURSE & CONTENT DELIVERY

- Digital VLSI Design
- Verification and Testing
- Low Power VLSI
- ASIC Design
- Artificial Intelligence in VLSI Design

## DEPARTMENT ACTIVITIES



"EVERY ACCOMPLISHMENT STARTS WITH DECISION TO TRY"