



## 1. Ph.D. Details:

### 1.a. List of faculties who holds Ph.D. degree,

Sl. No.	Name of the Faculty	Designation	Highest Degree	No of Ph.D Students	Area of Specialization
1	Dr. H.N. Divakar	Professor	Ph.D.	4	Mechanical Engineering
2	Dr. Arvindrao M.Yadwad	Professor	Ph.D.	3	Production, Management /Multidisciplinary
3	Dr. B. Hulugappa	Professor	Ph.D.	-	Production Engineering
4	Dr. Yogesh K K	Professor	Ph.D.	2	Materials and Manufacturing Engineering
5	Dr. Anand A	Assistant Professor	Ph.D.	3	Computational Analysis in Mechanical Sciences
6	Dr. K.R. Prakash	Professor	Ph.D.	6	Mechanical Engineering Science
7	Dr. Imran M Jamadar	Professor	Ph.D.	4	Machine Design
8	Dr. Hemanth R	Associate Professor	Ph.D.	-	Composite Materials, Tool Engineering
9	Dr. Sharath Chandra N	Assistant Professor	Ph.D.	1	Product Design & Manufacturing
10	Dr. Vikram Athreya V	Assistant Professor	Ph.D.	-	Thermal Power Engineering
11	Dr. Prithvi C	Assistant Professor	Ph.D.	-	Machine Design
12	Dr. Prasanta Kumar Samal	Assistant Professor	Ph.D.	-	Mechanical Engineering
13	Dr. Sathisha H M	Assistant Professor	Ph.D.	-	Thermal Engineering
14	Dr. Harshavardhan B	Assistant Professor	Ph.D.	2	Maintenance Engineering, Tribology of composites
15	Dr. T Raghavendra	Assistant Professor	Ph.D.	2	Production Engineering
16	Dr. Latha B M	Assistant Professor	Ph.D.	-	Lean Manufacturing Systems
17	Dr. Suresh Kumar S	Assistant Professor (FTC)	Ph.D.	-	Machine Design
18	Dr. Mahesh M	Assistant Professor (FTC)	Ph.D.	-	Product Design & Manufacturing



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**1.b. List of faculties currently pursuing the Ph.D.,**

Sl. No.	Name of the Faculty	Highest Degree	University	Area of Specialization	Present Designation
1	Mr. Ravikumar Beeranur	M.Tech (Ph.D)	IITB	Manufacturing Engineering	Associate Professor
2	Mr. Dharanish J	M.Tech (Ph.D)	VTU	Maintenance Engineering	Assistant Professor
3	Mr. Madaiah D C	M.Tech (Ph.D)	VTU	Machine Design	Assistant Professor
4	Mr. Santosh Kumar	M.Tech (Ph.D)	KUVEMPU	Composite Materials	Assistant Professor
5	Mrs. Rashmi S N	M.Tech (Ph.D)	VTU	Additive Manufacturing	Assistant Professor
6	Mr. Srikanth N S	M.Tech (Ph.D)	NITK(Surathkal)	Thermal Engineering	Assistant Professor
7	Mrs. Aruna Mokhamatam	M.Tech (Ph.D)	IIT Khar	Manufacturing Process Engineering	Assistant Professor
8	Mr. Ravikiran	M.Tech (Ph.D)	VTU	Maintenance Engineering	Assistant Professor
9	Mr. Vaibhav Deshpande	M.Tech (Ph.D)	VTU	Machine Design, Vibration analysis.	Assistant Professor
10	Mrs. T S Nandini	M.Sc (Engg) (Ph.D)	VTU	Operations Management	Assistant Professor
11	Mr. Deepak P	M.Tech (Ph.D)	VTU	Production Technology	Assistant Professor
12	Mr. Punithkumar Y K	M.Tech (Ph.D)	VTU	Thermal Power Engineering	Assistant Professor

**1.c. List of faculties not registered for Ph.D.,**

Sl. No.	Name of the Faculty	Highest Degree	University	Area of Specialization	Present Designation
1	Mr. S. Shamsundar	M.Sc (Engg)	University of Oldenburg, Germany	Renewable Energy	Associate Professor
2	Mr. Bheemaraj	M.Tech	VTU	Thermal Engineering	Assistant Professor
3	Mr. Sanjaya Kumar V	M.Tech	VTU	Industrial Automation & Robotics	Assistant Professor (FTC)
4	Mr. Sathyanidhi Acharaya	M.Tech	VTU	Robotics and Automation	Assistant Professor (FTC)



## 2. Sponsored Projects

### List of sponsored projects granted,

Sl. No.	Title of the Research Work / Title of the Project	Period of Project	Duration of Project	Year of Sanction	PI	Co-PI (1)	Granting / Funding Agency	Amount Sanctioned Rs.	Status
1	Wind Turbine Predictive Maintenance using Machine Learning Approach	2022-23	10 Months	2023	Dr. Imran M Jamadar	-	TIH-IoT CHANAKYA UG/PG Internship/Fellowship Program 2023	4,80,000	Completed
2	Design and Fabrication of Onion Harvester	2022-23	10 Months	2023	Prasanta Kumar Samal	-	TIH-IoT CHANAKYA UG/PG Internship/Fellowship Program 2023	4,80,000	Completed
3	Numerical and Experimental Studies for the Vibration Control of 3D Printed Complex Shaped Light Weight Robotic Manipulators	2022-23	3 Years	2023	Dr. Imran M Jamadar		State University Research Excellence (SERB SURE)	17,86,400	Ongoing
4	Condition Monitoring and Predictive Maintenance of Gear Box	2022-23	10 Months	2022	Dr. Imran M Jamadar	-	TIH-IoT CHANAKYA UG/PG Internship/Fellowship Program 2022	4,80,000	Completed
5	Development of Condition Monitoring and Predictive Maintenance System for Gear Box	2022-23	6 Months	2022	Dr. Ahkil V M	-	TIH-IoT CHANAKYA UG/PG Internship/Fellowship Program 2022	4,00,000	Completed



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6	Numerical Analysis of Heat and Mass Transfer in Various Grain Drying Process for Food Processing Applications	2022-25	3 years	2022	Dr. Sathisha H M	Dr. Shruthi Pandey (CFTRI)	Science and Engineering Research Board - Teachers Associateship For Research Excellence (SERB-TARE)	18,30,000	Ongoing
7	Enhancing the Performance of Solar Collector using Nanofluids	2022-25	3 years	2022	Dr. Mrinal K R	Dr. Sajith (NIT, Calicut)	Science and Engineering Research Board - Teachers Associateship For Research Excellence (SERB-TARE)	18,30,000	Closed
8	Vibration, Noise and Tribological Investigations on the Prospective use of Different Types of Polymers and its Composites in Gear Transmission Systems	2022-24	2 years	2022	Dr. Imran M Jamadar	Dr. B Suresha	VTU Research Grants Scheme - 2021,	10,00,000	Funds Not released
9	Polyamide Alloyed with Thermoplastic Elastomer Fibrillar Reinforced with Nanofillers Multi-phased Composite for Bearing Application	2019-20	1 year	2019	Dr. Suresha B		UGC	1,05,000	Completed
10	Vitamin-A Encapsulation Studies using Diblock Copolymer Material	2018-21	3 Years	2018	Dr. Siddharth Joshi	-	Science and Engineering Research Board - Teachers Associateship For Research Excellence (SERB-TARE)	18,30,000	Completed
<b>Total</b>								<b>1,02,21,400</b>	



### 3. Patent details

List of patents applied, published and granted in the last two years,

Sl. No.	Name of the Faculty	Title of Project	Assessment Year	Type of Activity	(Granted/ Published)
1	Dr. Imran Jamadar	Wind Turbine blade damage detection testing	2023-2024	Working Model	Granted
2	Dr. Sharath Chandra .N	Portable Electronic Dust Remover by DC Power	2025-2026	Working Model	Published
3	Dr. Prithvi .C	Electrochemical reactor for efficient co2 conversion into fuel for use in hybrid electric vehicles	2025-2026	Working Model	Published
4	Prof. Prasanta Kumar Samal	Gear Box Fault Detection Testing	2024-2025	Working Model	Granted
5	Dr. T. Raghavendra	Double shoulder friction stir	2023-2024	Patent	Published
6	Prof. S. Shamsundar	A System and Method for Recovery and Conversion of Variable Gravitational Potential Energy in Electric Bicycles	2023-2024	Patent	Published
7	Dr. Prithvi .C	IoT-enabled dual-arm robotic system for enhanced precision and real-time monitoring in endoscopic cardiac surgeries	2024-2025	Patent	Published
8	Dr. Prithvi .C	Automated hanging cable rescue with real-time GPS monitoring and alerts for landslide areas	2024-2025	Patent	Published
9	Dr. Prithvi .C	Adaptive resource provisioning in cloud environments using data mining and machine learning	2023-2024	Patent	Published
10	Dr. T. Raghavendra	Twin Pin Double Shoulder Friction Stir Welding Tool	2023-2024	Patent	Granted
11	Dr. T. Raghavendra	Safety Helmet	2023-2024	Patent	Published



12	Dr. K.R. Prakash	A system and method for cooking using a programmable cooking device	2024-2025	Patent	Granted
13	Dr. K.R. Prakash	Identification of Brachial Plexus Nerve Region Using CNN Model for Robot surgery(Copy Right)	2024-2025	Product in Market	Granted
14	Dr. Vikram Athreya V	Machine learning-based optimal cell balancing mechanism for electric vehicle battery management system	2023-2024	Patent	Published
15	Dr. Vikram Athreya V	Air-cooled Thermoelectric Generators for Waste Heat Recovery from Vehicles Exhaust System	2024-2025	Patent	Published
16	Dr. Yogesh K K	IOT Based Digital Power Press Machine	2025-2026	Patent	Granted
17	Dr. Arvindrao M.Yadwad	IOT Based Digital Power Press Machine	2025-2026	Patent	Granted
18	Dr. Yogesh K K	Hlgh Speed Punching Machine	2024-2025	Patent	Granted

#### 4. Publication details of Last three years

Year	Journals (SCI/Scopus/WOS)	Journals (Others)	Conference	Book Chapters (Scopus)	Total
2023	17	-	9	2	28
2024	25	0	8	1	33
2025	33	0	1	3	37



## 5. Memoranda of Understanding (MoUs)

### List of Memoranda of Understanding (MoUs) through the department,

Sl. No.	Organization / Partner	Details of MoU
1	TEC4FUELS GmbH, Germany <b>(15 Mar 2022)</b>	<ul style="list-style-type: none"><li>• Collaboration in alternative fuels and energy technologies research.</li><li>• Facilitate academic exchange and joint research projects.</li><li>• Promote innovation, product development and consultancy activities.</li></ul>
2	OWI Science for Fuels GmbH, Germany <b>(15 Mar 2022)</b>	<ul style="list-style-type: none"><li>• Research collaboration in renewable energy, synthetic fuels and hydrogen systems.</li><li>• Student internships and joint academic projects.</li><li>• Promote innovation in clean energy technologies.</li></ul>
3	Fachhochschule Dortmund, Germany <b>(30 Aug 2024)</b>	<ul style="list-style-type: none"><li>• Student and faculty exchange programs.</li><li>• Joint research collaboration and academic cooperation.</li><li>• Development of joint courses, seminars and internships.</li></ul>
4	Technische Hochschule Ostwestfalen- Lippe (TH OWL), Germany <b>(30 Aug 2024)</b>	<ul style="list-style-type: none"><li>• Academic collaboration in teaching, research and innovation activities.</li><li>• Student and faculty exchange programs between the two institutions.</li><li>• Development of joint research projects, seminars, and academic programs.</li></ul>
5	Bureau of Indian Standards (BIS), Bengaluru <b>(01 Jan 2024)</b>	<ul style="list-style-type: none"><li>• Establishment of Standards Club at NIE.</li><li>• Promote awareness of national standards and quality systems among students.</li><li>• Encourage participation in standards-related activities and projects.</li></ul>
6	NxtLeap Global Advisory Services <b>(03 Mar 2022)</b>	<ul style="list-style-type: none"><li>• Collaboration for innovation, entrepreneurship and startup development.</li><li>• Joint research, consultancy and product development activities.</li><li>• Work in areas such as BioCNG, microgrids, clean fuels and energy systems.</li></ul>



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7	Afleq Automotive Pvt. Ltd., Chennai <b>(14 Feb 2026)</b>	<ul style="list-style-type: none"><li>• Integration and testing of Battery Management System (BMS) in Formula Student EV.</li><li>• Collaboration for vehicle testing, data collection and performance evaluation.</li><li>• Support for student learning and applied EV research.</li></ul>
8	Nitte Meenakshi Institute of Technology, Bengaluru <b>(09 Jun 2023)</b>	<ul style="list-style-type: none"><li>• Academic collaboration and exchange of knowledge.</li><li>• Joint research and technical activities.</li><li>• Promote student development and institutional cooperation.</li></ul>
9	TAS – Ikshvaku Racing <b>(01 Aug 2025)</b>	<ul style="list-style-type: none"><li>• Collaboration with student motorsports team.</li><li>• Support technical development and racing activities.</li><li>• Promote hands-on automotive engineering experience.</li></ul>
10	Government Polytechnic, Chamarajanagar <b>(04 Nov 2024)</b>	<ul style="list-style-type: none"><li>• Joint skill enhancement programs and training.</li><li>• Conduct technical seminars and knowledge sharing sessions.</li><li>• Facilitate internships and collaborative research activities for students.</li></ul>
11	Government CPC Polytechnic, Mysuru <b>(21 Oct 2024)</b>	<ul style="list-style-type: none"><li>• Conduct skill development and training programs.</li><li>• Organize technical seminars and workshops.</li><li>• Facilitate internships and collaborative research activities.</li></ul>
12	Government Polytechnic, K.R. Pet <b>(10 Oct 2024)</b>	<ul style="list-style-type: none"><li>• Joint skill enhancement and training programs.</li><li>• Conduct seminars and knowledge-sharing activities.</li><li>• Promote student internships and R&amp;D collaboration.</li></ul>
13	Government Polytechnic, Mirle <b>(02 Oct 2024)</b>	<ul style="list-style-type: none"><li>• Organize skill development training and workshops.</li><li>• Conduct technical seminars and academic interactions.</li><li>• Support internships and collaborative projects.</li></ul>



## 6. Professional Societies

Following are the professional societies which faculty actively participate,

- Society of Automotive Engineers (SAE India) – Collegiate Club (TEAM SAENIEKS)
- Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) – Student Chapter
- Additive Manufacturing Society of India (AMSI)
- Fluid Power Society of India (FPSI)
- Mechanical Engineering Association (MEA)

## 7. Start-ups & Incubation details

Sl. No.	Name of Organisation	Year of Establishment
1	Caspian	2019
2	Plantex	2019
3	3zero (3D printing)	2020
4	Balaji Automations	2020



## 8. Department Analysis

### Strengths

- **Strong legacy and reputation:** Established in 1958, the department has a long academic legacy, strong alumni network, and recognition as a VTU research centre, contributing to its academic credibility.
- **Robust infrastructure and laboratory ecosystem:** The department hosts 25+ laboratories and advanced facilities, including additive manufacturing, automation & robotics, renewable energy systems, engines, CAD/CAM, and nanotechnology.
- **Multiple Centres of Excellence and specialized facilities**
- **Strong industry collaboration and skill-oriented training:** Programs like CNC training, Siemens Technical Centre training, and automotive technology programs strengthen industry exposure and practical learning.
- **Active research culture:** Sponsored projects, patents, funded student projects, and regular publications demonstrate a growing research ecosystem.
- **Strong student engagement and technical culture:** Student clubs such as motorsports teams, robotics clubs, and national competition participation promote experiential learning and innovation.
- **Good student outcomes:** Consistent placements, higher studies (India and abroad), and competitive salary packages indicate strong employability.

### Weaknesses

- **Entrepreneurship and technology commercialization still limited:** Despite good projects and patents, startups, spin-offs, and technology transfer outcomes are relatively few.
- **Need for continuous modernization of legacy laboratory setups:** Some traditional experimental rigs require digital instrumentation, IoT integration, and simulation-linked experimentation.
- **Faculty workload constraints:** Teaching load and administrative responsibilities may limit the time available for high-impact research and international collaboration.
- **Limited international academic engagement:** Few joint international research projects, dual degree programs, visiting scholars, or faculty exchange programs. International exposure for students and faculty can be significantly improved.