



**ZEAL EDUCATION SOCIETY'S  
ZEAL COLLEGE OF ENGINEERING AND RESEARCH  
NARHE | PUNE -41 | INDIA**



Record No.: ZCOER-ACAD/R/16D

Revision: 00

Date: 01/04/2021

**Program Outcomes (PO's) & Program Educational Outcomes (PEO)**

**Department:** Electrical Engineering    **Semester:** I    **Academic Year:** 2024-25  
**Class:** TE    **Div.:**    **Course:** Power Electronics (303142)

**(a) Program Outcomes:**

Sr. No.	PO Statements
PO 1	<b>Engineering knowledge:</b> Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	<b>Problem analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	<b>Design/development of solutions:</b> 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.
PO 4	<b>Conduct investigations of complex problems:</b> 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.
PO 5	<b>Modern tool usage:</b> 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.
PO 6	<b>The engineer and society:</b> 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.
PO 7	<b>Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 8	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	<b>Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	<b>Communication:</b> 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.
PO 11	<b>Project management and finance:</b> 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.
PO 12	<b>Life-long learning:</b> 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.



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**(b) Program Educational Outcomes (PEO):**

Sr. No.	PEO Statements
PEO 1	Graduates will be able to apply their technical skill sets and knowledge to solve engineering-based problems in industry, academic and diverse fields of Electrical Engineering.
PEO 2	Graduates will demonstrate ethical and social responsibility while engaging in research, innovative practices and entrepreneurial activities, contributing positively to society and technological advancement.
PEO 3	Graduates will embrace lifelong learning and adaptability, staying updated with emerging technologies, industry trends, and advancements in electrical engineering.

**(c) Program Specific Outcomes (PSOs)**

Sr. No.	PSO Statements
PSO 1	To apply knowledge to build ability to design, analyze and solve problems in the field of electrical engineering through power systems, electrical machines, control systems, electronics and automation.
PSO 2	To develop solution to real time problems through appropriate techniques, modern engineering hardware and software tools related Electrical Engineering.

**Course Faculty**

**Academic Coordinator**

**Head of Department**