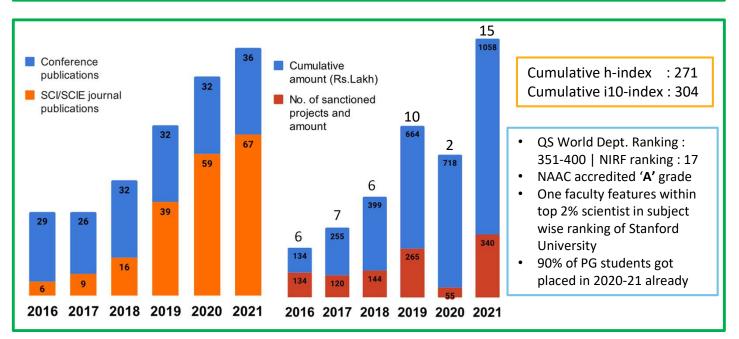




Mechanical Engineering Department, BITS Pilani, Hyderabad Campus

Welcomes application for Higher Degree Programs in Mechanical Engineering. The Department of Mechanical Engineering offers Master of Engineering (ME) courses in three categories: Mechanical Engineering, Design Engineering and Manufacturing & Systems Engineering.

Discipline	No. of Faculty	Expertise Area	Sr. Professor
Design & Robotics	13	Structural Optimization, CAD/CAM, Product Design, Rapid Prototyping and Manufacturing, Biomedical devices	Professor Associate Professor Professor 21
Materials & Manufacturing	7	Additive Manufacturing, Process Optimization, Manufacturing process modelling, High speed micromachining, Mechanical alloying	
Fluids & Thermal	13	Multi-phase flow simulations, Fluid- Structure Interaction, MEMS	



Thrust areas of research

- Micro-machining | Forming | Additive
 Manufacturing | Welding | Casting
- High-temp. Materials | Nano Materials | Composites | Hybrid Battery
- Refrigeration | CFD | Renewable Energy | IC
- Vibration & Control | Product Design | CAD/CAM | Condition Monitoring | Vibrations
- Micro electromechanical systems | Robotics
 & AI

Departmental Laboratories

Dynamics & Vibration Lab
Heat Transfer Lab
Hydraulics Machine Lab
IC Engines Lab
Materials Testing Lab
Product Design and Realization Lab
Refrigeration, Air-conditioning and Energy (RACE) Lab
Robotics, Automation and Mechatronics Lab
Tribology Lab

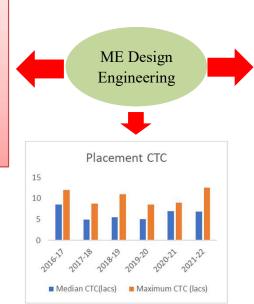


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Course Structure

Core Courses

- Material Testing and Technology
- Mechanism and Robotics
- Finite Element Methods
- Computer Aided Analysis and Design
- Product Design
- Dynamics and Vibration

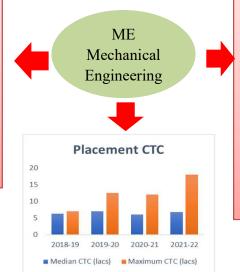


Elective Courses

- Design Projects
- Computational Fluid Dynamics
- Advanced Engineering Mathematics
- Nondestructive Testing Techniques
- Machined Tool Engineering
- Theory of Elasticity and Plasticity
- Tribology
- Fracture Mechanics
- Microfluidics and its Applications
- Advances Composites

Core Courses

- Quality Control Assurance and Reliability
- Mechanism and Robotics
- Finite Element Methods
- Computer Aided Analysis and Design
- Machine Tool Engineering
- Theory of Elasticity and plasticity



Elective Courses

- Design Projects
- Product Design
- Precision Engineering
- Wind Energy
- Turbomachinery
- Computational Fluid Dynamics
- Advanced Engineering Mathematics
- Advanced Heat Transfer
- Tribology
 - Micro Fluidics and its Application
- Heating and Cooling of Buildings

Core Courses

- Flexible Manufacturing Systems
- Quality Control Assurance and Reliability
- Mechanism and Robotics
- Research Practice
- Manufacturing Planning and Control
- World Class Manufacturing
- Supply Chain Management

M.E.

Manufacturing

Systems

Engineering

(Started in 2021)

Elective Courses

- Design Projects
- Mechatronics
- Maintenance Engineering
- Concurrent Engineering
- Computer Integrated Manufacturing
- Advanced Engineering Mathematics
- Toyota Production System

























































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