



PROGRAM OUTCOMES (PO) for IET

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, review and analyze complex engineering problems from the research papers and literature, and there after reach 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 cultural, societal, and environmental considerations for public health and safety.

PO4: Conduct investigations of complex problems: Use research-based knowledge and 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 to reason informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities.

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 teamwork: Function effectively as an individual, and as a member or leader in diverse teams and individual and in multidisciplinary settings relevant to the professional engineering practice.

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 lifelong learning in the broadest context of technological change.



PROGRAM OUTCOMES (PO) for BME Dept.

On completion of the B. Tech degree the Biomedical Engineering, the graduates will be able to:

PO1: Engineering knowledge: - Apply the knowledge of mathematics, biology, science, engineering fundamentals, and an engineering specialization to the solution of complex Medical / Hospital Instruments & Engineering problems.

PO2: Problem analysis: - Identify, formulate, review research literature, and analyze complex medical instruments & engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, Bioscience and engineering sciences.

PO3: Design/development of solutions: - Design solutions for complex Biomedical Engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health Diagnosis and Therapeutic safety, and the Medical /Hospital, 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 Biomedical Instrumental techniques, resources, and modern engineering and IT tools including prediction and modeling to complex Bioengineering 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 Biological, Medical/ Hospital technological issues and the consequent responsibilities relevant to the professional Biomedical engineering practice.

PO7: Environment and sustainability: - Understand the impact of the professional Biomedical 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 Biomedical 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 Biomedical engineering activities with the Bioengineering 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 changes in the field of Biomedical Engineering.



PROGRAM SPECIFIC OUTCOMES (PSO) for BME Dept.

On completion of the B. Tech degree the Biomedical Engineering, the graduates will be able to attain the following program specific attributes in addition to 12 PO's mentioned:

PSO-1: Graduates of the program will be able to analyze real world engineering problems and able to design its solutions in the field of Biomedical engineering.

PSO-2: Graduates of the program will be able to design and develop systems/processes based on core concepts of Biomedical engineering to provide solution to multidisciplinary Medical / Hospital Instruments & engineering problems.

PROGRAM EDUCATIONAL OBJECTIVES (PEO) for BME Dept.

PEO-1: Engineering Graduates must be experts in Medical/Hospital Instrument fields both in the industry and academics by analyzing the requirement of society and applying their knowledge in a professional manner.

PEO-2: Engineering graduates must be able to effectively solve engineering problems and develop products through advanced research in Biomedical Engineering.

PEO-3: Engineering graduates must be capable of applying their knowledge both individually and as a part of a team and they must be able to effectively present the same through the required media.

PEO-4: Engineering Graduates must be capable of realizing the unwanted and hazardous impacts of their contributions and keep ethical and societal values and responsibilities before individual achievements.

PEO-5: Engineering Graduates must keep pace with the ongoing improvements and advancements in the field of Biomedical Engineering and not only incorporate but carry forward the same for entrepreneurship development.