

EXECUTED RESEARCH PROJECTS

- Design and Development of Co-Axial Series Rotor Wind Turbine - AICTE-RPS grant
- Cryogenic Air Separation Technology Simulation and Exergy Analysis of Air separation Plant - AICTE-RPS grant
- Virtual Laboratory on Micro Manufacturing - MHRD
- Development of Speed Controller with an emphasis on estimating Manifold Pressure - TCDE AICTE
- Development of Modular Parabolic Trough Collector - AICTE-RPS grant
- Micro-fabrication by Fused Deposition through Electrochemical Discharge - DST grant
- Boiler Tube Leakage Failure Analysis and Prediction, NTPS, Nashik
- Development and Simulation of Multi-Finger Robotic Gripper, R&DE, Dighi Pune
- Optimum Design of Composite Patches to arrest a crack in Thin Plates, ARDB, DRDO, New Delhi.
- Investigation into Laser Hardening of cast iron cylinder liner and Process Assessment through thermography - DST grant
- Investigations into the development of Graphene paper and its mechanical characterization- AICTE-RPS grant
- Fatigue growth characterization at cold and elevated temperatures of cracked thin Aluminium-alloy panel repaired with polymer Composite patches, DRDO
- ABB 6 DOF 1520 ID Industrial robot with training cell, DRDO
- Design and development of battery thermal management system for electric vehicles, AICTE-RPS NDF
- Investigations of Laser-induced Combustion of Gaseous Fuels - AICTE-RPS Grant

- IoT-based prognostics and health monitoring of a machining centre incorporating digital twin technology, SERB Grant
- Development of Bulging Rate of tube testing system & Predicting remaining life of tube placed in high-temperature Zone
- Enhancement of heat transfer efficiency of lithium-ion battery packs using the design of wavy fins
- Development of Plug-in hybrid electric engine (PHEE) by extending the existing facility of computerized CRDI Diesel Engine for power generation
- Performance improvement of rotary rake machine for sugarcane trash collection
- Study of the combustion control system of bagasse fired boiler for a sugar and cogeneration plant

ONGOING RESEARCH PROJECTS

contd...

- Development and manufacturing of tarpaulin (tarps) material & development of an adequate ventilation system to preserve onions
- Comparative study of various configurations of linear Electrical Machines and design and analysis of linear permanent magnet synchronous motor (LPMSM) for Electromagnetic Launch Systems
- Effective use and transmission efficiency of roller chain
- Enhancement of bagasse-fired boiler performance & fuel saving by energy saving (ES) coating in sugar mill boilers, Prediction and residual life assessment about boiler
- Fatigue testing of composite materials

MOU WITH INDUSTRIES/ORGANIZATIONS

- TATA Motors Ltd, Pune
- Danfoss India Ltd, Chennai
- 3DPLM Software Solutions Ltd, Pune
- Schindler India Private Limited, Pune
- Kirloskar Oil Engines, Pune
- Forbes Marshall, Pune
- Eaton India, Pune
- Altair Engineering India Pvt Ltd, Bengaluru
- Hella India Automotive Private Limited, Pune
- Dassault Aviation, Pune
- Gamma CAE Technologies Private Ltd, Pune
- Fluid Controls Pvt. Ltd, Pune
- The Automotive Research Association of India (ARAI), Pune
- iRobotics & Rookie Ventures, Pune
- Bharat Electronics Ltd, Pune
- Infosys Ltd, Pune

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CONTACT

INFORMATION BROCHURE



Mechanical Engineering Department

COEP Technological University (COEP Tech.)

A Unitary Public University of the Government of Maharashtra

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The Department of Mechanical Engineering was established in the year 1912. At present, the department offers Graduate, Post Graduate and Doctoral degree programs. The institute is acclaimed for producing eminent engineers as professionals, researchers and entrepreneurs. Many of its alumni hold key positions in industries and institutions in India and abroad. The department is proud to have collaborated with well-known industries in niche areas.



COURSES OFFERED

Program	Branch / Specialization	Inception	Sanctioned Intake
B.Tech.	Mechanical Engineering	1912	150
B.Tech.	Robotics and Automation	2023	60
M.Tech.	Thermal Engineering	1957	18
M.Tech.	Design Engineering	1957	18
M.Tech.	Automotive Technology	2010	36
PGD	Electric Mobility	2019	30

and Ph.D. Program in Mechanical Engineering

PROGRAM HIGHLIGHTS

- Well-structured curriculum inline with NEP
- Learning through Internships/projects
- Comprehensive program and futuristic electives
- Experienced faculty with research capability
- High-end computational facility
- Department library and Well-equipped labs
- Expert lectures / Field visits
- Industry-sponsored Research projects
- Multidisciplinary projects
- 50+ student clubs, earn while learn scheme.
- Reputed Recruiters
- GATE scholarship for PG study as per AICTE norms
- Fellowship/scholarship schemes for Research Scholars



Robotic Tentacle arm using multiplexer



Agriculture Harvesting Machine



Soft Robotics Exoskeleton for Gait Abnormalities



Unidirectional wind turbine



Rotary Rake Machine for Sugarcane Trash Collection



Battery Thermal Management System

PROJECT BASED LEARNING

FACULTY EXPERTISE

Name	Domain
Dr. N. K. Chougule	CAD/CAM/CAE, AI/ML & Agromechanisation
Dr. S. S. Mohite	Dynamics and Control, IoT, MEMS, Condition monitoring
Dr. M. J. Sable	Heat Transfer, Engineering Optimization
Dr. M. R. Nandgaonkar	CFD, Laser Combustion, EV
Dr. P.R. Dhamangaonkar	Heat Transfer & Steam Engg.
Dr. R. M. Warkhedkar	RAC & Heat Transfer
Dr. U. V. Pise	CAD/CAM, BioCAD Modelling simulation
Dr. R.N. Ladhwe	Composite Materials, FEA
Dr. A. P. Bhattu	Vibration & Acoustics
Dr. M. P. Khond	Fluid Power, Industrial Engg.
Dr. Ms. S. S. Bhavikatti	Laser processing, Micro-Manufacturing
Dr. V. K. Haribhakta	Microsystems, Non-traditional machining
Dr. S. S. Ohol	Robotics and Automation
Dr. S. S. Pardeshi	Micro System Engg., Machine Learning
Dr. S. B. Patil	Micro-Machining, Non-Conventional Machining
Dr. Mrs. P. H. Selmokar	Control systems, Micromachining
Dr. Mrs. M.H. Yadav	Design, Production Engineering
Mr. N. P. Dale	Thermal Engineering
Mr. N. D. Dhote	Design Engineering
Dr. S. V. Wagh	Micro Manufacturing
Mr. M. B. Bhore	Manufacturing Engineering
Dr. P. S. Shinde	Design Engg. & Composite Materials, Biomedical Engineering
Dr. Mrs. S. S. Mundra	PCM, Graphene applications Composite Materials
Mr. H. P. Shinde	Mechanics of Composite Materials, Machine Drawing and Design Engineering
Dr. N. D. Shikalgar	Refrigeration, Air-conditioning, Fluid Power
Dr. P. W. Deshmukh	Heat Transfer, CFD
Dr. A. D. Patange	AI and ML
Mr. S. M. Kadam	IC Engine, Fluid Engg.
Ms. P. P. Suryawanshi	Vibration & Acoustics
Mrs. N. M. Gawai	Design Engineering
Dr Prashant Kumar	Composite Material, Fracture Mechanics
Dr K C Vora	Automobile Technology
Dr Dhananjay Kumar	Electric Mobility

RESEARCH FACILITIES



Danfoss Centre of Excellence



EATON Fluid Power



Kirloskar Center of Excellence



Forbes Marshall Steam Centre



Laser Combustion



Microsystems



CAD/CAM & Design Optimization



Vibration & Acoustics



Heat Transfer



TOM & DOM