Department of Mechanical Engineering

Tezpur Central University, Assam

Programme: Bachelor of Technology (B.Tech.)

Programme Educational Objectives (PEOs)

The B.Tech. program in Mechanical Engineering has the following PEOs.

1. To impart fundamental knowledge of Mechanical Engineering, enabling students to face practical challenges of solving engineering problems.
2. To train students in various core fields of Mechanical Engineering through exposure to the latest technology.
3. To motivate students for higher studies and research.
4. To orient students towards multi-disciplinary research and other co-curricular activities.
5. To inculcate in students the sense of ethics, professionalism, creativity, leadership, entrepreneurship, and self-confidence.

Programme Outcomes (POs)

The students from the given program will be able to

1. Apply knowledge of Mathematics, Science and Engineering in solving problems of Mechanical Engineering.
2. Identify, formulate, solve and analyze Mechanical Engineering problems.
3. Design machine elements and mechanical systems, conduct experiments, analyze and interpret results.
4. Design algorithms or systems to meet desired needs in the context of Mechanical engineering under realistic constraints, such as limited resources, environmental impacts, system performance etc.
5. Visualize and work on laboratory.
6. Use modern engineering tools, software packages and equipment to solve and analyze problems.
7. Understand professional and ethical responsibilities.
8. Communicate effectively.
9. Understand the impact of engineering solutions on the society, environment and awareness of contemporary issues.
10. Develop confidence and ability for self-learning.
11. Succeed in various competitive examinations for acquiring better employability.

12. Build a strong background for acquiring higher studies and pursuing research in leading organizations.

Original PEOs of the B.Tech. programme

1. To impart fundamental education and knowledge of mechanical engineering as well as contemporary science and technologies, enabling students to face practical challenges of engineering problems.
2. To train and equip students with knowledge of the latest design codes and design philosophy for addressing critical issues, like the design and development of sustainable systems and process as remedial steps towards the dual problem of limited natural resources and environmental hazards.
3. To motivate students for higher studies and research so as to contribute in demanding issues like developing alternative resources and energy and their effective management.
4. To orient students towards multi-disciplinary knowledge and research for applying engineering in broader prospects.
5. To inculcate in students the sense of ethics, professionalism, creativity, leadership, entrepreneurship, and self-confidence.

Original POs of the B.Tech. programme

a. Apply knowledge of mathematics, science and engineering in solving Mechanical Engineering as well as multi-disciplinary problems.
b. Identify, formulate, analyze and solve Mechanical Engineering problems.
c. Design machine elements and mechanical systems, conduct experiments, analyze and interpret results.
d. Design components, algorithms or systems to meet desired needs in the context of Mechanical engineering under realistic constraints, such as limited resources, environmental impacts, system performance, etc.
e. Visualize and work on laboratory and multi-disciplinary task.
f. Use modern engineering tools, software packages and equipment to analyze and solve problems.
g. Understand professional and ethical responsibilities.
h. Communicate effectively.
i. Understand the impact of engineering solutions on the society, environment and awareness of contemporary issues.

j. Develop confidence for self-education and ability for learning.

k. Succeed in various competitive examinations for acquiring better employability.

l. Build a strong background for acquiring higher studies and pursuing research in leading Organizations.