



MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

(A State University Estb. by Govt. of Punjab vide Punjab Act No. 5 of 2015 and Approved u/s 2(f) & 12 (B) of UGC; Member AIU)

Bathinda-151001 (Punjab), India

Department: **MECHANICAL ENGINEERING**
Giani Zail Singh Campus College of Engineering & Technology, MRSPTU

Program: **B Tech Mechanical Engineering**

PROGRAM OUTCOMES (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an electronics & communication engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyse complex electronics & communication engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex electronics & communication 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.
4. **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.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex electronics & communication engineering activities with an understanding of the limitations.
6. **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 electronics & communication engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional electronics & communication engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the electronics & communication engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the electronics & communication 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.
11. **Project management and finance:** Demonstrate knowledge and understanding of the electronics & communication 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 multi-disciplinary environments.
12. **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.



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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO-1

To develop the mechanical engineering graduates with strong fundamental knowledge and core competency in diverse areas such as thermal, design, manufacturing engineering using integrated technology to solve general and complex engineering problems of industry and real life applications.

PEO-2

To prepare the students for effective communication, leadership qualities, managerial skills, moral and ethical values to contribute to his successful career in research, interdisciplinary fields, industry, higher education and as entrepreneur.

PEO-3

To prepare the graduates to practice high ethical values and moral responsibilities for the service towards their peers, employers, society, environment and follow these precepts in their daily life.



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PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1) Will be able to apply the acquired theoretical and practical skills to solve the industrial and real life problems in the major streams such as design, thermal, manufacturing and industrial engineering.

PSO 2) Will be able to take up their career in government, public, private sector industrial/research organizations, pursue higher studies in institutions of repute, or in own start ups.
