



# **SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)**

Sree Sainath Nagar, Tirupati – 517 102

## **Department of Electronics and Communication Engineering**

### **SVEC-16**

### **M. Tech. (VLSI)**

#### **Program Educational Objectives:**

After few years of graduation, the graduates of M. Tech. (VLSI) Program would have

- PEO1.** Enrolled or completed research studies in the core or allied areas of VLSI.
- PEO2.** Successful entrepreneurial or technical career in the core or allied areas of VLSI.
- PEO3.** Continued to learn and to adapt to the world of constantly evolving technologies in the core or allied areas of VLSI.

#### **Program Outcomes:**

On successful completion of the Program, the graduates of M. Tech. (VLSI) Program will be able to

- PO1.** Demonstrate in-depth knowledge of specific discipline or professional area, including wider and global perspective, with an ability to discriminate, evaluate, analyze and synthesize existing and new knowledge, and integration of the same for enhancement of knowledge.
- PO2.** Analyze complex engineering problems critically, apply independent judgment for synthesizing information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context.
- PO3.** Think laterally and originally, conceptualize and solve engineering problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors in the core areas of expertise.
- PO4.** Extract information pertinent to unfamiliar problems through literature survey and experiments, apply appropriate research methodologies, techniques and tools, design, conduct experiments, analyze and interpret data, demonstrate higher order skill and view things in a broader perspective, contribute individually/in group(s) to the development of scientific/technological knowledge in one or more domains of engineering.

- PO5.** Create, select, learn and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities with an understanding of the limitations.
- PO6.** Possess knowledge and understanding of group dynamics, recognize opportunities and contribute positively to collaborative-multidisciplinary scientific research, demonstrate a capacity for self-management and teamwork, decision-making based on open-mindedness, objectivity and rational analysis in order to achieve common goals and further the learning of themselves as well as others.
- PO7.** Demonstrate knowledge and understanding of engineering and management principles and apply the same to one's own work, as a member and leader in a team, manage projects efficiently in respective disciplines and multidisciplinary environments after consideration of economical and financial factors.
- PO8.** Communicate with the engineering community, and with society at large, regarding complex engineering activities confidently and effectively, such as, being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions.
- PO9:** Recognize the need for, and have the preparation and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.
- PO10.** Acquire professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society.
- PO11.** Observe and examine critically the outcomes of one's actions and make corrective measures subsequently, and learn from mistakes without depending on external feedback.

### **Program Specific Outcomes:**

On successful completion of the Program, the graduates of M. Tech. (VLSI) Program will be able to

- PSO1.** Demonstrate in-depth knowledge of analog, digital and mixed signal integrated circuits with global perspective and an ability to process and integrate the existing and new knowledge for enhancement of knowledge.
- PSO2.** Analyze complex engineering problems critically and synthesize information to make intellectual and creative advances in the domains of analog, digital and mixed signal integrated circuits.
- PSO3.** Design and Develop solutions for real world problems in the domains of analog, digital and mixed signal integrated circuits.
- PSO4.** Provide a wide range of feasible and optimal solutions for complex

engineering problems in the domains of analog, digital and mixed signal integrated circuits.

- PSO5.** Do research contributions individually or in groups to the development of scientific/ technological knowledge in the domains of analog, digital and mixed signal integrated circuits.
- PSO6.** Apply appropriate techniques, resources, and modern tools to complex engineering activities in the domains of analog, digital and mixed signal integrated circuits.