

Department of EIE, VNRVJIET

Programme Educational Objectives (PEOs)

PEO.1. To provide students with a solid foundation in Mathematics, Sciences, Electronics, and Instrumentation Engineering which prepares students for wide range of career opportunities in Industries, Research, and Academics.

PEO.2. To train the students with good engineering breadth to comprehend, analyse, innovate, and design new products in core and multidisciplinary domain, to provide technical solutions and services to the needs of the society.

PEO.3. To provide students with an academic environment of excellence, proactiveness, and lifelong learning for successful professional career.

PEO.4. To inculcate professional and ethical attitude, effective presentation skills and enhanced ability to work in multidisciplinary teams to pursue complex, open-ended investigations and research.

PEO.5. To motivate students towards becoming entrepreneurs, collaborators, and innovators, leading, or participating in efforts to address social, technical, and business challenges.

Program Outcomes (POs)

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

PO2: Problem Analysis: Identify, formulate, 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 the specified needs with appropriate consideration for the 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.

P08: Ethics: Apply ethical principles and commit to professional ethics and responsibilities, and norms of the engineering practice

P09: Individual and Teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

P010: 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.

P011: 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.

P012: Life-Long Learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning (LLL) in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1: Specify, design, prototype and test electronic systems that perform processing as per user requirements using contemporary devices and technology.

PSO2: Architect and implement instrumentation systems for industrial processes and biomedical applications using appropriate technologies.

PSO3: Develop hardware and software tools/ programs used in industrial and other automation systems.