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National Institute of Technology, Raipur

राष्ट्रीय प्रौद्योगिकी संस्थान ,रायपुर

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Vision

To produce innovative, entrepreneurial and successful engineers and technologists of high caliber for the nation, to serve as a valuable resource for industry and

Show more

Mission

To provide the students and the faculty with opportunities to create, interpret, and apply the knowledge in the field of Mechanical Engineering. Provide technological

Show more

Mechanical Engineering

About Curriculum Laboratories Faculty Staff Syllabus Achievement

Accreditation Awards Virtual Tour Testing And Consultancy

Welcome to Mechanical Engineering

Department offers undergraduate program (B.Tech.) in Mechanical Engineering and Postgraduate (M.Tech.) programs in Thermal, Design, Industrial Engineering and Management streams. It is one of the largest department of the institute with intake of 115 students for undergraduate course and 51 students for post graduate courses. Department also offers Ph.D. program in all relevant discipline of Mechanical Engineering including Thermal, Design, Production, and Industrial Management.

VISION

● To produce innovative, entrepreneurial and successful engineers and technologists of high caliber for the nation, to serve as a valuable resource for industry and society.

Mission -

●To provide the students and the faculty with opportunities to create, interpret, and apply the knowledge in the field of Mechanical Engineering.
●Provide technological service to local, national, and international communities.

Programme Educational Objectives(PEOs)

Under the undergraduate Mechanical Engineering programme the objectives and aims to produce qualified Mechanical Engineers who will:
●Apply technical knowledge and skills as Mechanical Engineers to provide the solutions for the industries and government organizations.
● Utilize effective communication, team, and project management skills to work productively within their professions and communities.
●Conduct themselves in a responsible, professional and ethical manner.
●Inculcate an attitude for life-long learning process.

Programme Specific Outcomes (PSO's):

PSO-1: Graduates will acquire proficiency in implementation of the knowledge of the core aspects of Mechanical and allied engineering domains to the major challenging areas in Industrial, Academic and Research organizations.
PSO-2: Graduates will gain expertise in identifying the problems and in harnessing the state of the art experimental and computational tools to work out feasible and cost-effective solutions in the area of design, thermal, fluid, thermo-fluid, material science, manufacturing as well as production & management engineering problems.
PSO-3: Graduates will inculcate the capability of fostering innovations and disseminating innovative ideas in dealing with challenging problems pertaining to mechanical and related engineering domains, which in turn will aid them to build their career paths as entrepreneurs and technocrats of notable fame.
PSO-4: Graduates will be impregnated with commendable interpersonal, ethical and managerial skills, which will render them capable of effectively communicating a technical problem and/or its solution. Graduates will also be motivated to take-up higher studies/research activities in institute of repute.

Programme Outcomes (PO's):

1. Engineering Knowledge: Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. Problem Analysis: Identify, formulate, 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 specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.
4. Conduct investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of 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 contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
7. Environment and Sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of 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 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 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.

- **Year Of Establishment :**

  Year 1958

- **Intake :**

  Under Graduate Program - 115

  Post Graduate Program - 41+10(Sponsored)

- **Degree Offered :**

  Under Graduate Program - B.Tech. (Mechanical Engineering)

  Post Graduate Program - M.Tech. (Thermal Engineering) (http://www.nitrr.ac.in/mechanical/M.Tech%20Brochure%20Thermal%20Engineering(1).pdf)

  Post Graduate Program - M.Tech. (Design) POE & PO(M.TECH Design) (http://www.nitrr.ac.in/mechanical/NEW-MTECH_Machine_Design_Brochure.pdf)

  Post Graduate Program - M.Tech. (Industrial Engineering and Management) (../mechanical/M.Tech.%20Brochure%20Industrial%20Engineering%20and%20Management%20

- NIT Raipur at a Glance (downloads/NIT Raipur at a Glance09112021.pdf)
- Unnat Bharat Abhiyan at NIT Raipur (UBA/index.html)
- Anti-Ragging System (antiraggingcommittee.php)
- Research Newsletter NIT Raipur (http://nitrr.ac.in/Researchnewsletter.php)
- National Academic Depository (NAD) (nad.php)
- NIT Raipur Library Discovery (http://search.ebscohost.com/login.aspx?profile=eds)
- Web OPAC (https://nitrropac.libsys10.in/home/dashboard)
- MIS (mis_new.php)
- Hindi Font (downloads/hindi_fonts.rar)
- MOOCs (http://moocs.nitrr.ac.in/)
- Terms & Condition (t&c.php)
- National and Industrial Collaboration cell (iiic.php)
- Year Wise Toppers List (yeartopperlist.php)
- NIT Act, Statues and Office Memorandum (NITstatutes.php)
- Institute Innovation and Start-up Policy (downloads/InstituteStartupPolicy_Final.pdf)
- Annual Reports (ann_report.php)
- Vision 2030 (Vision2030 .php)
- RTI Act (rtiact.php)
- MOUs (mous.php)
- TEQIP III (teqip_3.php)
- Shilpi (shilpi.php)
- NITRR Newsletter: MIRROR (newsletter.php) click to subscribe (subscribe.php)
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- Institute Alumnus Awards (http://www.nitrr.ac.in/Alumni%20Awar
- E-booklet on COVID-related Research & Development works by CFTIs NEW (downloads/Covid E Book.pdf)

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