

## **Bachelor of Electronics Engineering**

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

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

**PO2) Problem Analysis:** identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

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

**PO4) Conduct investigations of complex problems:** 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) Modern tool usage:** 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) The engineer and society:** 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) Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

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

**PO9) Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10) Communication:** 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) Project management and finance:** 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) Life-long learning:** 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 (PSOs)**

1. Graduates will be able to apply the fundamentals of analog electronics and digital electronics systems.
2. Design a variety of Hardware and Software based systems for applications in the fields of communication, networking, power electronics and control systems.

### **Programme Educational Objectives (PEOs)**

1. To enable the graduates to identify, analyze and solve technical problems using appropriate theory, laws and formulas of applied physics, applied mathematics and electronic circuits and thus demonstrate an ability to assemble, test, maintain, and troubleshoot experiments relating to electronic systems and measure electrical and electronic quantities in a safe manner.
2. To train students to develop critical thinking skills and to make them technocrats to meet latest industrial requirements in the field of robotics, communication, signal processing, VLSI design, computer programming, embedded system programming and simulation.
3. To help Graduates to gain broad knowledge of electronics engineering technology practices to support cost effective design, application, installation, operation and maintenance and pursue higher studies for meeting the desired global needs.
4. To develop soft skills of students and enable them to work in a team to solve problems in case studies and design systems with an awareness of social issues, ethical responsibilities and professional practices.



# Vivekanand Education Society's Institute of Technology

Approved by AICTE & Affiliated to University of Mumbai