

Department of Mechanical Engineering

Sr.No.	Name of Research Centre	Total Seat	No. of Students Presently Registered	Total vacancy	No. of Students Completed PhD
1	Mechanical Engineering Department	15	09	06	09

Sr.No.	Name of Supervisor	Thrust Area
1	Dr.U.V.Kongre	Thermal Engineering, Combustion Modeling and Computational Fluid Dynamics
2	Dr.R.U.Sambhe	Production Engineering
3	Dr.V.R.Gandhewar	Production Engineering
4	Dr.S.V.Bhalerao	Thermal Mapping, Rapid Prototyping, Analysis and Health Monitoring of Hot Section Components of Aero Gas Turbines, Rotating Machineries & IC Engines for their life prediction and enhancement
5	Dr.R.M.Sherekar	CAD/CAM
6	Dr.P.N.Shirao	Thermal Engineering

Research Facilities (Mechanical Engineering Department)

Our department provides state of the art laboratories, software tools, and workshops to support PhD level research, industrial consultancy, and advanced training.

CAD/CAM & CAE Simulation Lab

- CATIA V5, ANSYS Workbench, High-performance workstations
- Research: FEA/CFD modeling, product optimization, multi physics simulation, digital manufacturing

Automation & Robotics Lab

- Research: Mechatronics, industrial automation, robotics, motion control
- Internal Combustion (IC) Engine Lab
- Research: Engine performance, combustion analysis, emission studies, alternative fuels

Heat Transfer & Thermal Engineering Lab

- Research: Thermal analysis, HVAC studies, heat exchanger design, renewable & solar thermal systems

Workshop / Manufacturing Practice Lab

- Capabilities: Machining, welding, sheet-metal work, prototype development, fabrication of test rigs
- Research: Manufacturing processes, tool design, material fabrication, PhD prototype development

Rapid Prototyping (RP) & Additive Manufacturing Lab

- Capabilities: 3D printing (FDM/SLA), reverse engineering, lightweight & lattice structures, design validation
- Research: Additive manufacturing, product innovation, digital reconstruction, rapid tooling

Thermal Mapping, Rapid Prototyping, Analysis & Health Monitoring Lab

- Focus: Aero gas turbines, rotating machinery, IC engine components
- Capabilities: Thermal mapping, IR thermography, hotspot detection, thermal stress analysis, fatigue & life prediction
- Health Monitoring: Vibration, acoustic emission, strain sensing, condition monitoring, failure diagnosis

- **Details of Scholars Awarded PhD**

Sr. No	Name of Scholars	Name of Supervisor	Topic of Research	Caste	Year of Registration	Year of Award of PhD	Registration Number
1	Dr.R.M. Sherekar	Dr.A.N. Pawar	Investigation of RP as a tool for designing and manufacturing of Customized anatomical implants.	OBC	2010	2015	SGBAU/Ph. D/Mechanical Engg./6/2010,w.e.f 15.01.2010
2	Dr.S.S. Gaddamwar	Dr.A.N. Pawar	Analysis of Heat Transfer Characteristics of High Pressure Gas in Heat Exchanger used in Coal Mines	OBC	2014	2019	SGBAU/Ph. D/MECH/7345/2014 w.e.f. 15.07.2014
3	Dr.M.S. Gorde	Dr.A.B. Borade	Performance evaluation of pedal operated tricycle using non circular chain ring	NT (C)	2014	2021	SGBAU/Ph. D/MECH/7348/2014 w.e.f 15/07/2014

4	Dr.Sharad Jagtap	Dr.A.N. Pawar	Performance Evaluation of Mullite Coated Low Heat Rejection Direct Injection Diesel Engine using Biodiesel	SC	2014	2021	SGBAU/Ph. D/MECH/7346/2014 w.e.f. 15.07.2014
5	Dr.Sunil Kewate	Dr.V.R. Gandhewar	Development of a frame work for Quality Enhancement of Maharashtra state road transportation and its generalization	OBC	2020	2025	SGBAU/Ph. D/MechEngg./1935/2022
6	Dr.Monika Satpute	Dr.R.U. Sambhe	Characterization and optimization of filler embedded epoxy resin composite for wear based application	SC	2020	2025	SGBAU/PH D/Mech Engg/2093/2022
7	Dr.S.V. Bhalerao	Dr.A.N. Pawar	Investigation of an integrated approach for evaluation of the fulfilled thermal plots of gas turbine engines.	OBC	2010	2013	SGBAU/Ph. D/Mechanical Engg./2010, w.e.f 15.01.2010
8	Dr.S.C. Jirapure	Dr.A.B. Borade	Investigation of Mechanical Properties and Corrosion Behaviour of Naval Alloy during Spinodal Decomposition.	OBC	2014	2021	
9	Dr. A. M. Wankhade	Dr.D.S. Ingole	Multi Objective Optimization of Part Build Orientation in Rapid Prototyping	Open	2011	2024	

● **Details of Ongoing PhD Scholars**

Sr. No	Name of Scholars	Name of Supervisor	Topic of Research	Caste	Year of Registration	Registration Number
1	Mr. Prasanjeet Bhagat	Dr.S.V. Bhalerao	Experimental Analysis of Heat Transfer Enhancement in Solar Air Heater Using Artificial Obstacles Elements with Varying Geometries and Roughness.	SC	2020	SGBAU/Ph.D/Mech.Engg/2094/2022
2	Mr. Vilas Thakur	Dr.S.V. Bhalerao	Development and Experimental Analysis an Automated Thermal Mapping System for Aerogas Turbine Engines.	VJ	2021	SGBAU/Ph.D/Mech.Engg/1000/2021 w.e.f. 01.09.2019
3	Mr. Prasand A. Hatwalane	Dr.S.V. Bhalerao	Torsional analysis of additively manufactured component	Open	2023	SGBAU/Ph.D/MechEngg./2127/2023
4	Rushikesh B Tale	Dr.U.V. Kongre	Under going Ph.D Course Work	OBC		
5	Satish K Kakade	Dr.R.U. Sambhe	Under going Ph.D Course Work	OBC		
6	Pawan A Mokhadkar	Dr.V.R. Gandhewar	Under going Ph.D Course Work	Open		
7	Rahul S Sakarkr	Dr.V.R. Gandhewar	Under going Ph.D Course Work	OBC		
8	Brijkishor B Sah	Dr.S.V. Bhalerao	RRC approval in process	Open		
9	Tanveer Ahmad Zafar Ahmad	Dr.P.N. Shrirao	Under going Ph.D Course Work	Open		