



# Vel Tech

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

## Department of Mechanical Engineering



## Annual Report 2020-21

# 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 2020 - 2021.

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 2020 - 2021 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. A.T. Ravichandran**

**Dean Academics &**

**Dean School of Mechanical and Construction**

**I am elated to release the Annual Report 2020-2021 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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# 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 (Electric Hybrid Vehicles)</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





# Vision & Mission

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## 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

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

# Program Educational Objectives & Program Specific Outcomes

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## Program Educational Objectives

- 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.
- Adapt new and recent techniques of engineering science and their applications to conceive, organize and develop the design of engineering systems.
- Work as an individual and in teams on multi-disciplinary assignments in industries, research organizations and academic institutions both in national and global level through collaboration.
- Demonstrate techno-commercial skills such as research interest and entrepreneurial ability in students to cater the societal problems.

## Program Specific Outcomes

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

# Laboratory Facilities

The laboratories of Mechanical department are classified into two, that are Academic Laboratories and Research laboratories. Academic labs like Manufacturing Technology, Strength of Materials, Fluid Mechanics and Machinery, Thermal Engineering, Dynamics of Machinery, Engineering metrology, Computer aided Design, Computer aided Manufacturing, Mechatronics, Heat transfer, Special Machines labs and Research laboratories like Design, Modeling and Analysis lab for Thermal studies, Metal forming lab, Composite research centre, Centre for Autonomous Systems Research & Metallurgical and Materials Engineering Lab



**Centre of Excellence for Manufacturing-Inaugurated by  
Hon. Vice President of India**



# Laboratories



Manufacturing Technology & Strength of Materials Laboratory



Fluid Mechanics and Machinery & Thermal Engineering Laboratory



Dynamics of Machinery & Engineering Metrology Laboratory





# Laboratories



Computer aided Design & Computer aided Manufacturing Laboratory

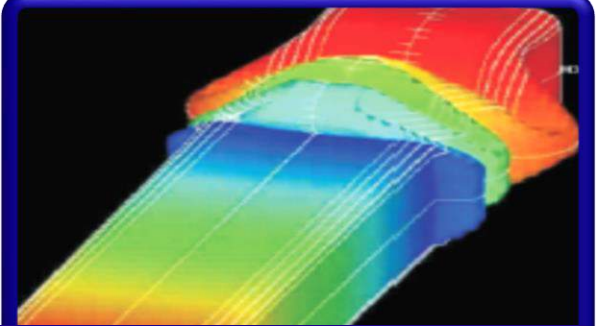


Mechatronics & Heat Transfer Laboratory



Special Machines Laboratory

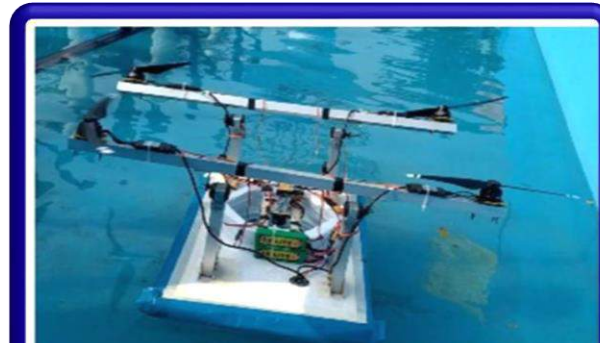
# Research Laboratories



Design, Modelling and Analysis Lab Centre For Thermal Studies



Metal forming Laboratory & Composite research centre

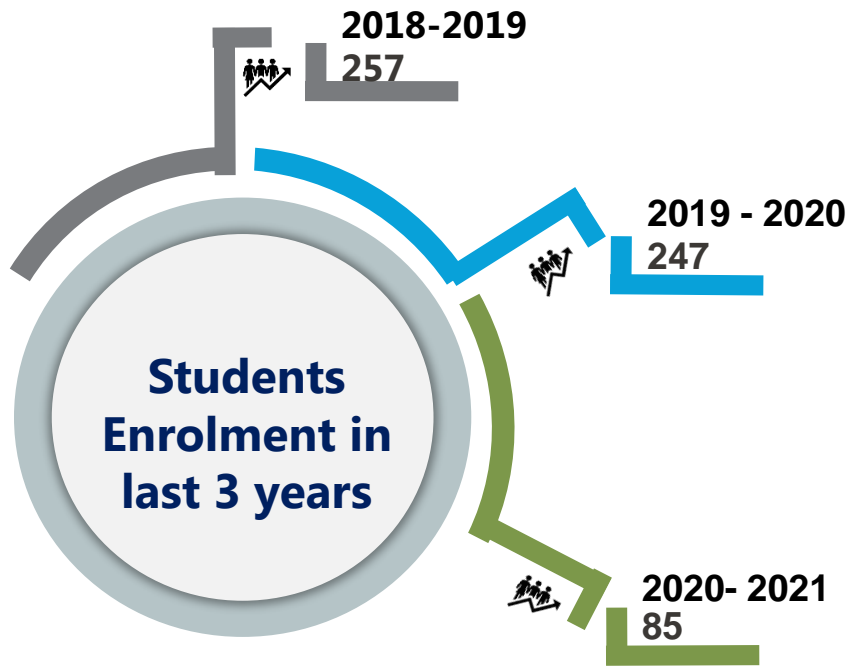


Centre for Autonomous Systems Research & Metallurgical and Materials Engineering Lab

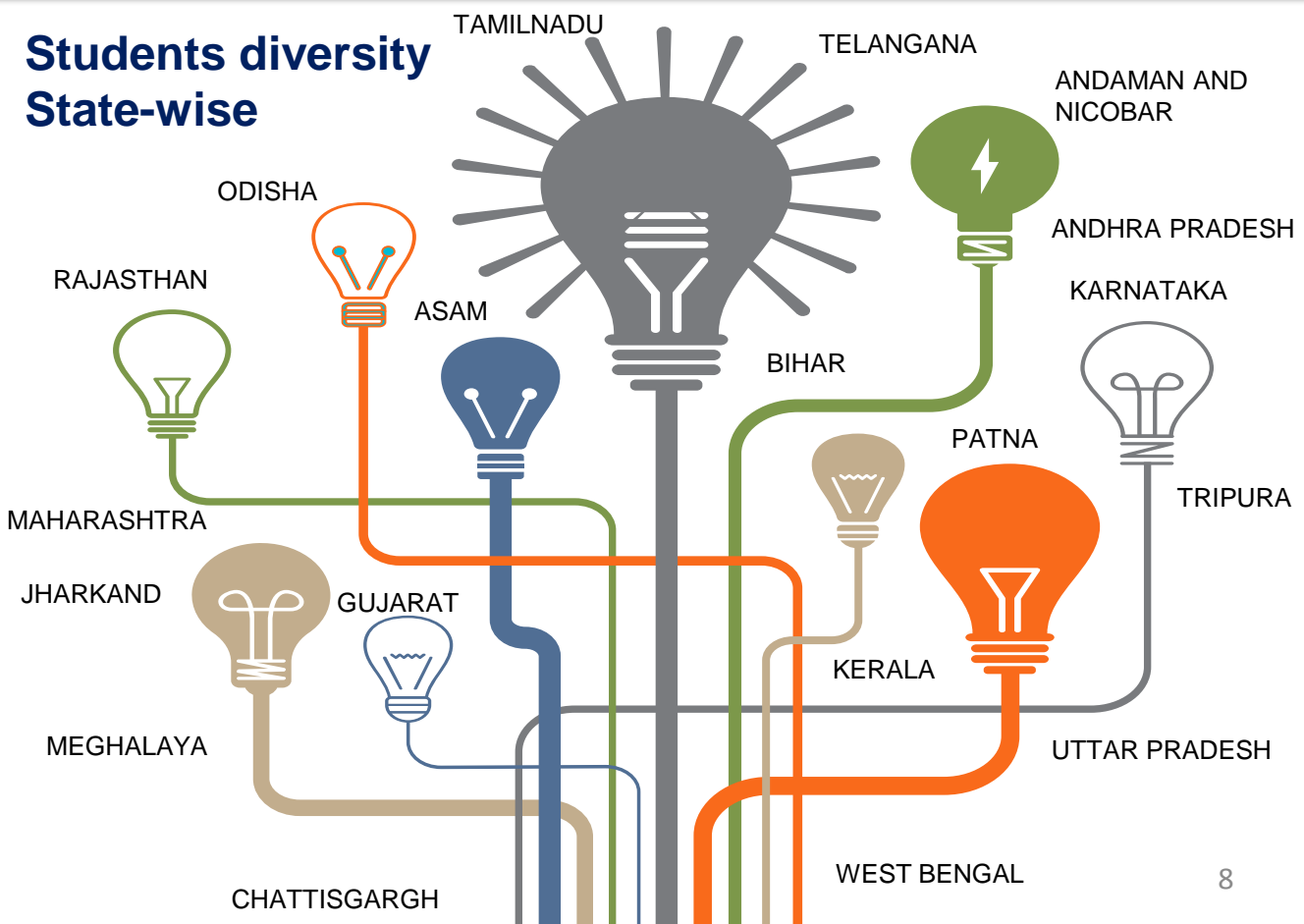


# Students Profile

The Department of Mechanical Engineering having 587 students of all years in total from 19 different states.



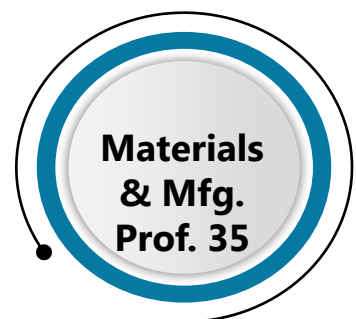
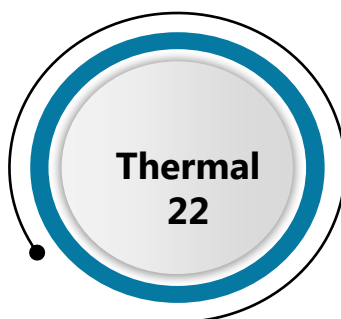
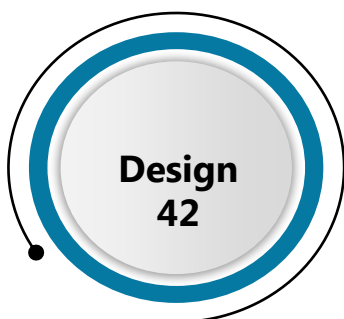
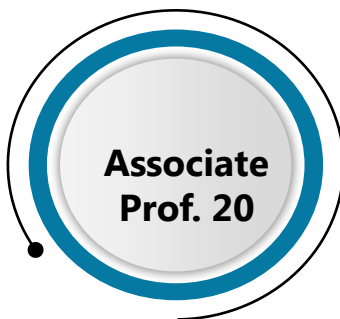
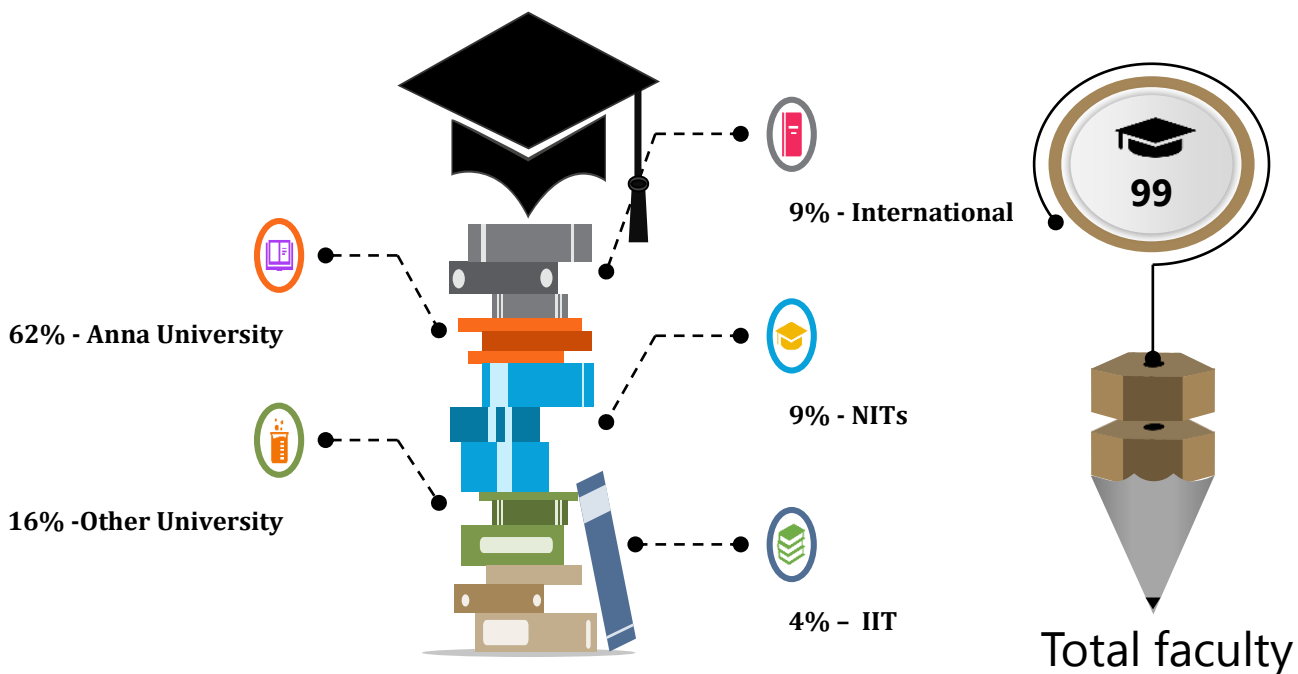
## Students diversity State-wise



# 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.



Patent



Books /Chapters



Funded Projects



Awards

# Research and Development

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Rs. 18,30,000

SERB-TARE

Dr. YUVARAJ N

Scale effect approach to evaluate the erosion mechanism and performance features in micro abrasive water jet machining process: A study of new approach based on process

Rs. 18,30,000

SERB-TARE

Dr. PRABHUKUMAR S

Additive Manufacturing of Next Generation Alloys

Rs. 60,000

AICTE - INAE

Dr. S. L. MANNAN

Indian National Academy of Engineering (INAE)  
Distinguished Visiting Professorship

# Awards Received by Faculty

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**Mr. V. Ramesh**

**Best Research  
Award**

**Science Father  
International**



**Dr. Sumathy  
Muniamuthu**

**Woman  
Researcher  
Award**

**Science Father  
International**



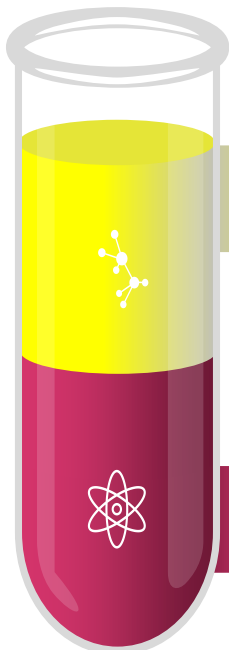
**Mr. T. Balaji**

**Best Robotics  
Teacher of the  
Year Award**

**Dr. Tustin,  
Canada, USA**

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## Patent filed/ Awarded



**07/12/2020**

**App No: 202041053113**

**Intra Layered Hybrid Fiber Reinforced  
Composites For Replacement of Automotive  
Components**

**Status: PUBLISHED**

**17/02/2021**

**App No: 202041057447**

**Parabolic inverted trough flat bed  
evaporator with heat storage compartment  
& tower condenser for solar desalination**

**Status: FILED**

# Consultancy work by Faculty

**Rs. 40000**

**Safety Audit and OSEP (On-Site Emergency Plan) for Kellogg's India Private Limited, Sri City, Andhra Pradesh**

**Rs. 40000**

**Safety Audit, OSEP and HARA for M/S Heptachem & Pharma (India) Private Limited, Adoni, Andhra Pradesh**

**Rs. 15000**

**Safety Audit and OSEP for M/S Hatsun Agro Limited, Madanapalle, Andhra Pradesh**

**Rs. 20000**

**HARA and OSEP for M/S Rane Die Casting Sadasivpet, Telangana**

**Dr. Harisivasri Phanindra K**

**Safety Audit for M/S Kikuwa India Pvt. Ltd, Sricity, Andhra Pradesh**

**Rs. 20000**

**Safety Audit for M/S Hero MotoCorp, Sricity, Andhra Pradesh**

**Rs. 40000**

**Safety Audit and review of existing OSEP (On-Site Emergency Plan) for various divisions in M/S Srikalahasthi Pipes Limited, Srikalahasthi, Andhra Pradesh**

**Rs. 150000**

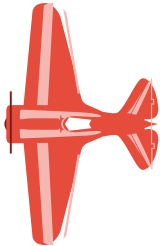
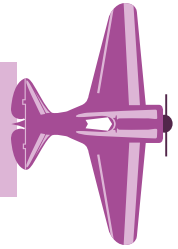


# Faculty as Journal Reviewer

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**Dr. CHRISTOPHER S**

- **Journal of Applied Fluid Mechanics**

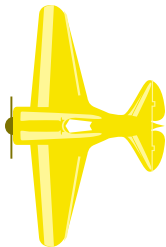
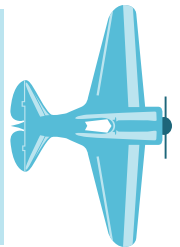


**Dr. LENIN N**

- **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**

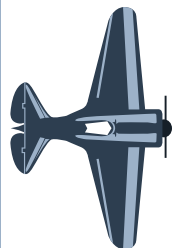


**Dr. PRABHUKUMAR S**

- **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**

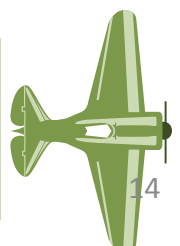


**Dr. PRAVEEN A S**

- **Journal of the Mechanical Behavior of Biomedical Materials**
- **Ceramics International**

**Dr. SRIMANICKAM B**

- **Journal of Energy Research and Reviews**
- **Australian Journal of Mechanical Engineering**

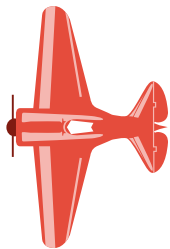
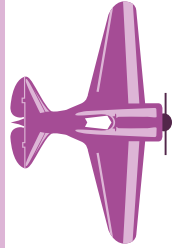


# Faculty as Journal Reviewer

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## Dr. YUVARAJ N

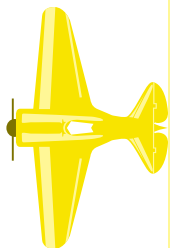
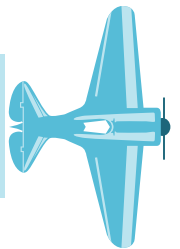
- **Materials Research Express**
- **ASTM International Journal of Testing and Evaluation**
- **Arabian Journal for Science and Engineering**
- **Journal of Brazilian Society of Mechanical Engineering**
- **Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture**



- Dr. BALAJI K**
- **Advances in Mechanical Engineering**
  - **Total Quality Management and Business Excellence**

## Dr. MOHAMED IQBAL S

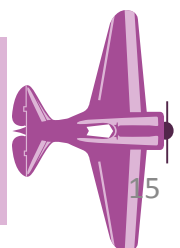
- **Journal of Ambient Energy**



- 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

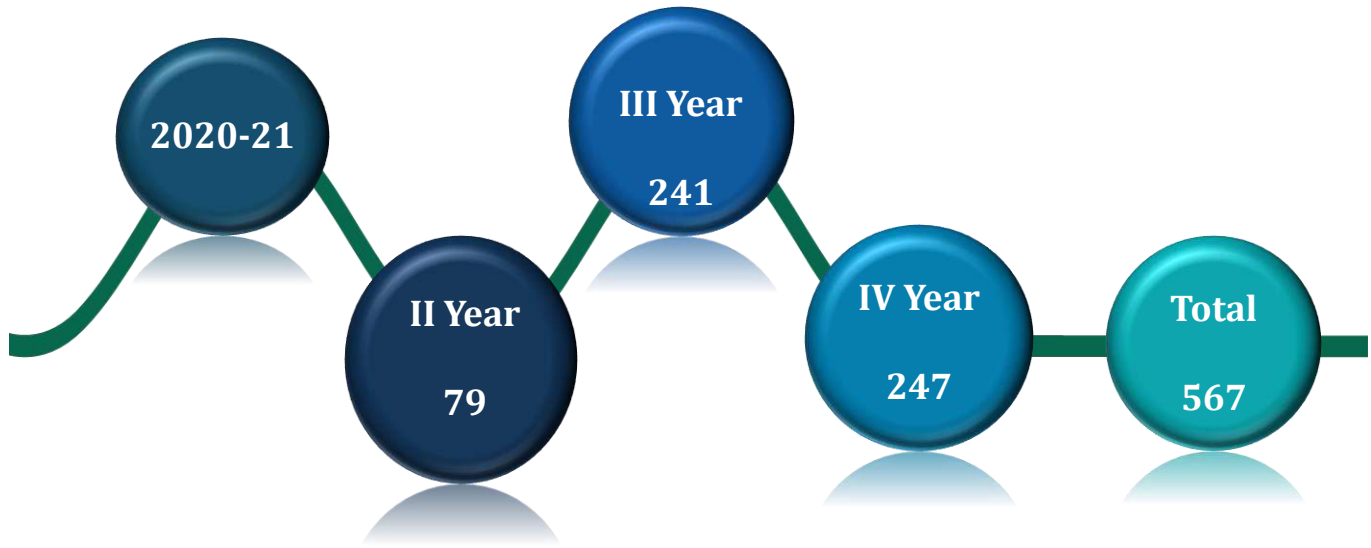
- **Materials Research Express**
- **Australian Journal of Mechanical Engineering**



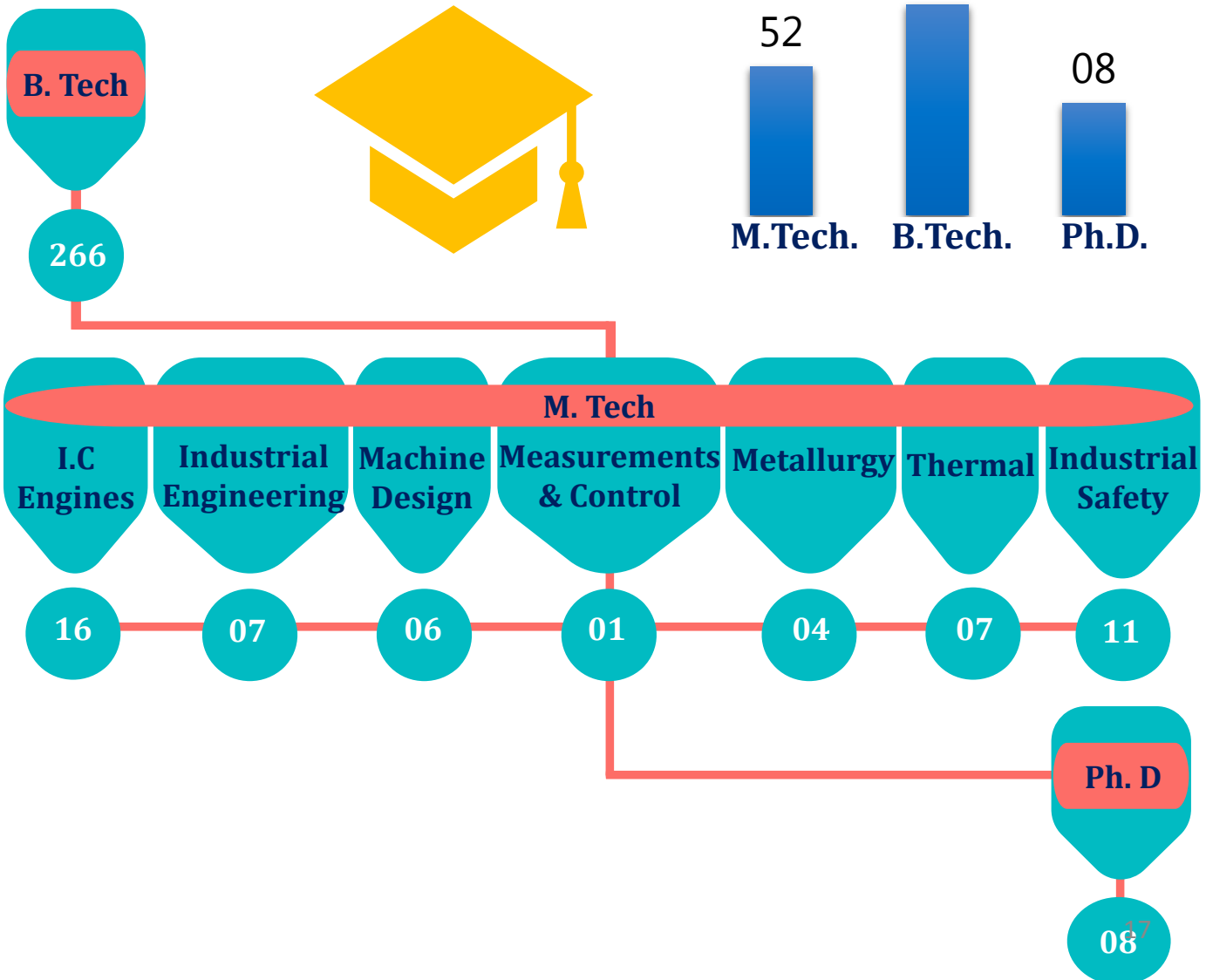
# Student Performance - Placement



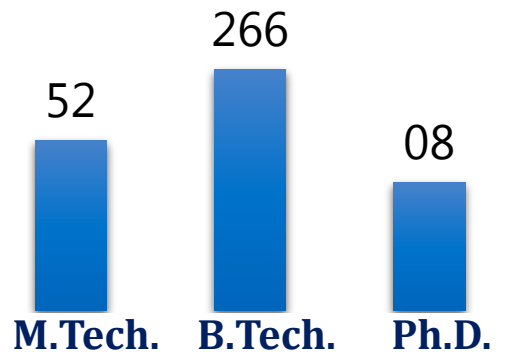
# Student Admission & Graduation Details



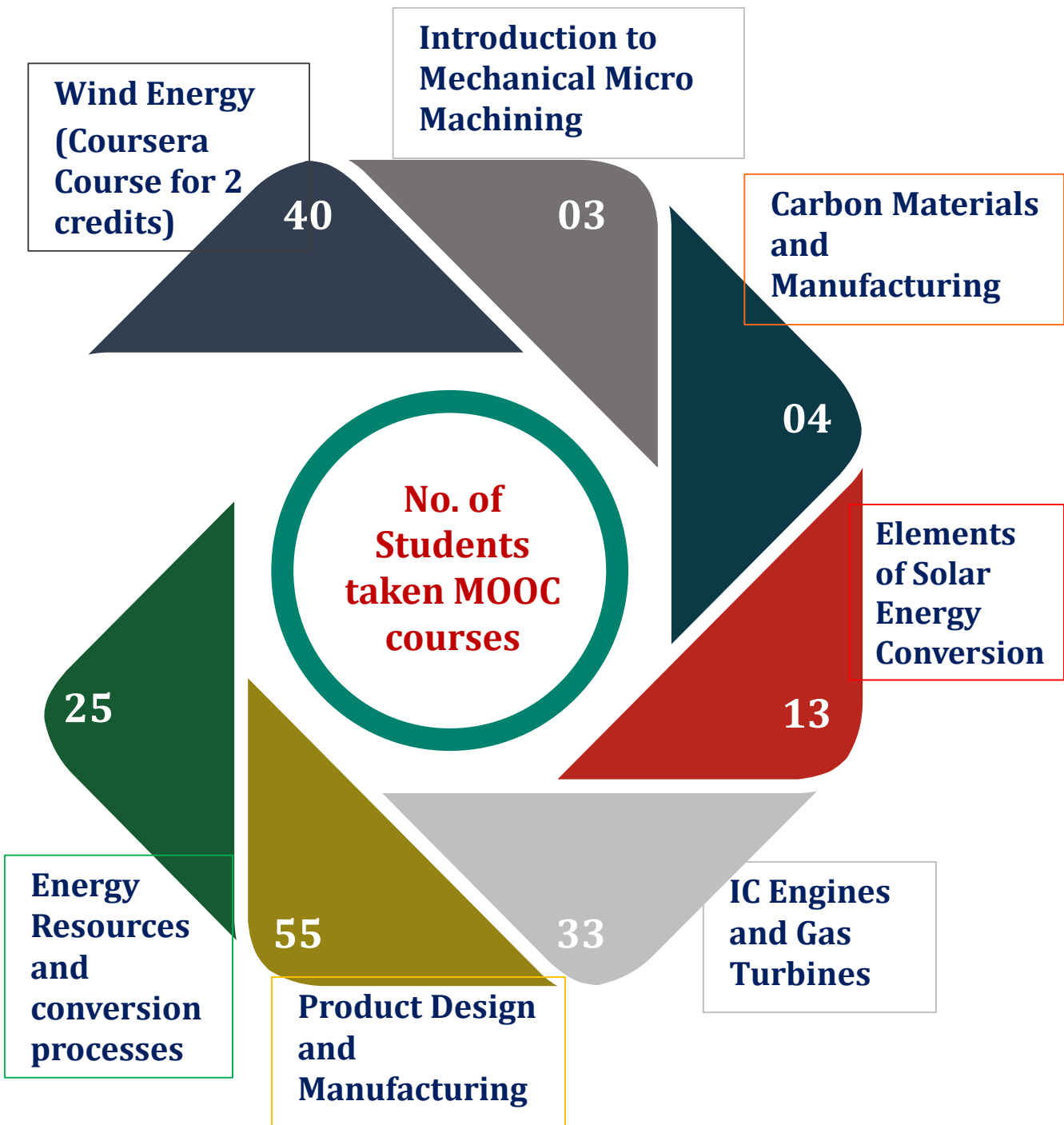
## Graduation Details



## Graduation Strength



# MOOC courses taken by Students



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

**Chung Cheng  
University**

**National Yunlin  
University of Science  
and Technology**

**National Chung  
Kung University**

**University of Kuala  
Lumpur**

**National Taipei  
University of  
Technology**



**Tamkang  
University, Taipei**

**National Chung Hsing  
University**

**Moscow Aviation  
Institute (RUSSIA)**

**Southern Taiwan  
University of Science  
and Technology**

**Jung-Tang Huang in  
Taipei Tech**



**IROAST, Kumamoto  
University**

**University de Tours,  
France**

**Hochschule  
Dusseldorf Germany**



***University at Abroad***



# Students' Internship in Foreign Universities 2019 - 20

## National Taipei University of Technology (Taipei Tech), Taiwan

Three students from Vel Tech are currently doing their major project work under Student Exchange Programme at National Taipei University of Technology (Taipei Tech), Taiwan with partial funding support from Vel Tech.

Mr. Hema Theja Reddy Puthalapattu (Mech.) is working on the project titled "Exoskeleton (Walking assistant)" under the guidance of Professor Jung -Tang Hwang.

Mr. Ganesh Shankar Putta (Mech.) and Mr. Chakradhar Kalle (Mech.) are working on the project titled "Development of the self-driving system of Mobile Robots based on deep learning of depth images" under the guidance of Professor Chih-Hung Gilbert Li.



## National Chung Hsing University (NCHU), Taiwan

Two students from Vel Tech are currently doing their minor & major project work under Student Exchange Programme at National Chung Hsing University (NCHU), Taiwan with partial funding support from NCHU and Vel Tech.



Mr. Anil Kumar Palagiri (Mech.) is working on the project titled "Evaluation of the effectiveness of using hydrogen and natural gas mixture as fuel for engines" under the guidance of Professor Joe Lu.

Mr. Sai Kumar Reddy Bodaddala (Mech.) is working on the project titled "Enzyme Immobilization glucose oxidase biofuel cells" under the guidance of Professor Hsiang Yang.



## Southern Taiwan University of Science and Technology (STUST), Taiwan

Two students from Vel Tech are currently doing their minor and major project work under Student Exchange Programme at Southern Taiwan University of Science and Technology, Taiwan with partial funding support from Vel Tech.

Mr. Damodar Reddy Sirammagari (Mech.) and Mr. Anand Ratna Kumar Gantayada (Mech.) are working on the Project Titled "Analysis of Mechanical properties and surface treatment of Aluminium alloy 6066" under the guidance of Dr. Prof. Chung Chun Wu.



Four students from Vel Tech are currently doing their minor and major project work under Student Exchange Programme in Department of Mechanical Engineering at National Cheng Kung University, Taiwan with partial funding support from Vel Tech.

Mr. Chakravarthy Dumpala (Mech.) is working on the project titled "Ultrasonic Touch screen Based on Lamb Waves and Machine Deep Learning" under the guidance of Professor Yung-chun Lee.

Mr. Barghava Sri Venkatesh Siva kumar Rudhala (Mech.) is working on the project titled "Magnetic transmission module of electric vehicle" under the guidance of Professor Mi Ching TSAI.

Mr. Vinay Kumar Bandarla (Mech.) and Mr. Sai Venkata Raju Mullapaku (Mech.) are working on the project titled "Research on Nonlinearization" under the guidance of Professor Dr Jen Fin Lin.

# Students' Internship in Foreign Universities 2019 - 20

## National Yunlin University of Science and Technology (YunTech), Taiwan

Three students from Vel Tech are currently doing their minor and major project work under Student Exchange Programme at National Yunlin University of Science and Technology, Taiwan with partial funding support from Vel Tech.

Mr. Santhosh Reddy Lingala (Mech.), Mr. Vamsidhar Reddy Rajoli (Mech.) and Mr. Harsha Vardhan Reddy Tupakula (Mech.) are working on project titled "Solar Powered Sterling Engine" under the guidance of Professor Xu Bojian.



## Tamkang University (TKU), Taiwan

Three students from Vel Tech are currently doing their final year project work under Student Exchange Programme at Tamkang University, Taiwan with partial funding support from Vel Tech and one Nepal student is doing his project work with funding support of NTD 15000 / INR 30000 per month.

Mr. Neethish Kumar Unnam (Mech.) is working on a project titled "Evans Flapping Mechanism and its Fabrication" under the guidance of Professor Lung-Jieh Yang.



## Universiti of Kuala Lumpur (UniKL), Malaysia

Mr. Siva Durga Manikanta Gurajala (Mech) from Vel Tech is currently doing his minor and major project under Student Exchange Programme at Universiti of Kuala Lumpur, Malaysia under the guidance Professor Dr. Muhamad Husaini Abu Bakar in the project titled "Design & Analysis of Scalable Graphene Production using Liquid Phase Exfoliation" with partial funding support provided by Vel Tech.





# Students' Industry Internship (2020 – 21)

ALSTOM

01

SL LUMAX

11

Capgemini

05

Brakes India Private Limited

05

EMERSON

05

BFW

01

SHARLOW

09

ISUZU

01

Harita  
Harita Seating Systems Ltd.

03

IPL India Pistons Limited  
(A Member of the Amalgamations Group)

03

TATA  
TATA ADVANCED SYSTEMS

01

GLOBAL  
AUTOMOTIVE  
RESEARCH  
CENTRE  
ERUDITE SAFEDAYC

09

सम सत्य ही जी  
NMDC

01

ARAI  
Progress Through Research

09

m

02

CAPCP

04

SKM  
Technologies

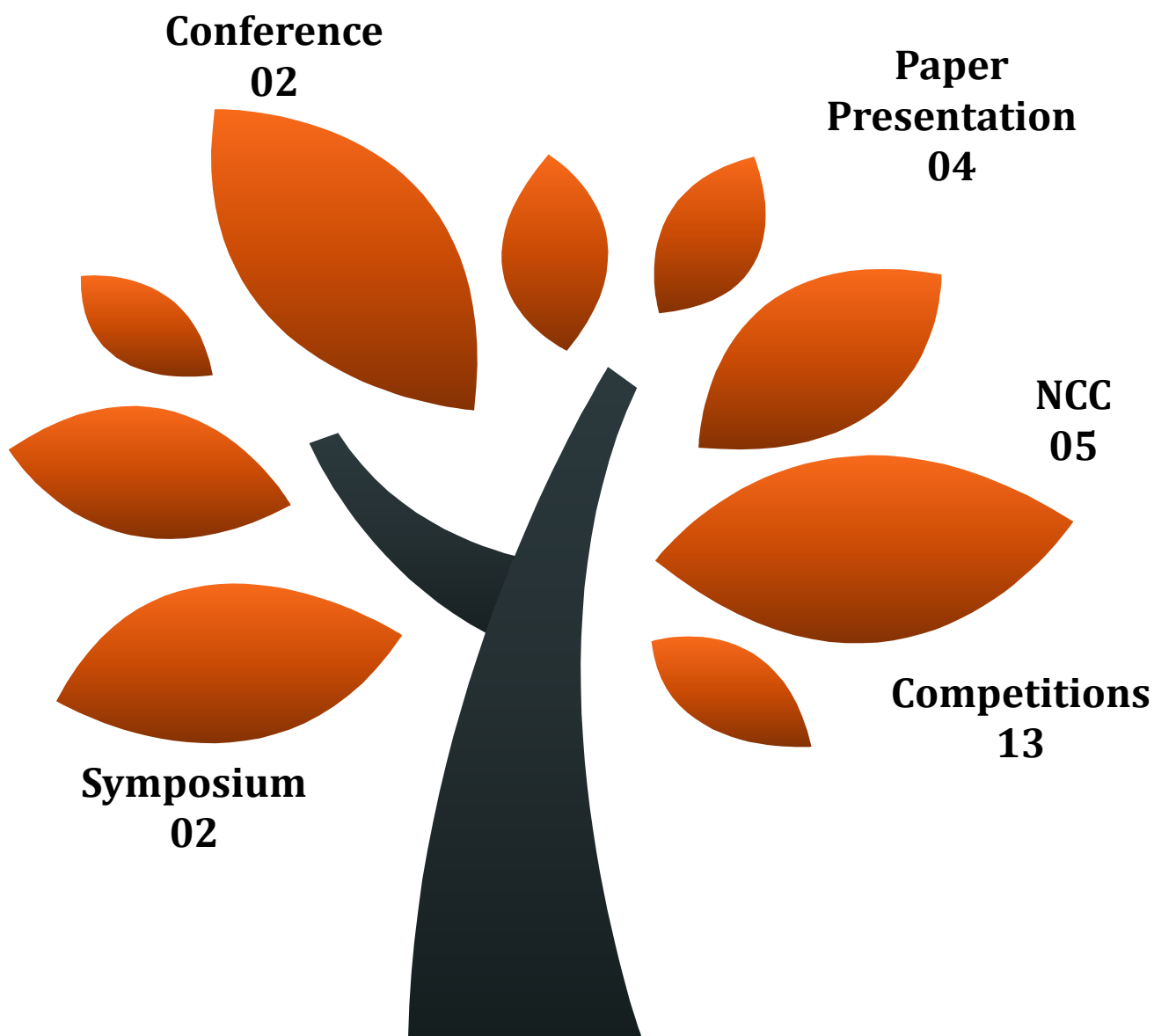
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सेल SAIL

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# Students' Participation in Various activities 2019-20

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

# Students' Participation in Various activities 2019-20

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International conference on technological advancements in materials, design, manufacturing and energy sectors

**Harsha Vardhan Reddy**

International conference on technological advancements in materials, design, manufacturing and energy sectors

**Yeddu Nitish kumar**

BHAUTHIKA 2020 - A state level technical symposium

**Vasanth Gopala Krishna**

BHAUTHIKA 2020 - A state level technical symposium

**L. Vinay Ramachandra**

# Students' Participation in Various activities 2019-20

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**Paper Presentation**

**R. Sai Uday Kiran**

**Paper Presentation**

**V. Gopala krishna**

**Paper Presentation**

**L. Vinay ramachandra**

**Paper Presentation**

**B. Venkata subbiah**



# Students' Participation in Various activities 2019-20

**FMAE Baja season 2**

**R. Yogesh singh**

**FMAE Baja season 2**

**R. Kaushik**

**SAEISS Electric Two  
Wheeler Design  
Competition**

**Siddavatam  
Veeraprathap Reddy**

**SAEISS Electric Two  
Wheeler Design  
Competition**

**Boni Deekshith**

**FMAE Baja season 2**

**D R Ramakrishna**

**SAEISS Electric Two  
Wheeler Design  
Competition**

**K. Srikanth Reddy**

# Students' Participation in Various activities 2019-20

**FMAE Baja season 2**

**Kumaran kaushal**

**FMAE Baja season 2**

**Thirumaal**

**FMAE Baja season 2**

**I Vivek Kumar**

**FMAE Baja season 2**

**K. Umesh Chandra**

**FMAE Baja season 2**

**Vishvesvaran**

**SAEISS Electric Two  
Wheeler Design  
Competition**

**Kalla Reddieswara  
Naidu**

# Students' Participation in Various activities 2019-20

**SAEISS Electric Two  
Wheeler Design  
Competition**

**N Harshavardhan Reddy**

**XI south zone shooting  
championship in small  
bore rifle/pistol  
(NR)events**

**Vegesh**

**Airpistol (NR)  
championship 10M Junior  
Men Individual**

**Vegesh**

**45th tamilnadu state  
shooting championship  
competitions**

**Vegesh**

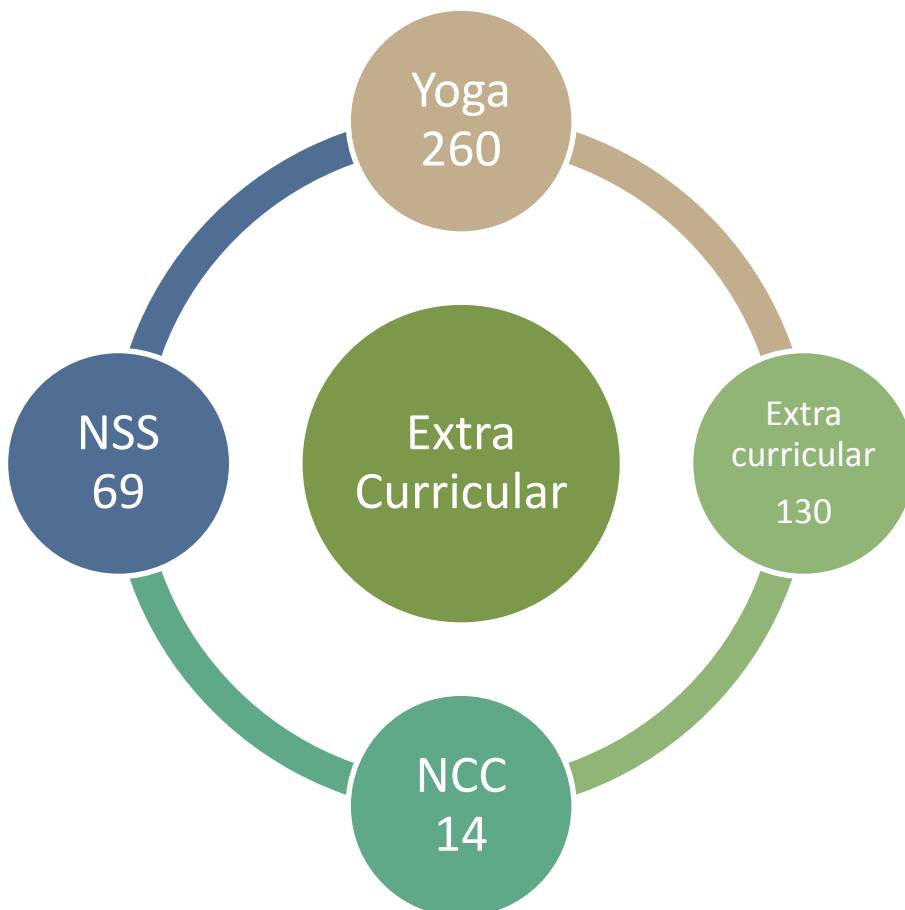
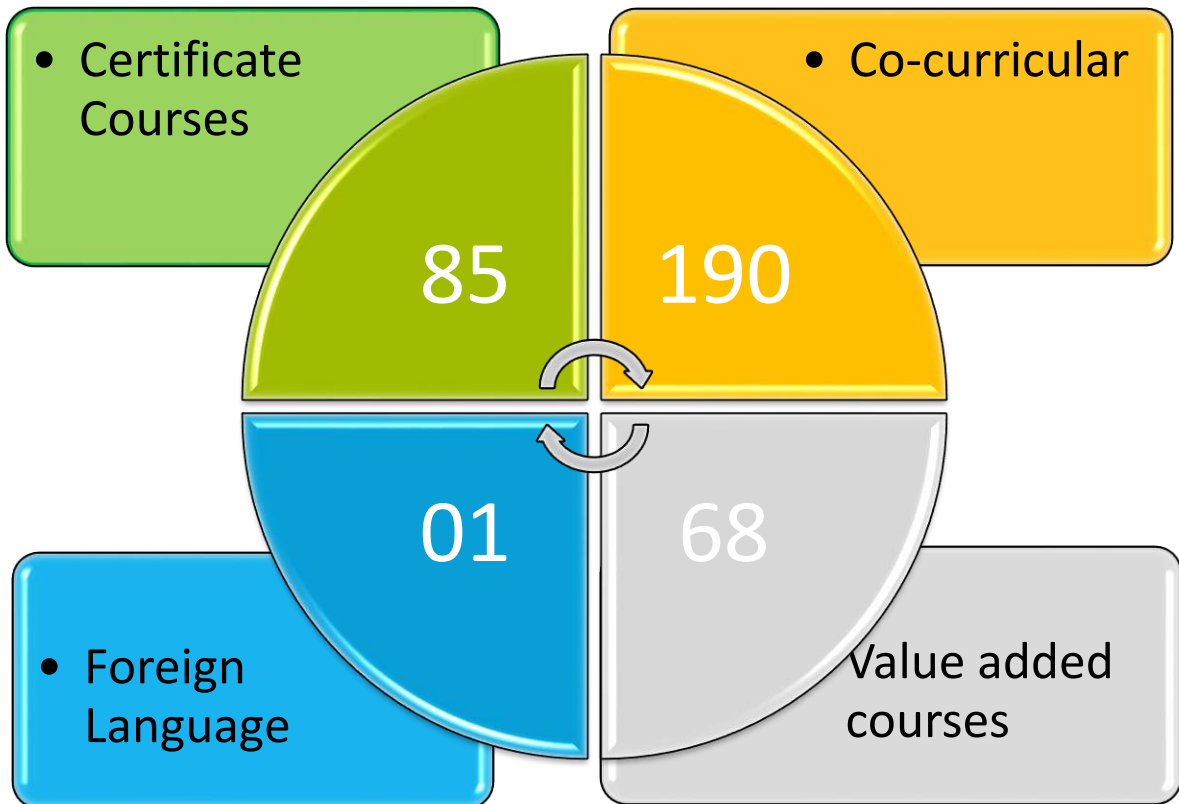
**GATC cum GP RDC TRG - I  
Camp**

**Nde Durga venkata sai**

**GATC cum GP RDC TRG - I  
Camp**

**Chintha Sandeep Kumar  
Reddy**

# Students Co-curricular & Extra curricular Activities



# Students Best Project Award



**MECH**  
**INDUSTRY PROJECT AWARDS**  
THROUGH TECHNICAL POSTER 2020 - 21

**1**

PROJECT TITLE  
**DESIGN AND MODELLING OF VERTICAL  
AXIS SAVONIUS WIND TURBINE WITH  
DEFLECTORS**

WINDSTREAM TECHNOLOGIES, HYDERABAD.

 **SIVASKANDAN.P**       **PARNAPALLI  
SATHEESH**



INDUSTRY RELATIONS



**MECH**  
**INDUSTRY PROJECT AWARDS**  
THROUGH TECHNICAL POSTER 2020 - 21

**2**

PROJECT TITLE  
**3D PRINTING OF PATCH ANTENNA  
STRUCTURE**

FABFORGE INNOVATIONS PVT LTD,  
COIMBATORE.

 **B. SATHISH**       **K.SURYAMANIKANTA  
REDDY**



INDUSTRY RELATIONS



**MECH**  
**INDUSTRY PROJECT AWARDS**  
THROUGH TECHNICAL POSTER 2020 - 21

**3**

PROJECT TITLE  
**MAINTENANCE PRACTICES AND SAFETY  
ASPECTS IN GAS CLEANING AND COLLECTING  
PLANT OF B.O.F IN STEEL MELTING SHOP - 2**

BHILAI STEEL PLANT, CHHATTISGARH.

 **RAHUL KUMAR**       **GAURAV KUMAR  
PATIL**       **RANJEET  
YADAV**

 **सेल SAIL**

INDUSTRY RELATIONS



# Students Testimonials 2020-21



I am very grateful to the Management and Faculty – Mechanical Engineering of Vel Tech for their untiring effort to ensure a flourishing career for us. They are with us all the times when needed.

**Srinivas Madival (2017-21 Batch), Placed at Capgemini, Chennai**



The campus drive conducted in Vel Tech was well organized and streamlined. I thank the entire Mechanical Engineering department of Vel Tech for giving proper guidance to clear the technical rounds during my interview.

**Sivaskandan.P (2017-21 Batch), Placed at Accenture, Chennai**



Studying at Vel Tech in Mechanical Engineering Department has been a wonderful experience in the context of technical knowledge, practical exposure through the research laboratories and motivational culture to participate in co-curricular and extra-curricular activities.

**Gopala Krishna Vasantha (2017 - 21 Batch), Placed at DXC TECHNOLOGIES**



# 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)

School of Mechanical and  
Construction, Department of Mechanical Engineering

Five Day Webinar Series on

## Aiding the Product Design Process using Hyper Mesh/LS-DYNA

 24<sup>th</sup> - 28<sup>th</sup> May 2021



RESOURCE PERSON

**Dr. Lakshmanan  
Palanimuthu**

Professor - Mechanical Engineering,  
Vel Tech

IN THE PRESENCE OF

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

**Dr. Sagunthala Rangarajan**  
*Foundress President*

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

**Webinar Series on Aiding the Product Design Process  
using Hyper Mesh/LS-DYNA**

# Events Organized

School of  
Mechanical Engineering and Construction  
Department of Mechanical Engineering



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University) Est. on 3rd ETC Act, 1987

organizes **Five Day Webinar Series** on

## 3D Printing & Advanced Manufacturing



**8<sup>th</sup> - 12<sup>th</sup> June 2021, 11.45 a.m. to 01.15 p.m.**

Organized by: Mechanical Engineering Students Association (MESA)



**Mr. Ilango Murugesan**  
Manager,  
TRANE Technologies,  
Bangalore.  
**Topic: Advanced  
Manufacturing**  
08.06.2021, Tuesday

### RESOURCE PERSONS



**Dr. S. Prabhu Kumar**  
Associate Professor,  
Mechanical Engineering,  
Vel Tech, Avadi  
**Topic: Metal Additive  
Manufacturing  
Opportunities & Challenges**  
10.06.2021, Thursday

**Dr. E. Pavithra**  
Associate Professor,  
Mechanical Engineering,  
Vel Tech, Avadi  
**Topic: Metal Forming  
Technology and its  
Applications**  
09.06.2021, Wednesday



**Dr. Santhosh Kumar**  
Professor,  
Mechanical Engineering,  
IIT (BHU), Varanasi  
**Topic: 3D Printing and  
its Materials**  
12.06.2021, Saturday

**Dr. Sachin Salunkhe**  
Associate Professor,  
Mechanical Engineering,  
Vel Tech, Avadi  
**Topic: Online Detection and  
Prediction of Fused  
Deposition Modelled Parts  
Using Artificial Intelligence**  
11.06.2021, Friday



**Webinar Series on 3D Printing & Advanced Manufacturing**



# Events Organized



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Chartered as an University Encl. no 3 of UGC Act, 1956)



School of Mechanical and Construction,  
Department of Mechanical Engineering

Organizes Five Day Webinar Series on

## Design of Heat Exchanger for HVAC Applications

 <p><b>31.05.2021</b> 11:45 am to 01:15 pm <b>Dr. Joseph J Kakkassery</b> Associate Professor Mechanical Engineering, Vel Tech.</p>	 <p><b>01.06.2021</b> 11:45 am to 01:15 pm <b>Dr. Prabhat Kumar</b> Mechanical Engineering NIT, Agartala</p>	 <p><b>02.06.2021</b> 11:45 am to 01:15 pm <b>Dr. A. Immanuel Selwynraj</b> Associate Professor Dept. of Thermal and Energy Engg. School of Mechanical Engg., VT, Melvior</p>
Talk on <b>Best practice guidelines and Typical Steps of CFD Simulation Process</b>	Talk on <b>Fundamentals of Heat Exchanger Design for HVAC applications</b>	Talk on <b>Exergy analysis of energy systems</b>
 <p><b>03.06.2021</b> 11:45 am to 01:15 pm <b>Dr. M. Piramanandhan</b> Sr. Engineering Manager/tech- R&amp;DESIGN, Engineering Services Division (R&amp;D Center), ESAAR India Ltd.</p>	 <p><b>04.06.2021</b> 11:45 am to 01:15 pm <b>Dr. Christopher Stephen</b> Professor, Mechanical Engineering, Vel Tech.</p>	
Talk on <b>Introduction to CAE simulation for HVAC design</b>	Talk on <b>Pumping Systems in HVAC</b>	

### Webinar Series on Design of Heat Exchanger for HVAC Application

# Events Organized



## Vel Tech

Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Chartered to be University Entitled to UGC Act, 1956)



Department of Mechanical Engineering, SoMC  
& Mechanical Engineering Students Association (MESA)

organizes five days webinar series

on

## Innovations in Mechanical Engineering and Science

24<sup>th</sup> to 28<sup>th</sup> November 2020



24.11.2020  
10.00 a.m. - 12.00 p.m.

**Dr. N. Gnanasekaran**  
Assistant Professor,  
Mechanical Engineering, National  
Institute of Technology Karnataka, Srirathhol

Topic: **Fluid flow and temperature characteristics in a vertical plate under natural convection**



25.11.2020  
10.00 a.m. - 12.00 p.m.

**Dr. P. Lakshmanan**  
Associate Professor,  
Mechanical Engineering, Vel Tech

Topic: **A journey from conventional to current practices in product design using predictive tools**



26.11.2020  
10.00 a.m. - 12.00 p.m.

**Dr. G. Dharmalingam**  
Assistant Professor,  
Mechanical Engineering, Vel Tech

Topic: **Novel materials for high temperature applications**



27.11.2020  
10.00 a.m. - 12.00 p.m.

**Dr. S. Jayavelu**  
Associate Professor,  
Mechanical Engineering, Vel Tech

Topic: **Intellectual Property Rights**



28.11.2020  
10.00 a.m. - 12.00 p.m.

**Dr. Tanmoy Mukhopadhyay**  
Assistant Professor, Aerospace Engineering,  
Indian Institute of Technology - Kanpur

Topic: **Mechanics, materials, structures and ML - What the future holds**

**Webinar Series on Innovations in Mechanical Engineering and Science**

# Events Organized

Date / Day	Expert	Topic to be delivered
08.12.2020 Tuesday	 Prof. Dr. Ramesh Arisambandam, Associate Professor, Mechanical Engineering, IIT Roorkee, Uttarakhand	Industry 4.0: Opportunities and Implementation Challenges in Manufacturing
09.12.2020 Wednesday	 Dr. S. Mohamed Iqbal, Associate Professor, Mechanical Engineering, VelTech	Emerging Novel Fluid for Heat Transfer Applications
10.12.2020 Thursday	 Dr. M. Arun Prasad, Assistant Professor, Mechanical Engineering, VelTech	An Insight to Process of Powder Metallurgy
11.12.2020 Friday	 Dr. M. Elengovan, Professor, Mechanical Engineering, VelTech	Unmanned Vehicle – Changing the World
12.12.2020 Saturday	 Dr. Seeni Meera Kamal Mohamed, Research Scientist, Institute of Materials Research, German Aerospace Center (DLR) - Germany.	Aerogels and Aerogel Composites

## Webinar Series on Innovations in Mechanical Engineering and Science



# Events Organized

12<sup>th</sup> June 2020, Friday  
Industrial applications of  
Unmanned Aerial Vehicle

Resource Person  
Dr. E. Balasubramanian  
Professor

13<sup>th</sup> June 2020, Saturday  
Digital  
Manufacturing

Resource Person  
Dr. M. Siva Kumar  
Professor

15<sup>th</sup> June 2020, Monday  
A Glimpse of  
Flow Prediction Inside  
the Pump Using CFD

Resource Person  
Dr. S. Christopher  
Professor

16<sup>th</sup> June 2020, Tuesday  
Application of  
Artificial Intelligence  
in Manufacturing

Resource Person  
Dr. Sachin Salunkhe  
Associate Professor

17<sup>th</sup> June 2020, Wednesday  
Intellectual Property Rights  
and Patent Rights

Resource Person  
Prof. S. Jayavelu  
Associate Professor

18<sup>th</sup> June 2020, Thursday  
3D Printed Biomimetic  
Structures for  
Medical Applications

Resource Person  
Dr. A.S. Praveen  
Associate Professor

# MECH

**Engineering Everything**

**Department of Mechanical Engineering  
School of Mechanical and Construction**



## Vel Tech

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