

**After successful completion of B. Tech. (Mechanical) program, students will be able to:**

1. Apply the knowledge of mathematics, science, engineering fundamentals, and mechanical engineering to the solution of complex engineering problems.
2. Identify, formulate, review research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design solutions for complex mechanical 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. 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. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex mechanical engineering activities with an understanding of the limitations.
6. 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.
7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communicate effectively on complex mechanical 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.
11. 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.
12. 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.

### **Program Specific Outcomes (PSOs) –**

After successful completion of B. Tech. (Mechanical) program student will be able to:

1. Use Company standards, national and international standards like IS BS, SAE, ISO, ASTM etc for designing and manufacturing of mechanical components and systems.
2. Engage professionally in industries or as an entrepreneur by applying manufacturing, design, thermal and management practices.

### **Program Educational Objectives**

1. Graduates will apply knowledge gained in engineering and science to improve lives and livelihoods through a successful career in Mechanical Engineering and other related fields.
2. Graduates will become innovators, entrepreneurs to address social, technical and business challenges.
3. Graduates will engage in lifelong learning such as higher studies, research and other continuous professional development activities.