



G. H. RAISONI COLLEGE OF ENGINEERING, NAGPUR

(An Autonomous Institute Affiliated to RTM Nagpur University)

Programme of BE Mechanical Engineering

Vision:

To achieve excellent standards of quality education by keeping pace with rapidly changing technologies and to create technical manpower of global standards with capabilities of accepting new challenges.

Mission:

Our efforts are dedicated to impart quality and value based education to raise satisfaction level of all stakeholders. Our strength is directed to create competent professionals. Our endeavour is to provide all possible support to promote research & development activities.

Vision & Mission of Department

Vision

To be recognized internationally for quality education and research in mechanical engineering with excellence in the fields of design, manufacturing and thermal sciences.

Mission

- To impart quality and value based education to raise satisfaction level of all stakeholders.
- To promote research and development activities in the field of mechanical engineering and allied areas.
- To create competent mechanical engineering professionals who are trained in the fields of design, manufacturing and thermal sciences

Programme Educational Objectives (PEOs)

Engineering Graduates shall:

- Practice mechanical engineering in the general disciplines of design, thermal and manufacturing engineering in industry and establishments in government and private sectors.
- Apply fundamental technical knowledge and skills to find workable solutions to technological challenges and problems in various areas of mechanical engineering.
- Pursue advanced education, research and development, and creative efforts in mechanical engineering and allied areas of science and technology.
- Practice mechanical engineering in a responsible, professional and ethical manner for the benefit of the industry and society.

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **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.
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 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 engineering practice.
7. **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.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
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.

Programme Specific Outcomes (PSOs)

Engineering Graduates shall:

- demonstrate industrial practices learned through internship and solve the industrial problem using technical knowhow acquired.
- apply skill in multi disciplinary area of renewable energy, automotive, agricultural & heat transfer
- utilize skill in developing innovative prototype concepts enabling to protect intellectual property rights