SREE VIDYANIKETHAN ENGINEERING COLLEGE

Sree Sainath Nagar, Tirupati – 517 102.

Department of Electronics and Instrumentation Engineering

PROGRAMME EDUCATIONAL OBJECTIVES

After few years of graduation, the graduates of B. Tech. (EIE) Program would have

PEO1.   Enrolled or completed higher education in the core or allied areas of electronics and instrumentation engineering or management.

PEO2.   Successful career in electronics and instrumentation enabled industries or software industries or be an entrepreneur in the domain area.

PEO3.   Constantly enhanced their knowledge on new developments in the core or allied areas of electronics and instrumentation engineering.

PROGRAMME OUTCOMES

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

PO1.   Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2.   Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3.   Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4.   Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5.   Create, select, 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.   Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7.   Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8.   Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9.   Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES

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

Model-1:

PSO1. **Sensor and Measurement:** Apply the knowledge to identify the suitable sensor and measuring techniques for solving the real time applications.

PSO2. **Control Systems:** Use domain tools for design, analysis and synthesis of controller of a real time application.

PSO3. **Signal Conditioning and communications:** Design and develop electronic systems for processing the sensor output and communicate as per standards protocols.

Model-2:

PSO1. Apply concepts of sensor techniques and control strategies for a real time application.

PSO2. Analyze and use engineering tools to simulate and develop the electronic systems for processing the sensor output with standard protocols for a real time application.

Ref.: BMSCE

PSO1: Ability to apply the Concepts of Data Acquisition, Signal Conditioning, Control and Communication.

PSO2: Ability to simulate, analyse and interpret analog/digital circuit designs, related to applications of automation and control using modern engineering tools.

PSO3: Ability to apply the knowledge of PLC, SCADA and DCS with industrial networking protocols for process industries.

ECE (SVEC19)

PSO1   Demonstrate the conceptual domain knowledge for engineering deployment in communications and networking.

PSO2   Analyze and Design electronics systems for Communication and Signal processing applications.

PSO3   Use domain specific tools for design, analysis and synthesis of VLSI and Communication systems

EIE (SVEC16)

PSO1.   Apply the knowledge of Electronics, Measurement, Signal Processing and Control Systems, to the solutions of real world technical problems.

PSO2.   Analyze, Design and Develop solutions in real time in the domains of Electronics, Measurements, Signal Processing and Automation.

PSO3.   Conduct investigations and address complex engineering problems with safety norms in the domains of Electronics, Measurements, Signal Processing and Automation.

PSO4.   Apply appropriate techniques, resources, and modern tools to complex engineering systems and processes in the domains of Electronics, Measurements, Signal Processing and Automation.

EIE

Model-1:

PSO1. **Sensor and Measurement:** Apply the knowledge to identify the suitable sensor and measuring techniques for solving the real time applications.

PSO2. **Control Systems:** Use domain tools for design, analysis and synthesis of controller of a real time application.

PSO3. **Signal Conditioning and communications:** Design and develop electronic systems for processing the sensor output and communicate as per standards protocols.

Model-2:

PSO1 Apply concepts of sensor techniques and control strategies for a real time application.

PSO2 Analyze and use engineering tools to simulate and develop the electronic systems for processing the sensor output with standard protocols for a real time application.