

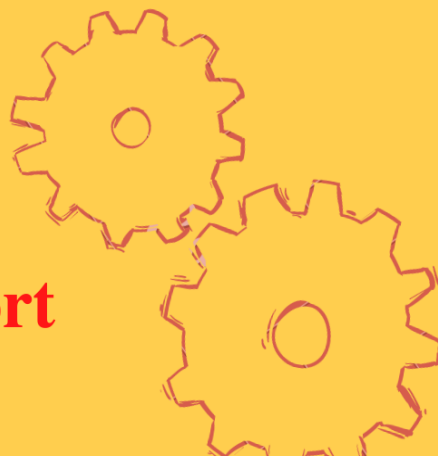


**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

# **School of Mechanical and Construction**

# **Department of Mechanical Engineering**

**Annual Report  
2021-22**



# FOUNDERS

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**Col. Prof. Vel. Dr. R. Rangarajan**

**Founder President**

**B.E.(Elec.), B.E.(Mech.), M.S.(Auto.), D.Sc.**



**Dr. Sagunthala Rangarajan**

**Foundress President**

**M.B.B.S.**

# FOREWORD

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**Col. Prof. Vel. Dr. R. Rangarajan  
Founder President**

**Dr. Sagunthala Rangarajan  
Foundress President**

**The Mechanical Engineering Department at Vel Tech is thriving in every way conceivable. One of the reasons for the Department's continued success is that it has never stayed on its laurels, but instead, it works tirelessly to preserve its leadership along with new trends and technology.**

**Vel Tech's achievements are the result of an uncompromising commitment to excellence, professionalism, creativity, and innovation. We believe that Vel Tech has sincerely dedicated its desire to make a beneficial impact on education and research.**

**We believe that this annual report will cover the foot print of Department's events, accomplishments, and awards. It's worth noting that the Department has organized a number of events such as online conferences and Webinars.**

**We are happy to note that the Department works hard to improve student employability by conducting placement training sessions. We congratulate the students who have graduated this year and we encourage them to make a commitment to serve society and country.**

**We greet the Mechanical Engineering Department who have worked tirelessly to ensure success both in the Department level and in the Institution level.**

# FOREWORD

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**Mrs. R. Mahalakshmi**

**Chairperson & Managing Trustee**

The Annual Report has always been a successful attempt in bringing out the achievement of the department and thus motivates the best of our young technocrats. I congratulate the effort taken by the Department of Mechanical Engineering for the publication of the Annual Report 2021 - 2022.

It is my pleasure to congratulate the students and the faculty members of Mechanical Engineering for the activities being carried out in the Department. The very purpose of this institute is to bring out the potential of each student and provide them proper guidance so that their potentials can be highly made use of building them as Engineers, being capable of meeting any kind of challenge. I feel proud to convey my best wishes to the versatile Faculty crew behind this meritorious effort. The academic achievements of faculty members and students and the innovations occurring in the department take Vel Tech to reach its milestone.

Four years of engineering education at Vel Tech will earn students a degree and transform students' personalities, empowering them to lead a successful life.



# FOREWORD

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**Prof. Dr. S. Salivahanan**

**Vice Chancellor**

The annual report has got its relevance and importance in this technological era. It will create a platform for faculty members and students to share their creativity and innovative ideas. It will be helpful for their overall and individual development. I always believe that one must find the meaning of his life in his daily work. One can give his best only when he realizes that it does not just work, but something more than that which will improve many lives.

I am pleased to introduce this Annual report of the Department of Mechanical Engineering. This Annual Report 2021 - 2022 provides a panoramic view of the department's academic, research, co-curricular activities and achievements during an academic year. Our vision is to impart technical education and training of exemplary academic standards to our students. The Mechanical Engineering department has a rich tradition of pursuing academic excellence and providing a congenial environment for the overall personality development of students. I feel confident that the department is progressing in the right direction. I congratulate the faculty and staff for their hard work and wholehearted efforts to make the department the choicest destination for aspiring Mechanical engineers.

# FOREWORD

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**Prof. Dr. S. Irudayaraj**

**Dean School of Mechanical and Construction**

**I am elated to release the Annual Report 2021-2022 of the Department of Mechanical Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology.**

**The Mechanical Engineering department holds the manifold distinction of being amongst the best when considering the current technical education status. It is great to find many winners and participants in co-curricular and extracurricular activities, which certainly prove that our faculty members and students are adequately equipped and possess the necessary skill-sets to bring such laurels to the department. I wish that this number may grow in the years to come.**

**It is my pleasure in congratulating the editorial board on this pleasant occasion of releasing the annual report. I am sure that publishing an Annual Report of this sort containing the achievements of the faculty members and wards will recognize them, and I wish them all the very best for future endeavours.**

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# Vision, Mission & PEOs

## Department of Mechanical Engineering



### Vision

To be a Centre of Excellence for education and research in the field of Mechanical Engineering to meet the national as well as global challenges.

### Mission

- M1:** To educate and enrich effective and responsible engineers for national as well as global requirements by providing quality education.
- M2:** To maintain vital State-of-the-Art Research facilities to provide its students and faculty with opportunities to create, interpret, apply and disseminate knowledge.
- M3:** To develop linkages with world-class organizations and educational institutions in India and abroad for excellence in teaching, industry and research.
- M4:** To cultivate and promote entrepreneurship using the industry and R&D facilities of the institution.

### Program Educational Objectives (PEOs)

- PEO1:** Apply modern analytical, computational, simulation tools and techniques on engineering materials, thermal sciences, applied mechanics and manufacturing methods to address the global challenges faced in mechanical and allied engineering streams.
- PEO2:** Adapt new and recent techniques of engineering science and their applications to conceive, organize and develop the design of engineering systems.
- PEO3:** Work as an individual and in teams on multidisciplinary assignments in industries, research organizations and academic institutions both in national and global level through collaboration.
- PEO4:** Demonstrate techno-commercial skills such as research interest and entrepreneurial ability in students to cater the societal problems.



# Program Outcomes & Program Specific Outcomes

## Program Outcomes (POs)

- PO1:** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
- PO2:** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3:** Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5:** 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.
- PO6:** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7:** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9:** Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10:** 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.
- PO11:** Project management and finance: Demonstrate knowledge and understanding of the 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.
- PO12:** 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.

## Program Specific Outcomes (POs)

- PSO1:** Apply their knowledge in the domains of design, manufacturing and thermal sciences to solve engineering problems using advanced technology.
- PSO2:** Engage professionally in industries or as entrepreneurs by applying innovative ideas in design and manufacturing using modern CAD/CAE/CAM tools.



# 1. Department Profile

The Department started in the year 2001, nurtures graduates who can meet the rapidly changing needs of the mechanical core industry which requires skilled Mechanical Engineers. This Program facilitates the students to be readily employable in Industries or to pursue their higher studies in elite Universities in India and abroad.

<b>B.Tech.,</b>	<b>Mechanical Engineering</b>
<b>Specialization</b>	<b>Mechanical Engineering (AI &amp; Robotics) Mechanical Engineering (Mechatronics)</b>
<b>Honors</b>	<b>Digital Manufacturing Computational Thermo fluids</b>
<b>Minor Specialization</b>	<b>Smart Manufacturing Energy Engineering</b>
<b>M.Tech.,</b>	<b>Metallurgical and Material science Industrial and Safety Engineering</b>
<b>Ph.D.,</b>	<b>Mechanical Engineering (Full &amp; Part time)</b>

## Recognitions & Accreditation



# B.Tech. Mechanical Specialization

## B.Tech. Mechanical Engineering Specialization in Artificial Intelligence & Robotics



### Preamble

Artificial Intelligence (AI) and Robotics cater to the needs of the manufacturing industry by providing industrial solutions for making production decisions smarter and instant. AI-enabled robots are growing beyond being the workhorses of manufacturing industries. Mechanical engineering coupled with AI technology contributes to the design of human-machine coordination, resulting in robotics, automation, and sensor technology. This specialization aims to equip the graduates with knowledge in AI and robotics, molding them for promising careers.



### Outcome

- ✓ Integrate the concepts of AI with core values of Mechanical Engineering
- ✓ Apply AI tools for manufacturing needs
- ✓ Gain expertise in intelligent computing using AI
- ✓ Design and development of robotic arm using the integration of linkages with AI

# B.Tech. Mechanical Specialization



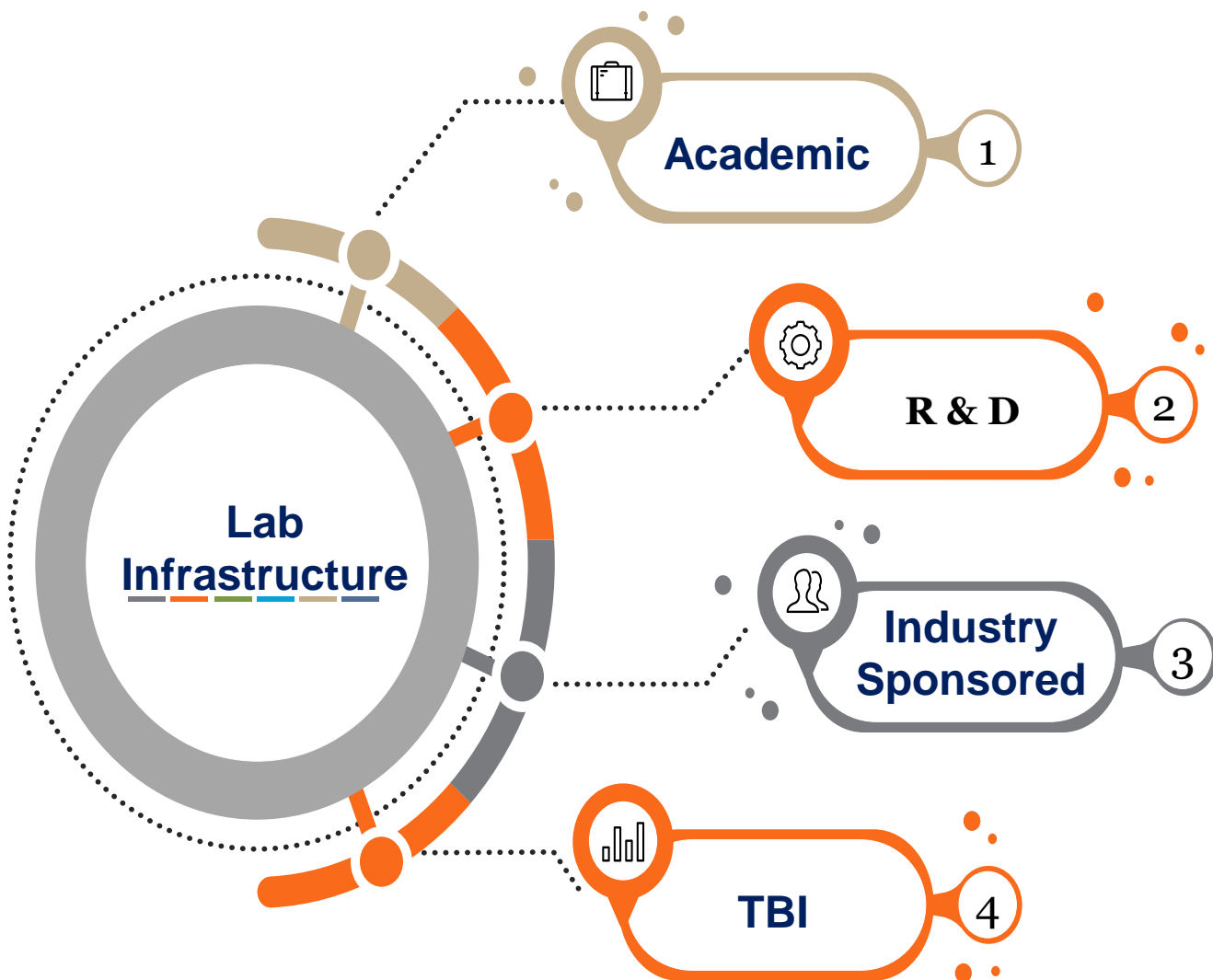
## Career Opportunity

As AI and Robotics technologies develop, they are going to create a demand for new skills. The graduates will develop a portfolio during their course of study, giving them suitable experience to expose their practical skills required by the industry. The transferrable skills such as problem identification, analysis, modeling, solution developing and evaluation gained during the study will prepare the students to buildup their careers in various industries such as TATA, BHEL, BARC, DiFACTO Robotics and Automation, NASA, Tech Mahindra Ltd, Kuka Robotics, ISRO, etc., with a package ranging from Rs.10 lakh to Rs.20 lakh per annum.



## 2. Laboratory Infrastructure

Laboratory work is vital for improving and developing products and processes, validating designs and for gaining fundamental understanding of how materials, parts, components or systems will behave under a variety of conditions. As such it is essential that mechanical engineering students be able to work productively in this setting.







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R&D Institute of Science and Technology  
(Deemed to be University Estd. n/s 3 of UGC Act, 1956)

## Manufacturing Center of Excellence



*Honourable Vice President of India, Shri. M. Venkaiah Naidu and Guest of Honour, Honourable Governor of Tamil Nadu, Shri Banwarilal Purohit launched the "Centre of Excellence for Manufacturing" in Vel Tech on 13.03.2019*

**Manufacturing Centre of Excellence offers various specialized courses & Hands on Training in different machinery**





Mechanical engineering is one of the broadest and oldest branches of engineering. Mechanical engineers are involved with any system that has a moving part. Their job opportunities are wide open in many areas and in numerous industries irrespective of location.

Manufacturing CoE is the center of attraction at Vel Tech University which promotes the mechanical students to pursue their careers with good expectations and with good skilled knowledge in different machinery. Vel Tech provides innovative, effective, and integrated training opportunities for people who need new skills to enjoy the dignity of employment, independence, and self-reliance in the field of mechanicals. To continuously hone the skills of the industrial workforce for higher productivity bridging the gap between academics and industries for suitable placement for the young generation in technical fields.

## BENEFITS OF MECHANICAL ENGG. @ Vel Tech

By using the facilities available in Vel Tech many skill development programs are being conducted to develop and strengthen the confidence of the Mechanical students who want to pursue their careers as successful mechanical engineers. This institute has well-trained and highly motivated training faculty who have been certified by ASDC training institute to provide training in various machinery to students. The emphasis of training is to develop clear concepts and upgrade skills.

Till date, 200+ Mechanical students got trained in these machines to upgrade their level from graduate to industry person.



## FACILITIES @ Vel Tech

The Vel Tech Mechanical workshop is well equipped as per industry standards, with a wide range of High fabrication facilities and CNC Precision machining facilities. This institute has well-trained and highly motivated training faculty who have been certified by ASDC training institute to provide training comparable to any international standards in Vocational training. The emphasis of training is to develop clear concepts and upgrade skills.



**CNC HORIZONTAL  
MACHINING CENTRE**



**CNC VERTICAL MACHINING  
CENTRE**



**CNC HORIZONTAL TURNING  
CENTRE**



**CNC HIGH SPEED MOVING  
COLUMN VMC**





**CNC 5 AXIS VMC**



**CNC WIRE CUT EDM**



**CNC PLASMA PROFILE CUTTING MACHINE**



**NC TUBE BENDING MACHINE**



**NC SHEARING MACHINE**



**NC PLATE ROLLING MACHINE**



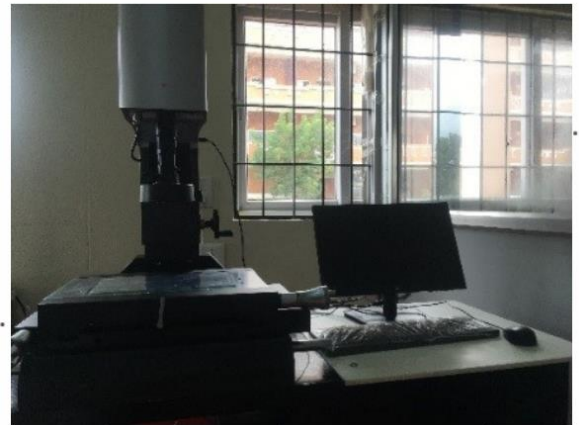
**MIG-MAG WELDING ROBOT MACHINE**



**GAS TUNGSTEN ARC WELDING**



**CNC CMM**



**VISION MEASURING MACHINE**



# Academic Laboratories

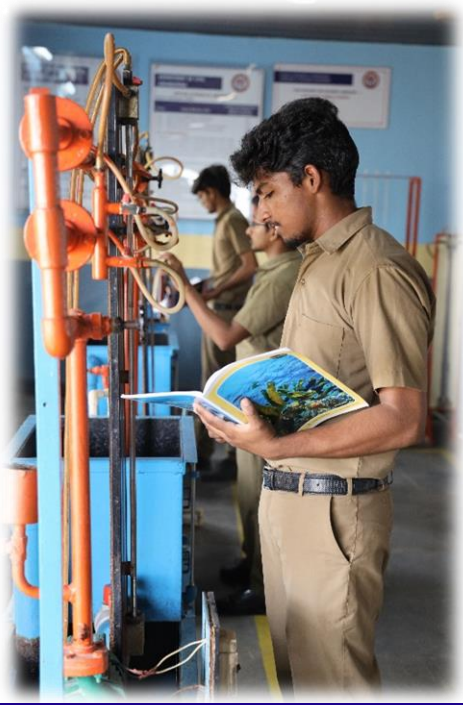
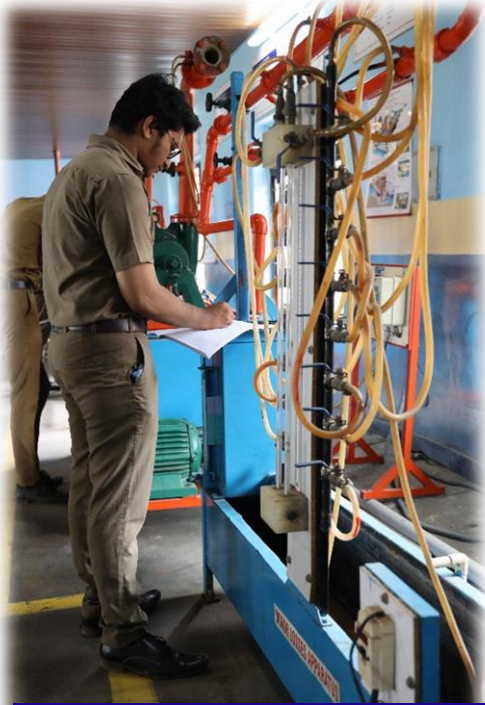


Manufacturing Technology Laboratory





# Academic Laboratories



Fluid Mechanics Laboratory



Strength of Materials Laboratory





# Academic Laboratories



Thermal Engineering Laboratory

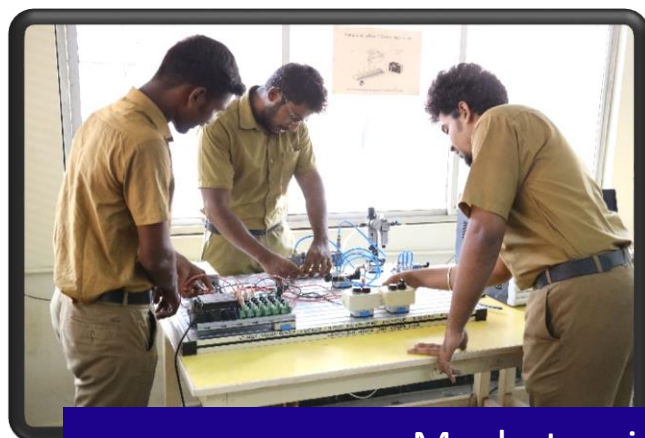




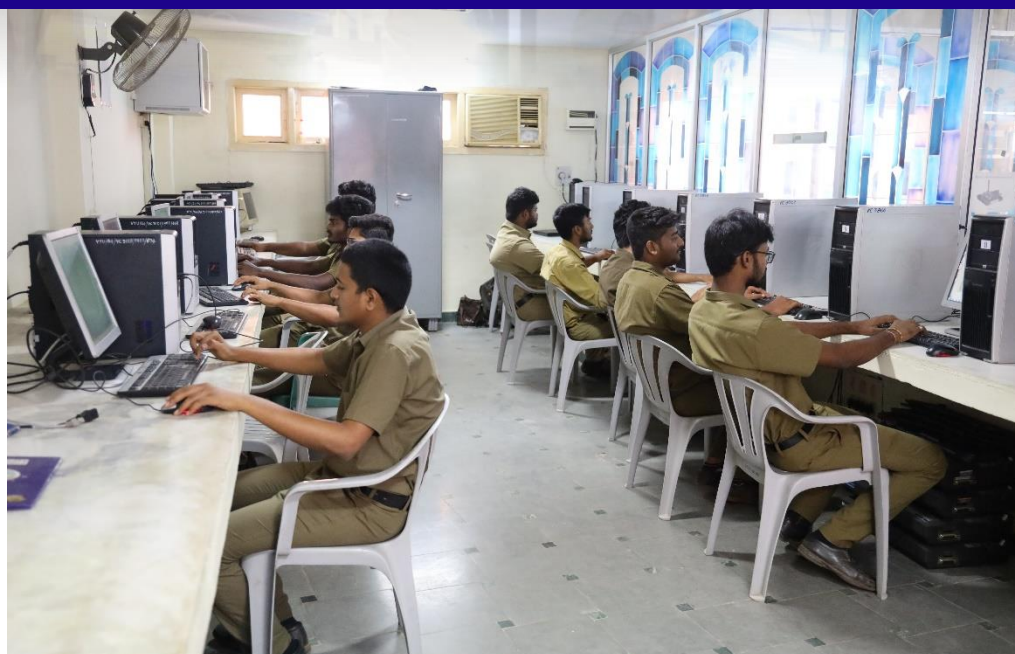
# Academic Laboratories



Metrology and Measurement Laboratory



Mechatronics Laboratory





# Academic Laboratories



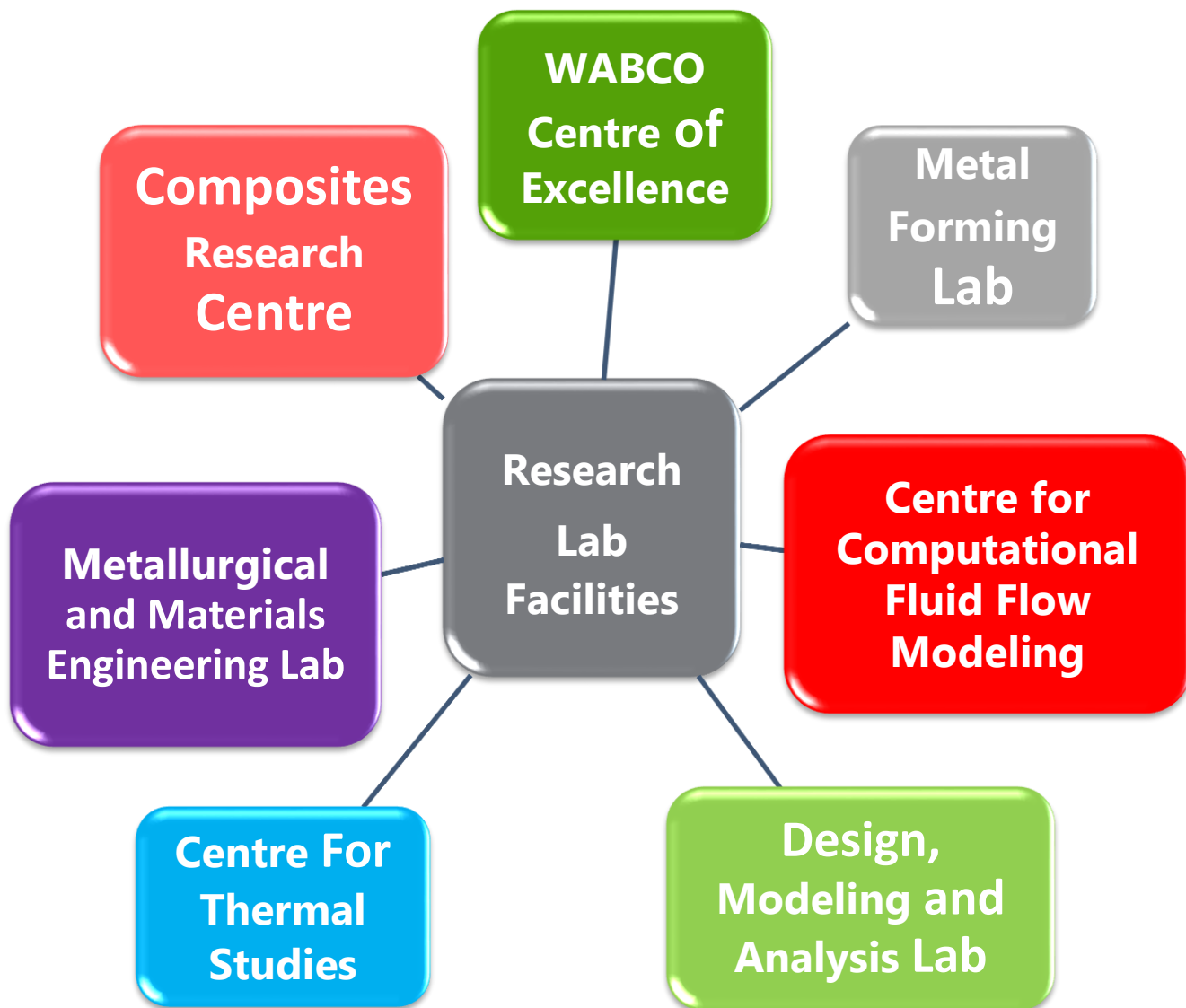
Computer Aided Design & Computer Aided Manufacturing Laboratory



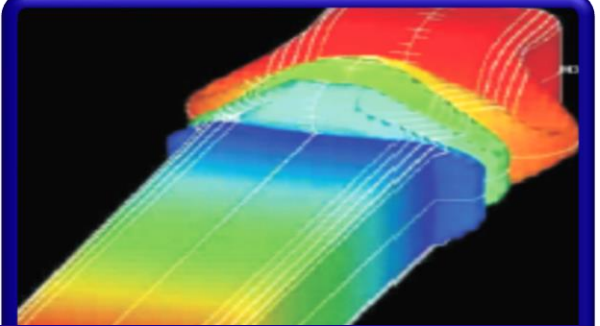


# Research Laboratories

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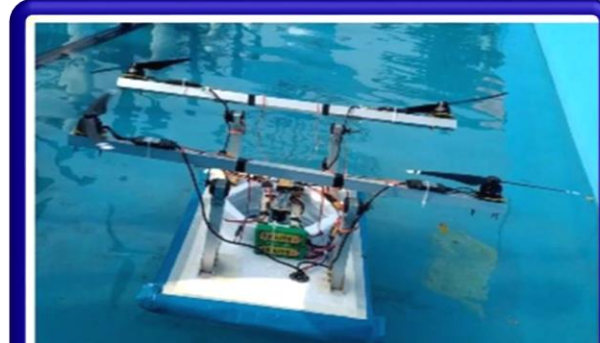
# Research Laboratories



Design, Modelling and Analysis Lab Centre For Thermal Studies



Metal forming Laboratory & Composite research centre



Centre for Autonomous Systems Research & Metallurgical and Materials Engineering Lab

### 3. Teaching Learning process

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Teaching-learning process has been equipped with the facility called **Learning by facilitation** which happens in a place wherein students will learn actively with peers. The department has taken pedagogical initiatives for improving instruction methods as follows:

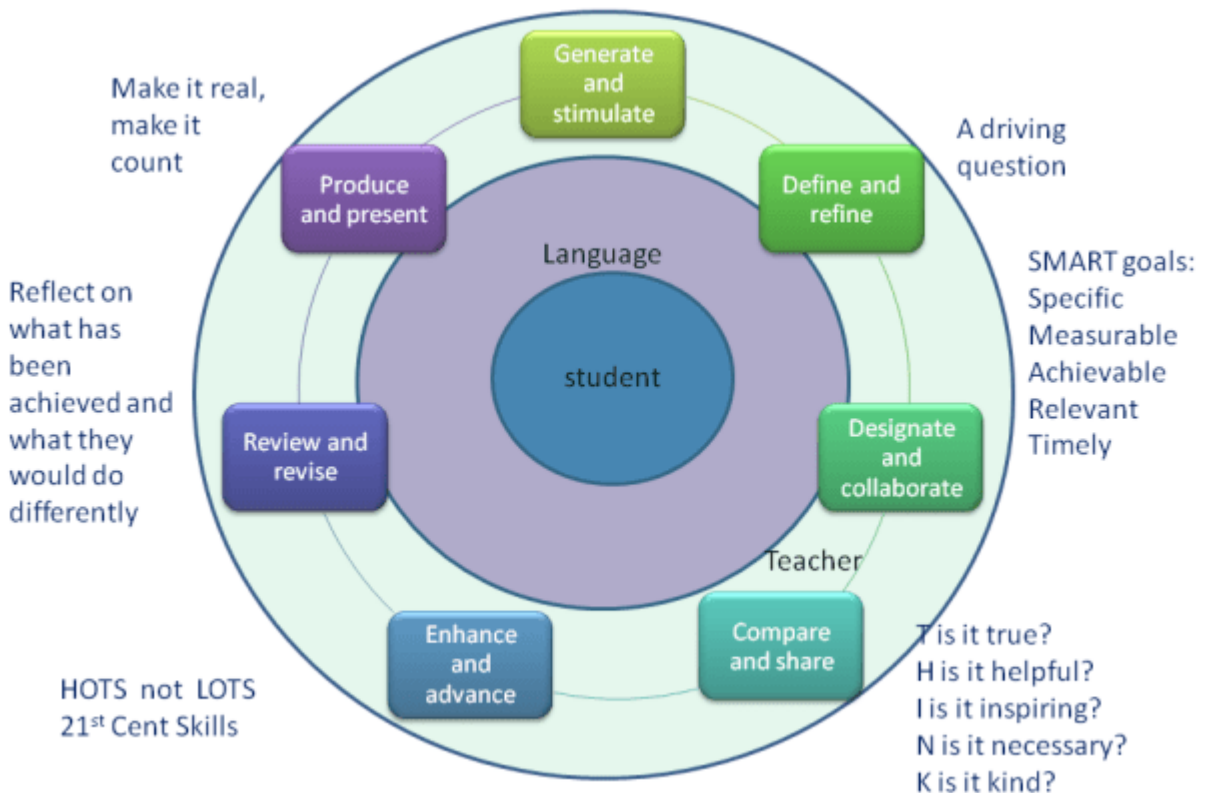
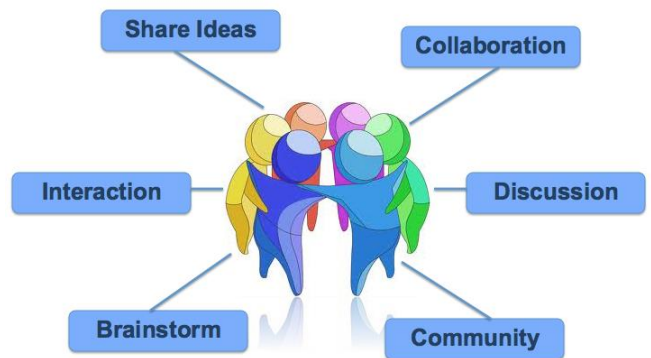
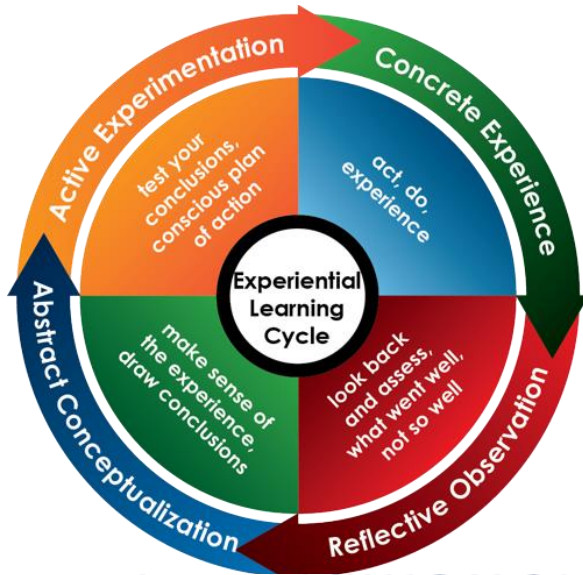
The faculty members have been facilitating students toward **collaborative and experiential learning** through

- Active Learning Environments like Think-Pair-Share, Peer Instruction, Concept Test, and flipped classroom
- Problem-based learning
- Project-based learning
- e-Learning



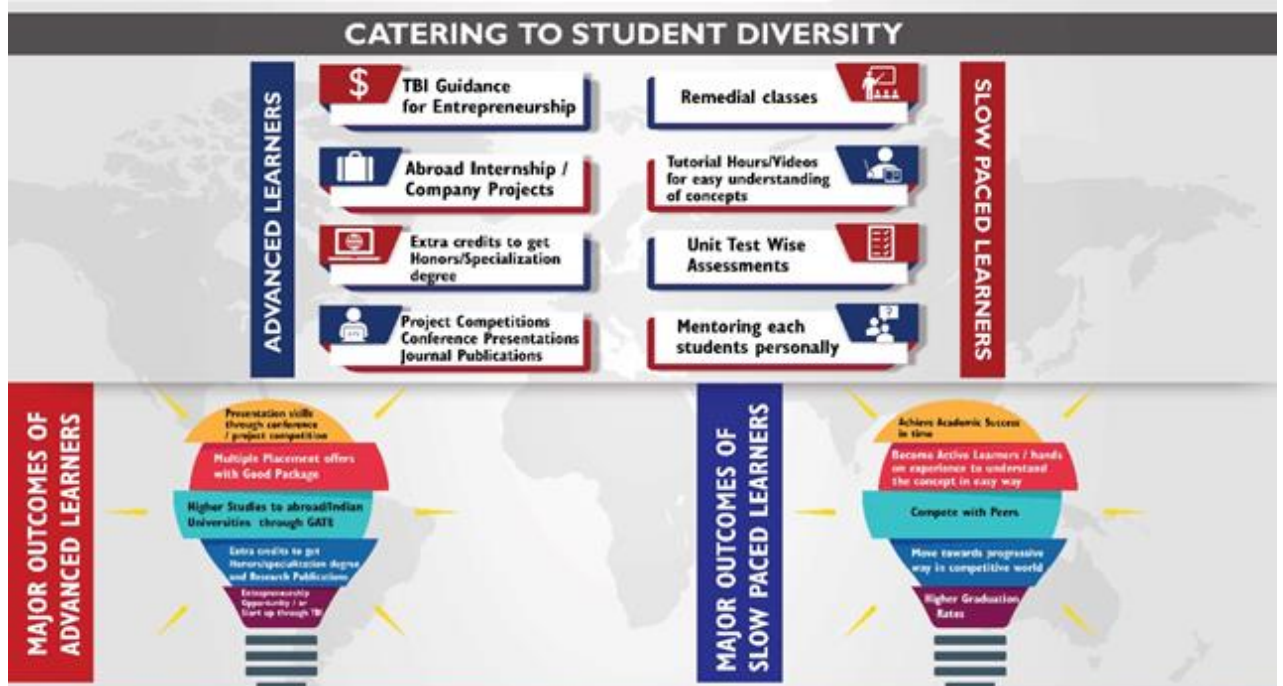
# Teaching Learning process

Our goal is to provide students with not only a degree but also the opportunity to tackle some of the world's most critical challenges. We adopt the following student centric approach to nurture them as a multifaceted graduate.





# Teaching Learning process



## Encouraging Fast learners & Assisting Slow learners

# Teaching Learning process

## Student centric methods practiced



Kinematics of Inversion - Model-based learning



Simulation-based learning



ICT facility enabled halls



ICT based Learning

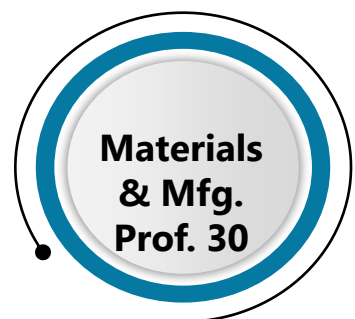
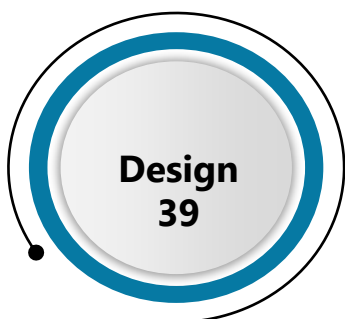
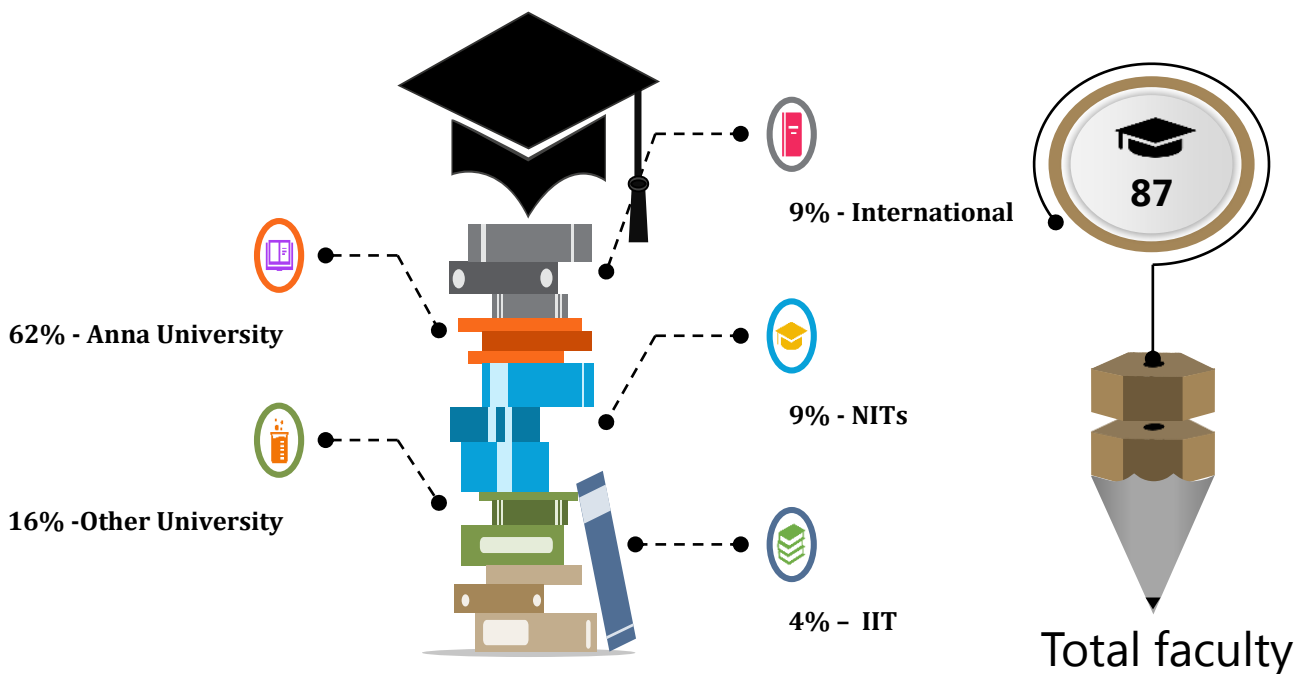


Project based Learning

# 4. Faculty Profile

The department has got a team of highly qualified faculty members with doctoral and post-doctoral degrees from the leading institutes across the globe, to train the students as efficient engineers.

Faculty completed Ph.D. from reputed National and International Institutions



# Faculty Contribution

Faculty members published their research articles in various reputed journal indexed by Scopus / SCI with good impact factor. In the Academic year 2020-2021 around 130 papers were published.





# Project proposals submitted

Name of the Faculty	Details (Title, Funding agency and amount)
Dr.ANAND. P	Experimental investigations and Finite Element Analysis of Basalt / Kevlar cross weaved twin fiber reinforced Hybrid Polymer Ballistic Helmet, DST SERB and Rs.18,00,000/-
Dr.ANAND. P	Design and Development of Bio-degradable Prosthetic Limbs Using Additive Manufacturing for Moment Disability People, TNSCST, Rs.5,00,000/-
Dr.M.MEIKANDAN	Multi-objective Optimization and Experimental Investigation of 3D Printed Polymer/ Two-Dimensional Transition Metal Carbides and Nitrides (MXenes) /Strychnos Potatorum Porous Membrane for Enhanced Water Purification, DST SERB-TARE - 2022
	Investigation on degradation and seed germination of nanocomposite based compostable plastics incorporated with mixed vegetable seeds. TNSCST and Rs.5,12,000/-
	Design and Implementation of Advanced Fuel Indicator with Fuel Theft System, TNSCST, and Rs 10,000/-
DR.S.MOHAMED IQBAL	Performance analysis of organic and bio-based phase change materials on building cooling applications
Dr. BALAJI. K	Development of Sustainable Manufacturing Framework for Industrial Solid Waste Products,SERB-TARE,RS.1800000/-
Dr.G.DHARMALINGAM	Ultrasonic additive manufacturing of Al-Ni dissimilar metals joints for various thermal and electrical contact applications, SERB-TARE-2022, Rs.15,00,000/-
Dr. RATHINASURIYAN. C	An Experimental and ANN framework for Submerged Friction Stir Welding of Aluminium Alloy under Nanofluidic Environment in Heat Exchanger Applications, SERB-TARE-2022
Dr.M.VENKATASUDHAKAR	Optimization of Machining Parameters to Counter Delamination of Fibre Reinforced Composites and Investigation Using New Approach, SRB-TARE-2022
Dr. YUVARAJ. N	A smart machining approach to investigate and control the defects of abrasive water jet milling in pocket corners for small scale manufacturing industries, TANSCST and Rs.4,43,400/-
DR.SUNDARRAJ. M	Nitro cracking of waste plastics into liquefied fuel by utilisation of single screw conveying machine for enhancing pyrolytic oil yield (science and technology project scheme submitted to TNSCST, Rs.5lakhs)
Dr.HARISIVASRI PHANINDRA. K	Experimental studies for inventing novel food/pharma grade anti-static additives for increasing the electrical conductivity of nonconductive liquids – A study for improving the workplace safety – SERB – Rs. 19,64,625/-
Dr.HARISIVASRI PHANINDRA. K	Experimental studies on oxygen deficiency environments due to accidental spillage or release of gases - ISRO <sup>24</sup> Rs. 8,65,680/-

# Project proposals submitted

Name of the Faculty	Title, Funding Agency and Amount
Dr. S. Christopher	Optimization of solar photovoltaic based water pumping performance with dc motor, serb - tare, dst
Dr. S. Christopher	"Renewable Energy with Small Hydro Actions for the Promotion of Efficient Solutions "RESHAPES", International Cooperation Division, India Italy Call for Network of Excellence, DST, 207,03452 /-- 3 years
Dr. Prabhukumar S	Additive Manufacturing of Si Based Materials for Energy Applications, Ministry of Mines, Rs. 8850864/-
Dr Rupesh P L	Department of Science & Technology WTI Call 2021 on Desalination Technologies
Dr.Dharmalingam G	Additive Manufacturing of Si Based Materials for Energy Applications, Ministry of Mines, Rs. 8850864/-
Dr. Meikandan M	Submitted 2 students project to Tamil Nadu State Council for Science and Technology
Dr.Sumathy Muniamuthu	A potential long term solution for organic and plastic waste handling – 3D printing, SERB - POWER Scheme, Budget - 28,11,360/- / Ref : SPG/2021/004081 on 14.10.2021
Dr M Arulprakasajothi	Department of Science & Technology WTI Call 2021 on Desalination Technologies
Dr. E. Pavithra	Application of heat treatment salt wastes as abrasives in water jet machining process, Power Grant , DST SERB, Rs.22,59,224/-
Dr.Harisivasri Phanindra K	"Inputs for the safety monitoring system using AI-ML – A comprehensive review of Unsafe Acts and Unsafe Conditions/Situations". Funding Agency: Varaanga Engineers Pvt. Ltd, Hyderabad, 1 month, Rs. 26,660/-

# Funded Projects

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Rs.18,30,000/-

**SERB-TARE**

**Dr. Praveen A.S**

**Additive manufacturing of osteogenic and infection resistant bone tissue engineering scaffolds**

Rs.18,30,000/-

**SERB-TARE**

**Dr. Christopher.S**

**Optimization of Solar Photovoltaic Based Water Pumping Performance with DC Motor**

Rs.18,30,000/-

**SERB-TARE**

**Dr. Rajamani**

**High strain rate characterization of additive manufactured materials for ballistic loading applications**

Rs.18,30,000/-

**SERB-TARE**

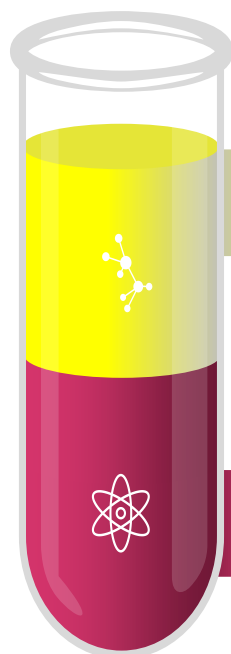
**Dr. Arul Prakash Jothi.M**

**Desalination Technologies**

# Patent Filed/Published/Awarded

Dr.J.M.Babu	Granted 380952 Application No: 2688/CHE/2014	Introduction of hydrogen oxygen mixture at different injection pressures of diesel engines
Dr. K Raja	published	Exhaust Gas Heat Utiliser
Mr.Gandhi Mallela	Filled (Australia patent) Application No:2021103644	Design and Fabrication of Elliptical Tricycle using Tilting Mechanism

## Patent filed/ Awarded



App. No: 2688/CHE/2014

Introduction of hydrogen oxygen mixture at different Injection pressures of diesel engines

Status: Granted

App. No: 2021103644

Design and Fabrication of Elliptical Tricycle using Tilting Mechanism

Status: Filed



# Consultancy work by Faculty

**Rs 15000/-**

**EHS Compliance for  
RUI Pharma, S4  
Scientifics**

**Rs 75000/-**

**Safety Studies at  
ISRO-IPRC-  
Pradesh,**

**Rs. 15000/-**

**Safety Audit for  
BPCL (LPG Plant),  
Kurnool**

**Rs 45000/-**

**Fire Safety Audit  
for Hetero drugs,  
Hyderabad**

**Dr. Harisivasri Phanindra K**

**Rs 20000/-**

**Safety Audit for  
Biocon Limited.**

**Rs 53100/-**

**Fire Safety Audit  
for Hetero drugs,  
Visag.**

**Rs 53100/-**

**Safety Audit for  
Hetero drugs,  
Hyderabad.**

**Rs 53100/-**

**Fire Safety Audit  
for Hetero drugs,  
Hyderabad**

**Rs 41300/-**

**Safety Audit for  
Bhavya Cements  
Private Limited**

**Rs 35400/-**

**Safety Audit for  
Hetero drugs,  
Hyderabad.**

# Faculty as Journal Reviewer

## Dr. CHRISTOPHER S

- Journal of Applied Fluid Mechanics

## Dr. LENIN N

- Journal of Industrial Textiles
- Computers & Industrial Engineering
- Journal of Alloys and Compounds

## Dr. ANAND P

- Journal of Polymer Research, Journal of Natural Fibers, Journal of Industrial Textiles, International Journal of Ambient Energy, Materials and Design

## Dr. PRABHUKUMAR S

- Transactions of Indian Institute of Metals
- Materials Today Proceedings

## Dr. UDAYA PRAKASH J

- International Journal of Ambient Energy
- Materials Today: Proceedings
- Advances in Materials and Processing Technologies
- SN Applied Sciences
- Particulate Science and Technology

- Journal of Materials: Design and Applications (SAGE)
- Lubricants (MDPI) (SCI, IF - 3.584)
- Metal (MDPI) (SCI, IF - 2.695)
- Frontiers in Materials (SCI, IF - 3.985) Dr. Sachin Salunkhe
- International journal for simulation and multidisciplinary design optimization, EDP Science

## Dr. Kanak Kalita

Journal Reviewer: 77

### Journal Editor

- SAE International Journal of Materials and Manufacturing
- International Journal of Energy Optimization and Engineering
- AIP Conference Proceedings,
- Data-Driven Optimization of Manufacturing Processes, 2020, IGI-Global, USA.
- Advances in Electronics, Communication and Computing,
- IOP Conference Series: Materials Science and Engineering,

# Faculty as Journal Reviewer

## Dr. YUVARAJ N

- Materials Research Express
- ASTM International Journal of Testing and Evaluation
- Arabian Journal for Science and Engineering
- Journal of Brazilian Society of Mechanical Engineering
- Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture

## Dr. BALAJI K

- Advances in Mechanical Engineering
- Total Quality Management and Business Excellence

## Dr. MOHAMED IQBAL S

- Journal of Ambient Energy

## Dr. RAJAMANI D

- Journal of Mechanical Science and Technology
- Journal of Brazilian Society for Mechanical Sciences and Engineering
- Rapid Prototyping Journal
- Journal of Precision Engineering and Manufacturing - Green Technology
- Journal of Industrial Textiles
- Journal of Thermoplastic Composite Materials
- Polymers and Polymer Composites
- Part G: Journal of Aerospace Engineering
- SN Applied Sciences

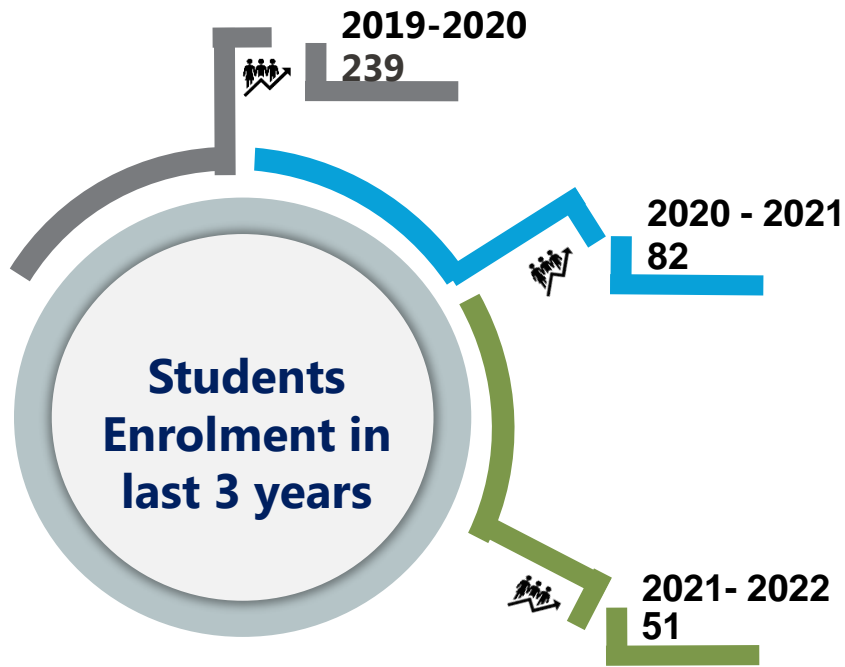
## Dr. DHARMALINGAM. G

- Materials Research Express
- Australian Journal of Mechanical Engineering

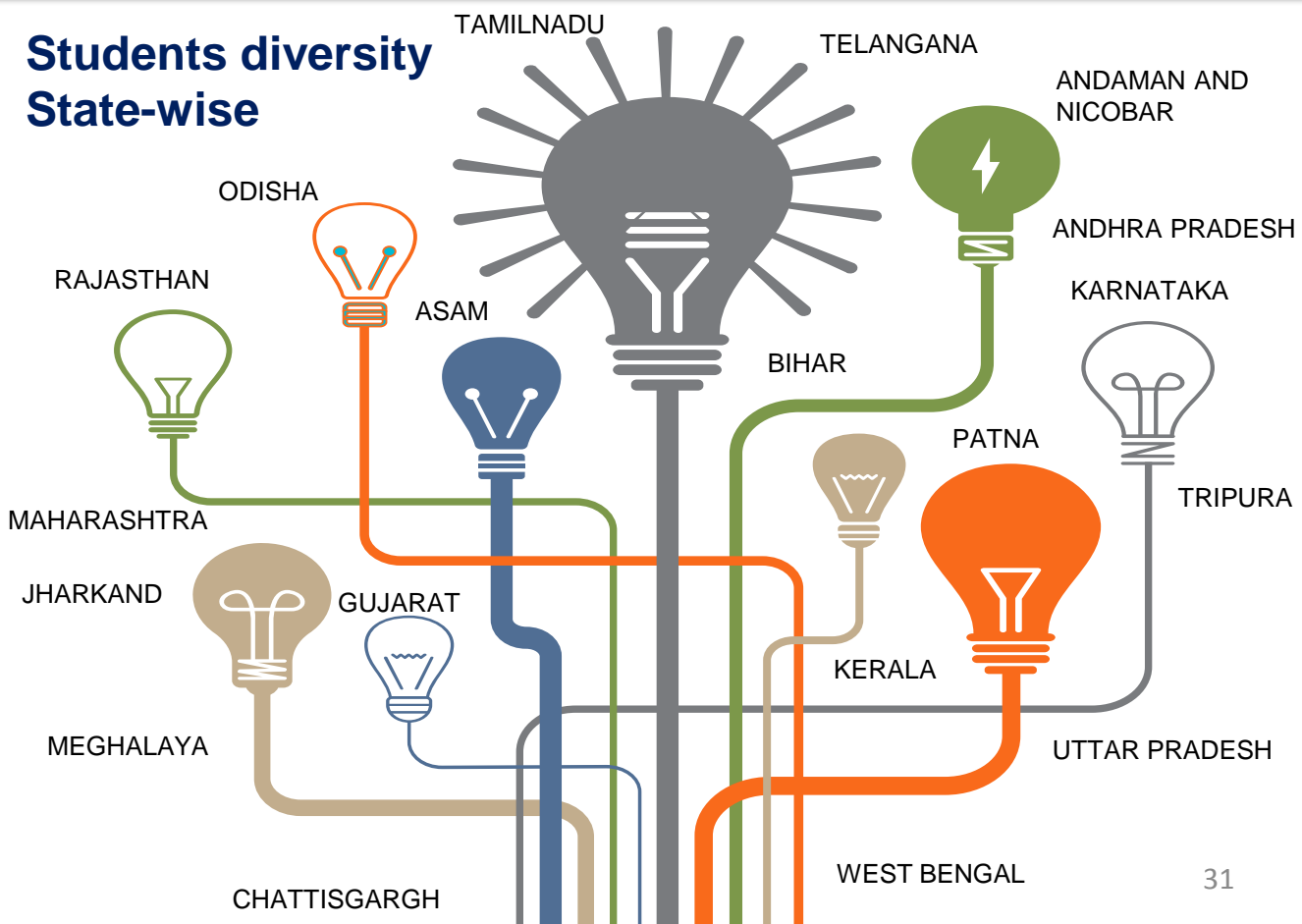


# 5. Students Profile

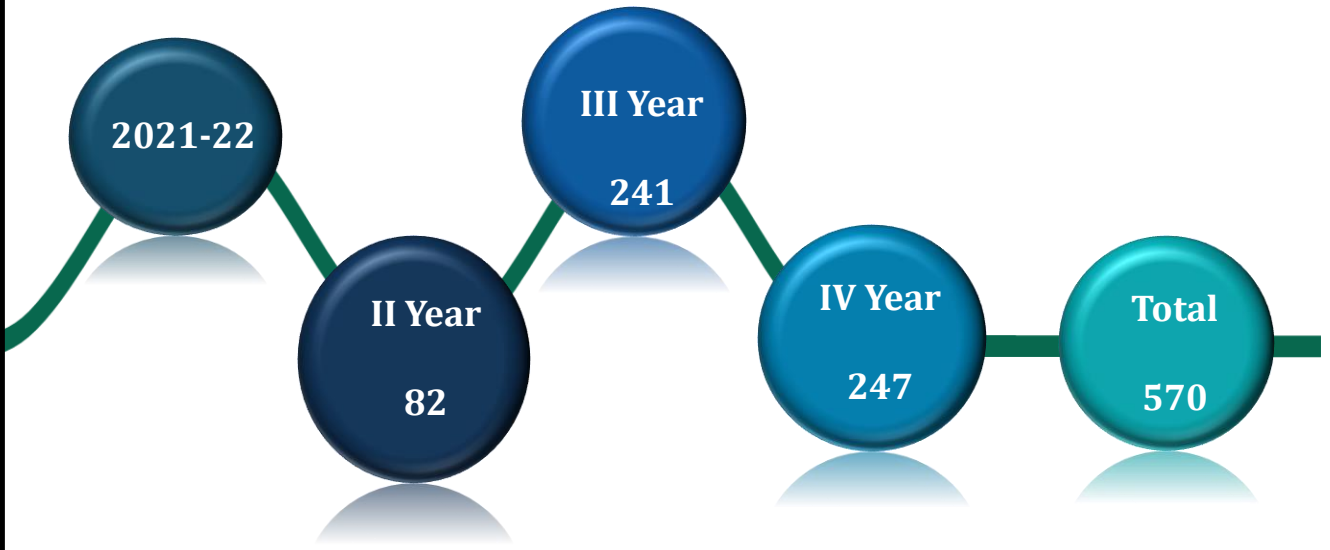
The Department of Mechanical Engineering having 372 students of all years in total from 19 different states.



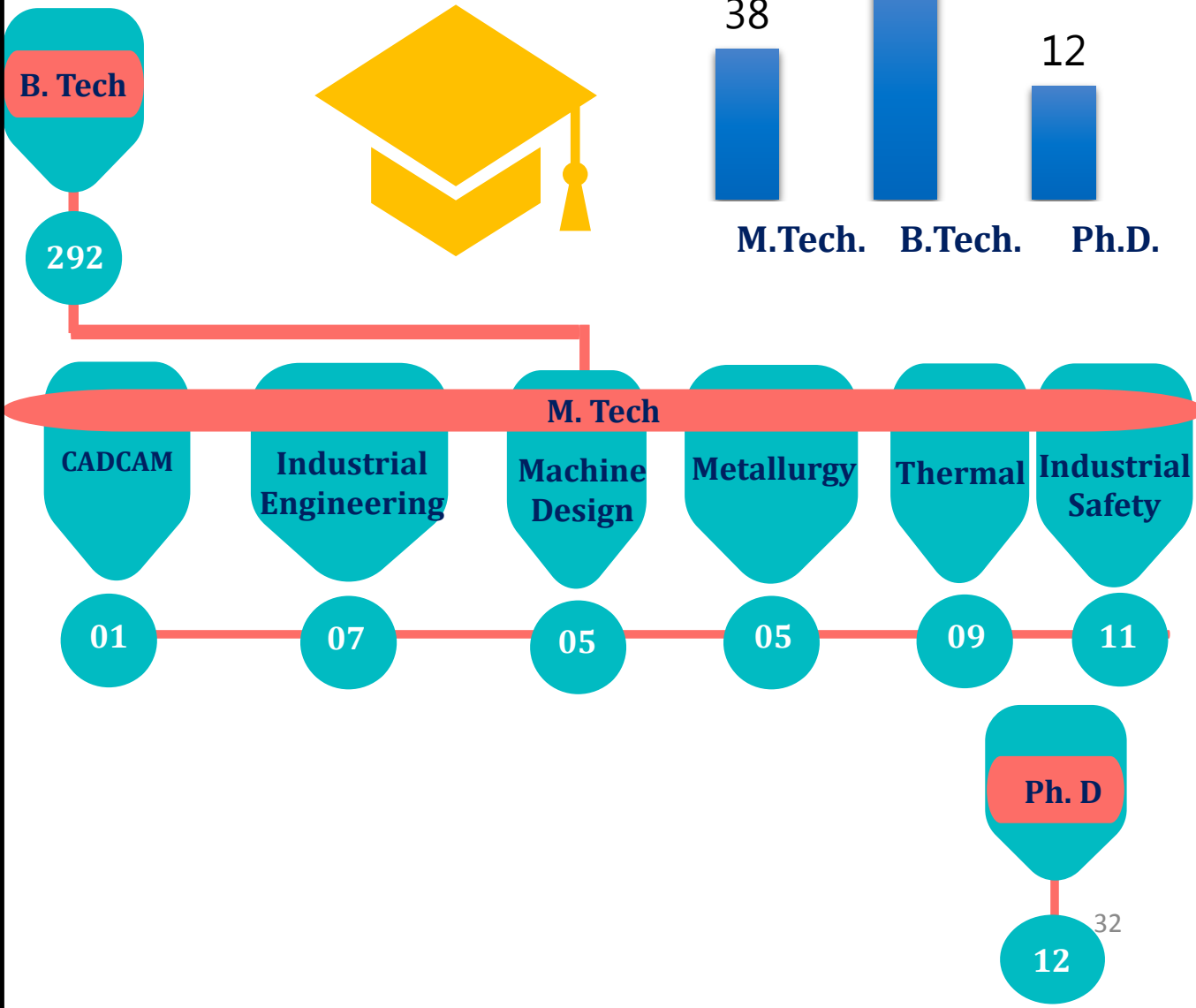
## Students diversity State-wise



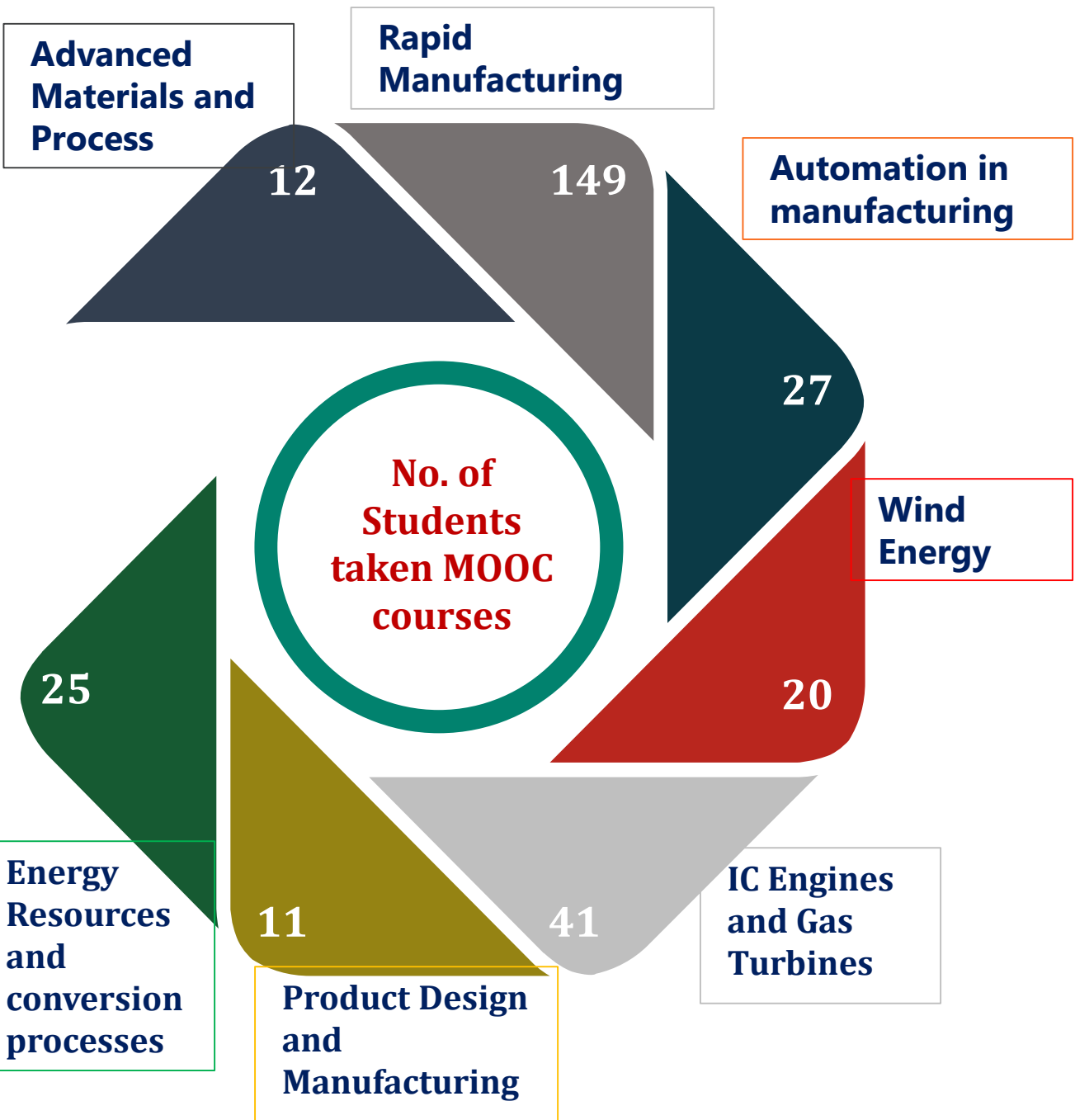
# Student Admission & Graduation Details



## Graduation Details



# MOOC courses taken by Students



Summer f 2021-2022	Design of Mechatronic Systems	NPTEL	05
Summer 2021-2022	Heat Exchangers-Fundamentals and Design Analysis	NPTEL	04
Summer 2021-2022	Texture in Materials	NPTEL	02
Winter 2021-2022	Introduction to Mechanical Micro Machining	NPTEL	01
Winter 2021-2022	Carbon Materials and Manufacturing	NPTEL	02

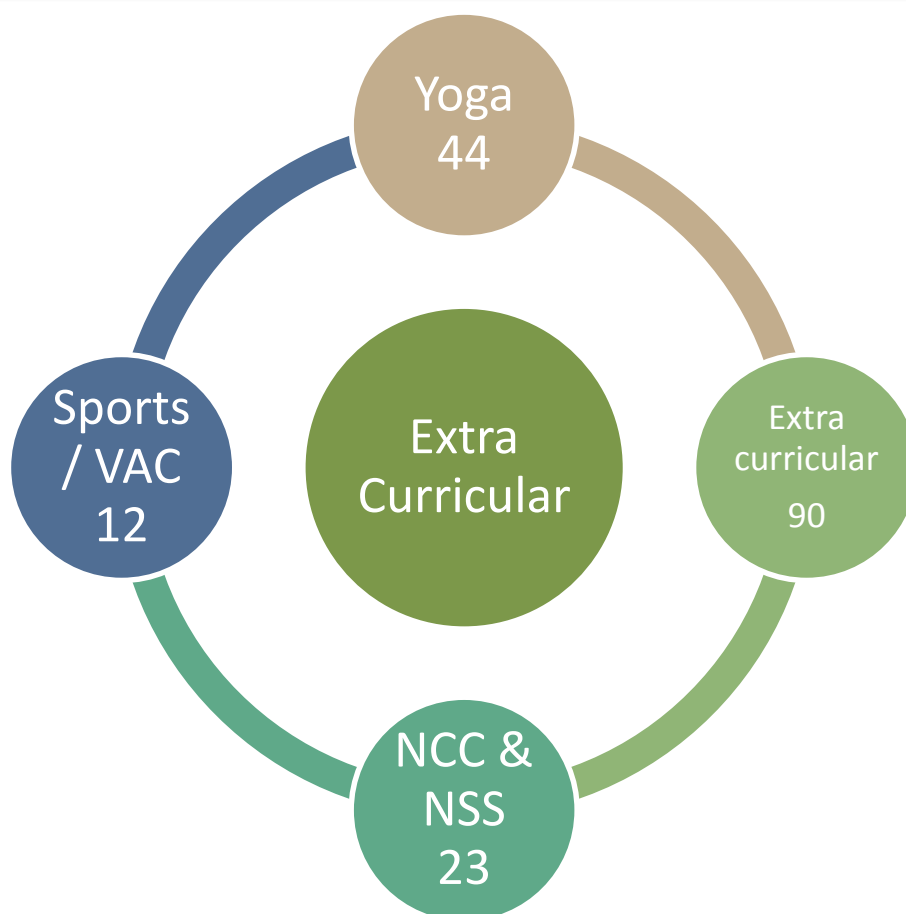
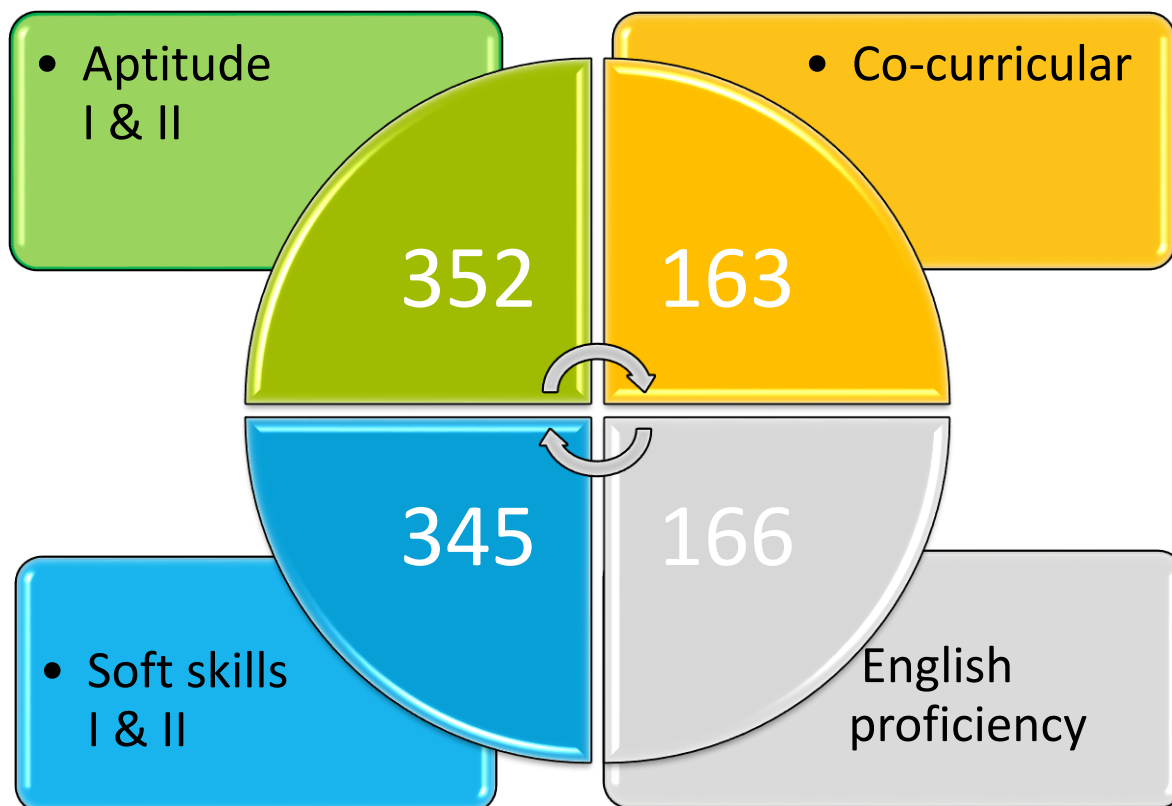


# Students' Participation in Various activities 2021-2022



Students are actively participated in various events such as Symposium, conference, paper presentation, and other extra curricular activities conducted by reputed Institutions.

# Students Co-curricular & Extra curricular Activities



# Student Performance - Placement



## Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

### SCHOOL OF MECHANICAL AND CONSTRUCTION

Department of Mechanical Engineering

*Congratulates*

THE STUDENTS OF BATCH 2018-22 WHO GOT PLACEMENT IN



**A.PAVAN KUMAR  
REDDY VTU10987**



**K R NITHISH  
VTU11092**



**PANDIRI KEDARNATH  
VTU11299**



**MOHAMMED IRSHAD  
ALI VTU11618**



**SANDU NAGA  
DILEEP KUMAR  
VTU12785**



**P.R.RUFUS JOEL  
VTU12844**



**MAREDLA OMKAR  
VTU12940**



**K.SAI KRISHNA  
NITISH VTU12984**



**MODALAVALASA  
ROHITH  
VTU13232**



**Sampathirao  
Pavankalyan  
VTU13250**



**S MARIYAM BEE  
VTU13390**



**RAMAPURAM PAVAN  
KUMAR VTU14138**

**GREAT CHEERS FOR ACHIEVING YOUR DREAM JOB**



# Student Performance - Placement



## Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

### SCHOOL OF MECHANICAL AND CONSTRUCTION

Department of Mechanical Engineering

*Congratulates*

THE STUDENTS OF BATCH 2018-22 WHO GOT PLACEMENT IN



**DIVANSH THOMAR**  
VTU14223



**VEMANA BOYINA**  
**VIJAY YADAV**  
VTU14387



**CHEKURU VISHNU**  
**SAIKUMAR** VTU14593



**N VISHNU VARDHAN**  
VTU14709



**K.TARUN SATYA**  
**NAGA KUMAR**  
VTU11043



**SATHYANARAYANAN.**  
**R.G** VTU11670



**MALLOJU VIJAY**  
**KUMAR** VTU12938



**NALLABATHULLA**  
VTU14258



**CHEEKATLA**  
**SATYA DEV**  
VTU14898



**PASUMARTHI**  
**VENKATA**  
**SUDHAKAR**  
VTU14904



**JAGADEESHWAR**  
**KAGITHA**  
VTU11037



**ACHUKATLA AZHAR**  
**MAHAMMAD**  
VTU11264

**GREAT CHEERS FOR ACHIEVING YOUR DREAM JOB**

# Student Performance - Placement



**KATARI NAVEEN  
KUMAR  
VTU10937**



**S.M.L.N.MURTHY  
VTU15000**



**SATHI RAJU TALURI  
VTU14208**



**A.SAITEJA  
VTU14235**

# Student Performance - Placement



**T NARESH**  
VTU14620



**ABHILASH**  
VTU14542



**J. JERIN KENNEDY**  
VTU11635



**T.ANIL**  
VTU12859





**K HRITHIK**  
VTU12156



**MUKUL**  
VTU11317





**MD TAUQUEER**  
VTU11690



**K K HARISH**  
VTU11174



**BENDALE DARSHAN  
PANDIT** VTU14316



**KURMADASU BHASKARA  
RAMA SRIKRISHNA** VTU12960<sup>39</sup>



# Student Performance - Placement



**T. ADITYA REDDY**  
VTU1171



**PRAVEEN.M**  
VTU11365



**E. KARTHI**  
VTU11628



**KUMARAN . S**  
VTU11238



**B. VAMSI  
KRISHNA**  
VTU12233



**KANCHARLA  
ABHINAV**  
VTU12337



**K. RATNA SAI**  
VTU14574



**RUDURU VINAY  
KUMAR** VTU13223



**M. LOKESH**  
VTU14553



**RAMARAO**  
VTU11443



**VISHAL R**  
VTU11712



Your technology partner



**KATARI NAVEEN KUMAR**  
VTU13214



**ARAVIND**  
VTU11641



# Student Performance - Placement



**RAJAT MATHUR**  
VTU11703



**J.C.SAILESSH**  
VTU12458



**HARSH MISHRA**  
VTU12453



**BHUVANESHWAR REDDY**  
VTU14296



**SAURAV KUMAR**  
VTU14366



**DANESH VADDI**  
VTU11019



**RAVI TEJA D**  
VTU12800

# Student Performance - Placement



Mu Sigma



BALAKRISHNA M  
VTU12968



PRAVEEN KUMAR R  
VTU13208



SIMHA SS  
VTU14302



SANDEEP  
VTU14883



JAYAM MANIKANTA  
VTU11609



SIVAKISHORE  
VTU13193



VISHNU  
VTU13336



VENKATESH D  
VTU14889



TATA TECHNOLOGIES



MOHAMED YOUSUF  
VTU11245



K NAVEEN KUMAR REDDY  
VTU14944



AKHILESH BABU  
VTU14689



VUTCHA SANGEETH  
VTU12363

# Student Performance - Placement



**D.NAVEEN KUMAR**  
VTU12465



**RAKESH**  
VTU12268



**HEMA SAI PAVAN**  
VTU11041



**ADAVELLKY  
VENKATESH**  
VTU14167



**ALLI BHASKARA  
SAI GANESH**  
VTU14681



**KAMALAPURAM  
DHAN  
SHUBHAKAR**  
VTU14938



**S. HARI SAI PAVAN  
REDDY**  
VTU12293



**B.PAVAN KUMAR**  
VTU14608



**AKKUMALA VINAY**  
VTU13368



**BORRA  
GURUVARAPRASAD**  
VTU11017



**HIMAJHA**  
VTU11051



**MOHAMMED NAYEEM**  
VTU13233

# Student Performance - Placement

## Zelf Studie



**DINESH**  
VTU11194



**DIPAN SKINDER**  
VTU11164



**ANDE DURGA VENKATA  
SAI**  
VTU11369



**ABDUL RAZAAK**  
VTU11346



**KARTHIKEYAN . R**  
VTU11661



**CHNDRA BABU  
NAIDU**  
VTU12089



**BVSG NAVEEN KUMAR**  
VTU14389



**SUMIT**  
VTU11785

**IOHBORLANG  
MYNSONG**  
VTU11723

**N H D S  
SAIKUMAR**  
VTU10988

**R NAGA VINOD  
BABU**  
VTU12436



# Student Performance - Placement



EASA SALEH AL GURG GROUP



MANOJ KUMAR  
VTU11378



G V CHAITANYA  
VTU12879



SHIVAM SINGH  
VTU14365



CHAKRADHAR  
VTU14742



HARSHA KARUMANCHI  
VTU14181



MURALI MANOHAR  
VTU11457



SUBRAMANYAM U  
VTU11397



KONJERI BHANU PRAKASH REDDY  
VTU11131



NETURI MANOJ KUMAR  
VTU 13149



CH BALA SAI  
VTU12132

# Student Performance - Placement



**NIKHIL**  
VTU11399



**GEETHA RAMESH**  
VTU14989



**LAKSHMAN K**  
VTU11430



**MULA NAGENDRA  
REDDY**  
VTU14619



**BALE SUSANTH**  
VTU11044



**VISHAL KUMAR SINGH**  
VTU11398

## Products developed by Students

**HEAT EXCHANGERS**



**COMPOSITE HELMETS**



**COMPOSITE AUTOMOBILE  
DOME**



**3D PRINTED PUMP HOISING**



**SUPPLIER ROBOT**



**MEDICINE DELIVERY DRONE**



**PICK AND PLACE ROBOT**



**FOLDABLE COMPACT DINING  
TABLE**



**POLAR 3D PRINTER**



**PLASTIC GARBAGE SCRUBBER**



**COMPOSITE TURBINE BLADE**



**RAILWAY TRACK CLEANER**

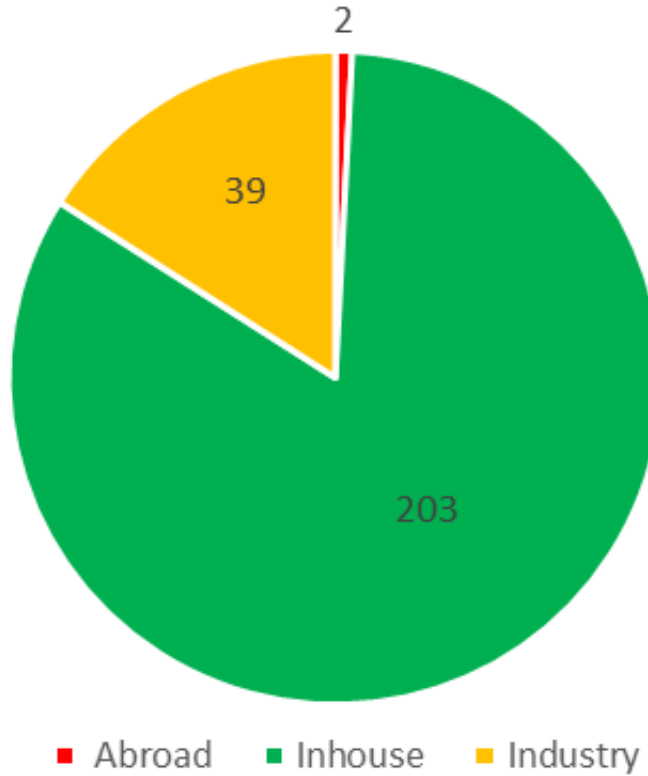


**VERTICAL PEDALLING  
CHAINLESS BICYCLE**

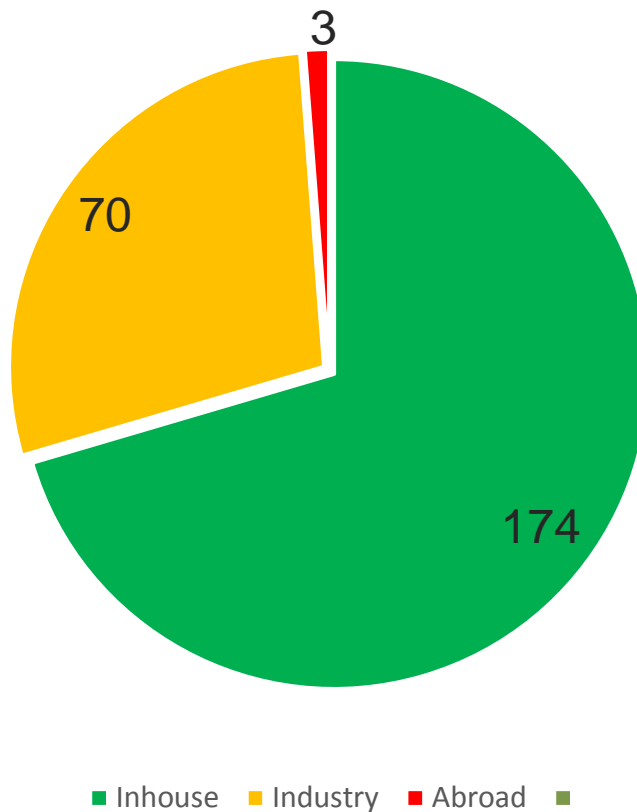


# Minor and Major Projects

### No.of students completed mini project

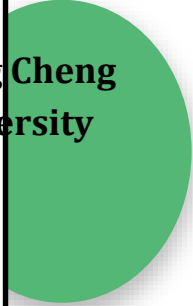


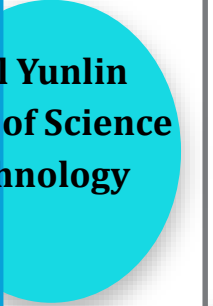





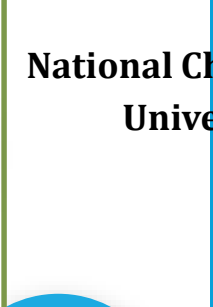


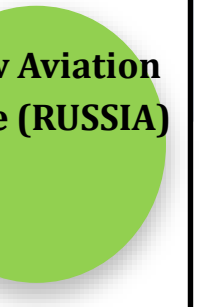

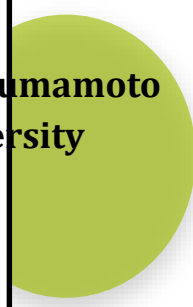









### No.of Students completed Major Projects



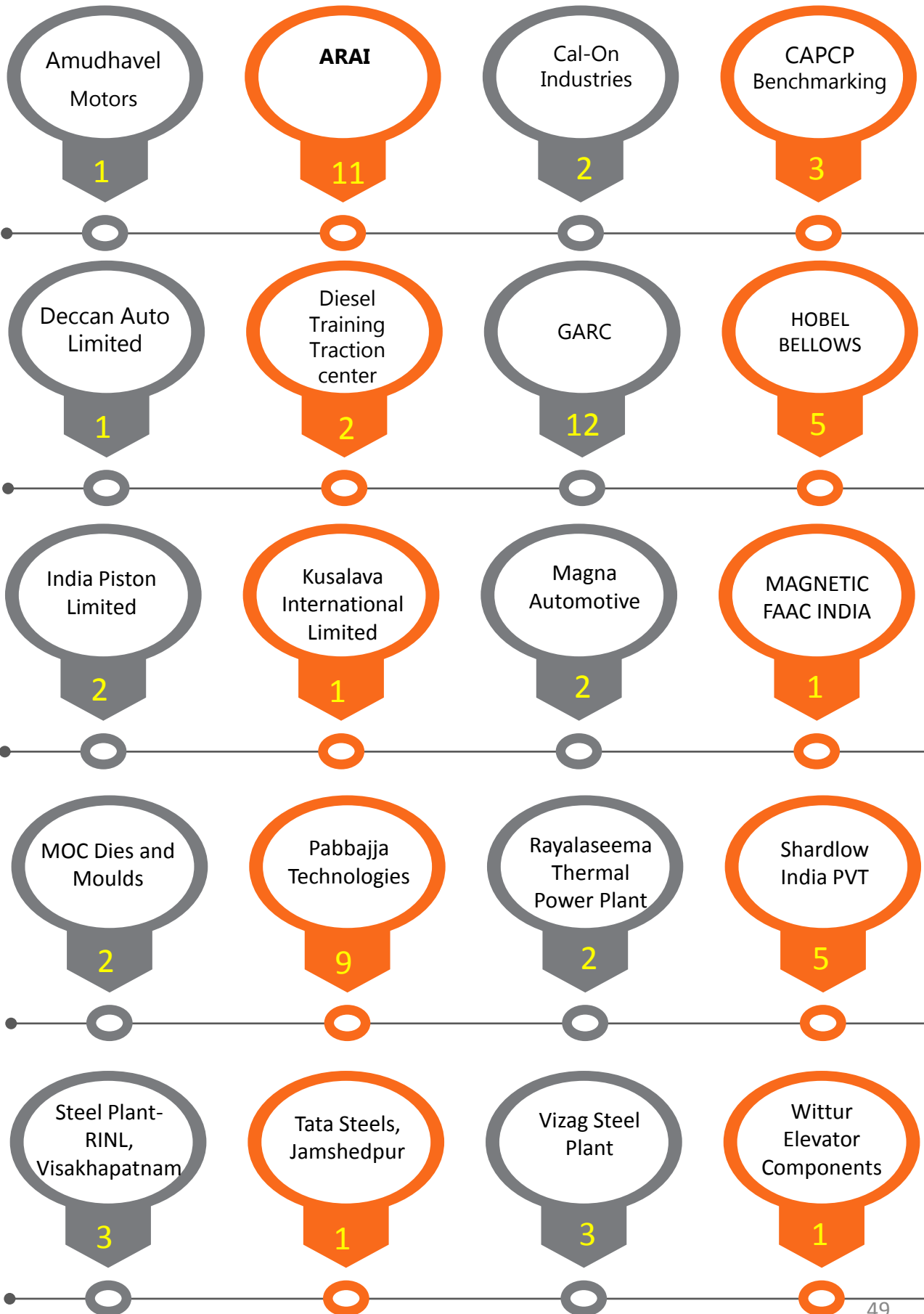
# 6. Industry Institute Interaction

## MoU's with Foreign Universities for Student's Internship

<p>Chung Cheng University</p>  	<p>National Yunlin University of Science and Technology</p> 	<p>National Chung Kung University</p> 	<p>University of Kuala Lumpur</p> 	<p>National Taipei University of Technology</p> 	
<p>Tamkang University, Taipei</p>  	<p>National Chung Hsing University</p> 	<p>Moscow Aviation Institute (RUSSIA)</p> 	<p>Southern Taiwan University of Science and Technology</p> 	<p>Jung-Tang Huang in Taipei Tech</p> 	
<p>IROAST, Kumamoto University</p>  	<p>University de Tours, France</p>  	<p>Hochschule Dusseldorf Germany</p> 			



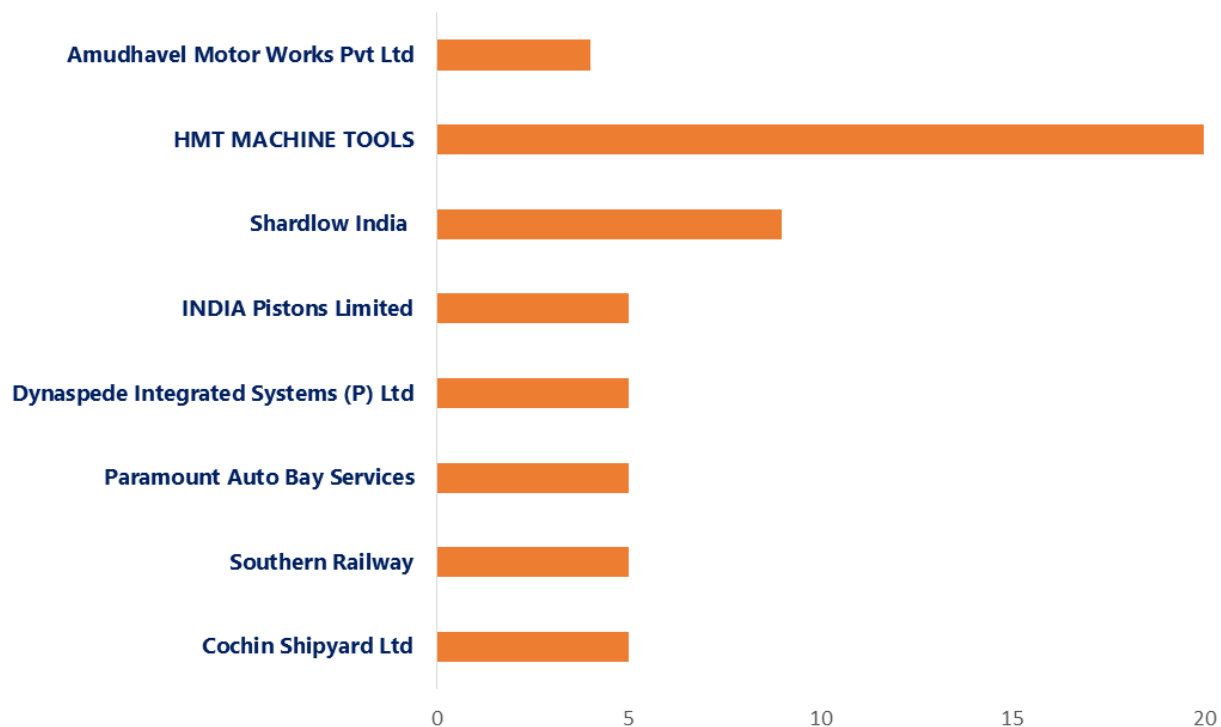
# 6. Industry Institute Interaction



Students Internship at various Industries

# In-plant training and Internship

## No. of Students undergone In-plant training at various industries



**Mr. SWAGAT DEVADAS PATIL**  
B.Tech. - Mech  
VTU 12882  
Batch : 2018 -2022

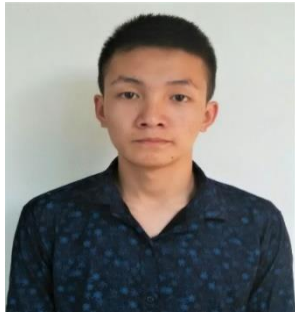


**Mr. ROHAN THOKCHOM**  
B.Tech. - Mech  
VTU 11732  
Batch : 2018 -2022

**Title:** To Study and Analyze the Roughness of 3D Printed Inner Surface of the wind tunnel

**Supervisor:** Prof. Dr. -Ing. habil. Ali Cemal Benim,  
Professor - Faculty of Mechanical and Process Engineering,  
Head - Center of Flow Simulation (CFS),  
University of Applied Sciences Düsseldorf, Germany

# Students opted Higher Studies at Foreign universities (2021-2022)



**Rohan Thokchom**  
VTU1732  
Country: Germany



**Swagat Devadas Patil**  
VTU12882  
country: Germany

## SEMESTER ABROAD PROGRAM (2021-2022)

## VIRTUAL INTERNSHIP PROGRAM (2021-2022)



**Atharva Milind Kulkarni**  
VTU12353  
Country: Canada



**Tsering Wangmo**  
VTU11705  
Country: Singapore



**Swagat Devadas Patil**  
VTU12882  
Country: Singapore



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE



Hochschule Düsseldorf  
University of Applied Sciences

**HSD**



## 6. Events Organized



**Project Expo 2021- 22**



# 6. Events Organized



# Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Est. u/s of UGC Act, 1956)

IN ASSOCIATION WITH



## SCHOOL OF MECHANICAL AND CONSTRUCTION DEPARTMENT OF MECHANICAL ENGINEERING

*Cordially invites you for three days expert lecture on*

### Fatigue Deformation, Fracture and Its Importance in the Design of Equipment

(under Distinguished Visiting Professorship (DVP) scheme)

Date: 28.03.2022 to 30.03.2022 Time: 10:00 am – 12:00 Noon

RESOURCE PERSON



### Dr. S.L. Mannan

Former Director - Materials and Metallurgy Group,  
IGCAR-Kalpakkam and Former Consultant -  
GTRE, DRDO-Bangalore

IN THE PRESENCE OF

### Col. Prof. Vel. Dr. R.Rangarajan

Chancellor & Founder President

### Dr.Sagunthala Rangarajan

Foundress President

### Dr.S.Salivahanan

Vice Chancellor

CONVENOR

### Dr.N.Lenin

HoD-Mech.

Mode:  
Offline

All faculty members  
and students are  
cordially invited to  
participate



Link for online registration:



<https://forms.gle/6GpxPTbNZpPUTLG7A>

No.42, Avadi-Vel Tech Road, Vel Nagar, Avadi, Chennai - 600062

[www.veltech.edu.in](http://www.veltech.edu.in) 1800 212 7669

# 6. Events Organized



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Est. n° 5 of UGC Act, 1956)

IN ASSOCIATION WITH

**SCHOOL OF MECHANICAL AND CONSTRUCTION**  
**DEPARTMENT OF MECHANICAL ENGINEERING**

*Cordially invites you for three days expert lecture on*

**Materials for High Temperature Applications**

(under Distinguished Visiting Professorship (DVP) scheme)  
Date: 18.04.2022 to 20.04.2022 Time: 10:30 am - 12:30 pm  
Venue: Wright Brothers Engineering Hive (1722)

**RESOURCE PERSON**



**Dr. S.L. Mannan**  
Former Director - Materials and Metallurgy Group,  
IGCAR-Kalpakkam and Former Consultant -  
GTRE, DRDO-Bangalore

IN THE PRESENCE OF

**Col. Prof. Vel. Dr. R.Rangarajan**  
Chancellor & Founder President

**Dr.Sagunthala Rangarajan**  
Foundress President

**Dr.S.Salivahanan**  
Vice Chancellor

CONVENOR  
**Dr.N.Lenin**  
HoD-Mech.

Mode:  
Offline

All faculty members  
and students are  
cordially invited to  
participate



Link for online registration: 

<https://forms.gle/PRGZTU3WX8sz1Np17>

📍 No.42, Avadi-Vel Tech Road, Vel Nagar, Avadi, Chennai - 600062  
🌐 [www.veltech.edu.in](http://www.veltech.edu.in) ☎ 1800 212 7669



# 6. Events Organized



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Est. on 3 of UGC Act, 1956)



Cordially invites you for the inauguration of

# IDAD'22

5<sup>th</sup> INTERNATIONAL CONFERENCE ON

*Innovative Design, Analysis & Development Practices in  
Aerospace and Automotive Engineering*

24<sup>th</sup> February, 2022

Jointly Organized by

**SCHOOL OF MECHANICAL AND CONSTRUCTION  
&  
OFFICE OF RESEARCH & DEVELOPMENT**

On 24<sup>th</sup> February, 2022, 9:30 a.m. through Virtual Mode



Chief Guest

**Prof. Lung-Jieh Yang**

Department of Mechanical and Electro-Mechanical Engineering,  
Tamkang University, Taiwan

Presided by

**Col. Prof. Vel. Dr. R. Rangarajan**  
Chancellor & Founder President

**Dr. Sagunthala Rangarajan**  
Foundress President

In the Presence of

**Prof. Dr. S. Salivahanan**  
Vice Chancellor

**Dr. S. Irudayaraj**  
Dean – SoMC

**Dr. E. Balasubramanian**  
Dean – R&D

# 6. Events Organized



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Encl. to UGC Act, 1956)

**SCHOOL OF MECHANICAL AND CONSTRUCTION**  
**DEPARTMENT OF MECHANICAL ENGINEERING**



**One Day Hands on Training on**  
**"CATIA V5 R20 version-Training on Drafting, Simulation and Code Generation"**

**25<sup>th</sup> APRIL 2022**

**INVITATION**



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**SCHOOL OF MECHANICAL AND CONSTRUCTION**

*One Day Hands on training*  
*On*

**"CATIA V5 R20 - Drafting, Simulation and Code Generation"**

Organized by



On 25<sup>th</sup> April, 2022, 10.00 a.m.  
Venue: Computer Aided simulation and Analysis Laboratory



Resource Person

**Dr. R. RAMESH KUMAR**  
Assistant Professor  
Mechanical Engineering

Presided by

Col. Prof. Vel Dr. R. Rangarajan  
Founder Chancellor & President

Dr. Sagunthala Rangarajan  
Foundress President

In the presence of

Prof. Dr. S. Sathishan  
Vice-Chancellor

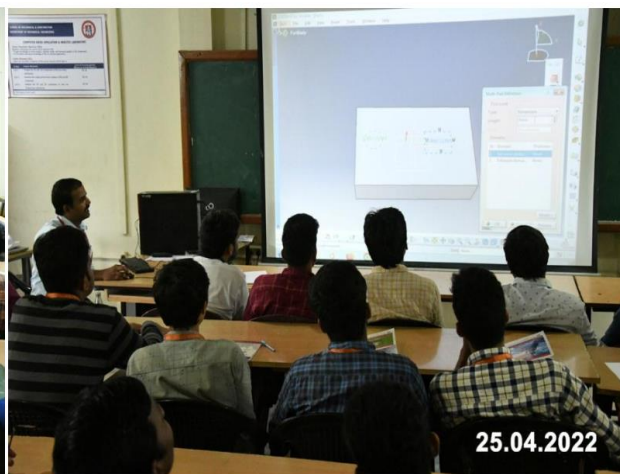
Prof. Dr. S. Brudayaraj  
Dean- SoMC

Prof. Dr. M. Lenin  
HoD - Mechanical Engineering

No.42, Avadi-Vel Tech Road, Vel Nagar, Avadi Chennai-600 062

[www.veltech.edu.in](http://www.veltech.edu.in)

18002127669





# 6. Events Organized

## PHOTOGRAPHY CONTEST

Organized by



MECHANICAL ENGINEERING  
STUDENTS ASSOCIATION

in association with

DEPARTMENT OF MECHANICAL ENGINEERING  
SCHOOL OF MECHANICAL AND CONSTRUCTION



# Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Decmed to be University Estd. u/s 3 of UGC Act, 1956)

Event held on 12 May 2022



**Prize winner**



# Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)



Ranked 5<sup>th</sup> in India  
by MHRD, Govt. of India



Ranked by Times Higher Education (THE),  
London - Impact Rankings 2020



84<sup>th</sup> IN ENGINEERING  
CATEGORY 2019



The Association  
of Commonwealth  
Universities



**400 feet Outer Ring Road, Avadi,  
Chennai - 600 062,  
Tamil Nadu, India.**

**Toll Free : 1800 2127 669**

**Email : [admission@veltech.edu.in](mailto:admission@veltech.edu.in)**