

INSTITUTE VISION

"Moulding Professionals par Excellence with Integrity Fairness and Human Values".

INSTITUTE MISSION

- We commit to develop the institution as a Center of Excellence of International Standards
- We guide our students in the attainment of intellectual and professional competence for successfully coping with the rapid advancements in technologies and the ever changing world of business, industry and services
- We help each and every student in their personal growth into mature and responsible individuals
- We strive to cultivate a sense of social and civic responsibility in our students, thus empowering them to serve humanity.
- We promise to ensure a free environment where quest for the truth is encouraged

DEPARTMENT VISION

"Moulding socially committed engineers capable to meet the global challenges in the mechanical engineering stream."

DEPARTMENT MISSION

- To provide ample facilities to foster excellent ambiance for teaching learning process in the department.
- To enhance the creative ideas, analytical talents and soft skills in the students to cope up with the emerging trend in technical field.

■ To enable the students to meet real life problems in mechanical engineering with a zeal to human and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Our graduates shall have

- **PEO1** Strong base in Mathematics, Science, and Mechanical Engineering to face and handle the challenges in real world engineering problems in society and industry.
- PEO2 Passion for Mechanical Engineering to select an area of specialization, pursue higher studies, choose a career, lifelong learning in industry, research and academics.
- PEO3 Basic knowledge in other disciplines to tackle and coordinate Interdisciplinary real life problems*
- PEO4 Soft skills, discipline, confidence, self esteem, and ethical values.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- **PSO1** Students shall be competent, creative and imaginative mechanical engineers employable in fields of design, research, manufacturing, safety, quality, technical services.
- PSO2 Students shall be able to progress through advanced degree, certificate programs or participate in continuing education in mechanical engineering, business, and other professionally related fields.

PRINCIPAL'S MESSAGE

As Moshe Feldenkrais puts it, "We act in accordance with our self-image". All of us do have dreams but in order to materialize those dreams, it demands strong determination, dedication, perseverance and personal effort. It is self image that governs all our activities. The way a person views

himself/herself, self-respect is projected and accordingly activities that mark respect for others. If our body and soul get connected self image get refined as a result a nobler personality useful for the society emerges .Good education is the key to balanced self image. My appreciation to the faculties and students of the department for their significant achievements.

Dr. K.K.Rajan

INTRODUCTION

The Department of Mechanical Engineering has three tenets that centre on the principle of improving lives and livelihoods: to create knowledge through research in science and technology of mechanical engineering domain; to share knowledge through educational programs and the dissemination of our new discoveries; and to develop the professional potential of faculty, staff, and students. Department of Mechanical Engineering expands the frontier of human knowledge in the discipline of mechanical engineering through fundamental and applied research conducted by faculty and students. Our land-grant mission is based on the premise that knowledge is beneficial to mankind and the greatest benefit comes from dispersing knowledge as widely as possible. We share knowledge with our students through educational programs and all of society through disseminating our research findings in scholarly publications, presentations, patents, entrepreneurship and technology transfer. Through classroom, laboratory and project-based instruction, undergraduate and graduate students are well served by a curriculum that is based upon the fundamental principles of mechanical engineering, as well as forward looking and set within the context of our profession's social mandate. Our curriculum prepares students for diverse and successful careers across the global engineering marketplace, and it further fosters creativity and critical thinking skills through research and design experiences.

HOD'S MESSAGE

A warm and Green Greetings from the Department of Mechanical Engineering VJCET. I would like to share with you the 11th volume of "Magnanimous", Department of Mechanical Engineering Newsletter. The Department has been simply unstoppable in its progress as it has been actively

involved in various activities that have brought to light the hidden talents of our students and staff. The Department is striving hard continuously to improve upon the quality of education and to maintain its position of leadership in Engineering and Technology. I take this opportunity to congratulate all the team members and the publication team in particular for their commendable effort in bringing out the 11th successful issue of Magnanimous. Our Department has been conducting various technical webinar / seminar to keep our faculties and students up-to-date with the latest technology, in the field of technical education. Hope this will impact our program with tremendous positivity and will help to reach our goal of making all our students well-trained and qualified mechanical engineer in India and abroad.

Dr. Shunmugesh K

MESSAGE FROM THE EDITORIAL BOARD

The department cares for student support, mentoring, tutoring, study skills workshops and career development. During the last semester, the participation of mechanical engineering faculties and students in various training program, international certification courses and webinars was the most encouraging factor, which we want to continue in coming years also. The department also aims to recognize the extra talent of our students other than academics and motivate them to shine in their respective fields

RESEARCH PAPERS IN JOURNALS AND CONFERENCES

Mr. Nidheesh K

- Fabrication of Banana Harvesting Machine on IJAEM, Volume 3, Issue 3, pp: 1641-1642, ISSN NO: 2395-5252
- Hover Board Forklift Machine on IJAEM, Volume 3, Issue 7, pp: 1645-1649, ISSN NO:2395-5252

Mr. Arun Raphel

- High entropy stabilization and band engineering driven high figure of merit in nanostructured PbSn0.875TeSeBi0.125 alloy. J. Solid State Chem. 303, 122531.
- Thermoelectric performance of nanostructured PbSnTeSe high entropy

- thermoelectric alloy synthesized via spark plasma sintering. Physica B: Condensed Matter. 622, 413319.
- Tuning figure of merit in Na doped nanocrystalline PbSnTeSe high entropy alloy via band Engineering. Mater. Sci. Semicond. Process. 138, 106270.

FACULTY TRAINING

Dr. Shunmugesh K

- Attended a Webinar on Application of 3D Printing in different fields, the importance of simulation in AM, Software used for the Simulations organized by VJCET on 20th September 2021
- Attended a Webinar on The Future of Mobile App Industry organized by VJCET on 11th October 2021
- Attended a FDP on New Age Materials & Technologies organized by Sree Vidyanikethan Engineering College from 4th Oct - 8th Oct 2021

Mr. Akash Paul Savio

- Attended a Webinar on Application of 3D Printing in different fields, the importance of simulation in AM, Software used for the Simulations organized by VJCET on 20th August 2021.
- Webinar entitled "The Future of Mobile App Industry".
- Participated KTU Sponsored online FDP on Supply chain modelling & Logistics Management organized by VJCET from 5th to 9th July 2021

Mr. Nidheesh K

- Attended a FDP on Supply chain modelling & Logistics Management organized by VJCET from 5th to 9th July 2021
- Attended an Online workshop on "Examination Reforms" conducted by AICTE from 1st to 3rd November 2021.

Mr. Arun Raphel

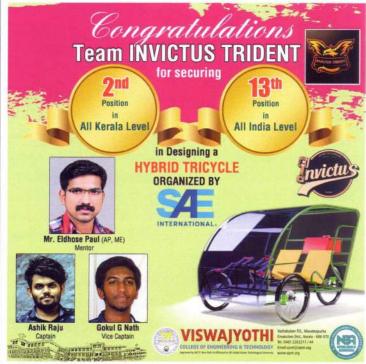
- Participated KTU Sponsored online FDP on Supply chain modelling & Logistics Management organized by VJCET from 5th to 9th july 2021
- Participated in national leve live webinar on "Funding agency for supporting Incubation, IPR, Entrepreneurship and startup" on 28 th August, 2021, organized by SVR College Nadyal.
- Attended a Webinar on Application of 3D Printing in different fields, the importance of simulation in AM, Software used for the Simulations organized by VJCET on 20th September 2021

STUDENTS AWARDS AND ACHIEVEMENTS

Team INVICTUS TRIDENT designed a HYBRID TRICYCLE

EFFI CYCLE derived from Efficient-Cycle promote the objective of providing opportunity to the students to conceive, design and fabricate a three wheeled configuration vehicle powered by human-electric hybrid power

and capable of seating two passengers catering to the day-to-day mobility needs. The objective is to promote innovation & generate consciousness amongst the young engineers towards environment friendly mobility solution.





In the 12th season of SAE Efficycle, INVICTUS TRIDENT has the first footprint of achieving a 13th rank in All India level & 2nd rank in all Kerala level. The SAE team had arranged such a great event and executed it very systematically as the provided us with a mentor from their side to monitor our work as well as to clarify our doubts through weekend meetings. The 12th season comprises of two validation phases conducted in online mode

which includes virtual simulation of the vehicle.

The first phase of evaluation was conducted in a convenient way as the validators were the mentors of other groups. In this phase the project plan, bill of material as well as design validation plan of our vehicle should be handed over and which is to be evaluated. It was on the evening of 16th October & 17th October 2021. Till the team members were actively participating on these documents which we efficiently presented for valuation.

The phase two of valuation consists of static and dynamics of the vehicle, which where need to be presented. For this the entire vehicle is to be designed in the Solidworks (Software) and need to be analysed using ANSYS (Software). The team was split into 2 groups which comprises of the designing and analysing groups, as the tentative date was close enough, we couldn't utilize our full dexterity, even though we have submitted a fair documentation of the vehicle. Validation was conducted on 22nd November 2021, in which the team members are need to present the technical details of the vehicle as well as the fully finished design is also needed to be submit on time.

The virtual simulation phase was the final step which was conducted on 28th November 2021. For this phase the fully designed vehicle is to be operated on IPG carmaker (Software) and add parameters to the vehicle, which will convert the vehicle into final result on the given conditions as if a simulation. These were the main events conducted and for the improvement from the organizer side there was a OC review which was conducted to collect the review from the participants and there suggestions to improve for next season.

The final results and award winning ceremony was also conducted on 5th December 2021.

Basil Varghese (S7 ME B)

Participated in "All India Inter University Volleyball Tournament" representing "Kerala Technological University" organised by SRM University, Chennai on 18th December 2021.

Aravind T Biju (S5 ME A)

participated in the "Rural Innovation's Meet 2021 Organized by Kerala State council for Science, Technology and Environment during 20th and 21st December 2021, Sasthra Bhavan, Thiuvananthapuram

Febin K Sidheek (S5 ME A)

⇒ Participated in the Webinar on "YES U CAN" organised by the Department of Mechanical Engineering, Viswajyothi College of Engineering and Technology, Vazhakulam on 19th November 2021.

Cyriac Jacob (S7 ME A)

 Successfully completed a NPTEL course on Engineering Metrology on Oct 2021.

- Completed a one-month online internship on HYBRID AND ELECTRIC vehicles on July 2021.
- Completed a five day online internship on INNOVATION, DESIGN AND MANUFACTURING conducted by EMIRITES STEEL TUBES PVT LTD on July 2021.
- Attended a webinar on 3D PRINTING AND APPLICATIONS conducted by Viswajyothi College of Engineering and Technology on 20th September 2021.
- Attended an online workshop on PRODUCT DESIGN conducted by SAE CET on 20th June 2021.

Kevin Stalin (S5 ME B)

- Completed 5 Day internship on Additive Manufacturing by Alphasys
 3D printing solution on September 2021
- Participated in 2 Day Workshop On Lab Of Fused Deposition Modelling on September 2021
- Completed a quiz on the topic in Additive Manufacturing by Alphasys
 3D printing solution on September 2021.

Geo Francis (S5 ME B)

- Completed a 5 Day online internship on "IC Engines" organized by Techmaghi and SAE, MA College of Engg., Kothamangalam from 23rd August 2021 to 27th August 2021
- Participated in the webinar Automobile Journalism, Techmaghi & SAE MA College, Kothamangalam conducted on 28th August 2021
- Participated in the webinar on Car Detailing, Techmaghi & SAE MA College, Kothamangalam 29th August 2021
- Participated in the webinar on The Future of Mobile App Industry, HUAWEI Training 11th October 2021
- Participated in the webinar on Yes U Can, VJCET, Vazhakulam on 19th November 2021
- Completed a course on Creating Toolpaths for a CNC lathe, Coursera on 20th December 2021

Judson Jose (S5 ME B)

- Completed 5 day internship on Additive Manufacturing by Alphasys 3D printing solitions on September 2021
- Participated in 2 day workshop on Lab of Fuse Deposition modelling on September 2021
- Participated in quiz competition on topic "Additive manufacturing by Alphasys 3D printing solutions" on 2021
- Participated in SAEINDIA Northern section EFICYCLE event held on November 2021

Varghese P K (S5 ME B)

- Participated in the webinar on "yes u can"organised by VJCET Vazhakulam on 19th November 2021
- Participated in TIFAN competition organised by SAE India
- Completed 7 days Bootcamp on Basics of Web Development.

Aluke John (S5 ME B)

- Completed 5 Day internship on Additive Manufacturing by Alphasys
 3D printing solution on September 2021
- Participated in 2 Day Workshop On Lab Of Fused Deposition Modelling on September 2021
- Completed a quiz on the topic in Additive Manufacturing by Alphasys
 3D printing solution on September 2021.

Basil Mathew (S5 ME B)

- Completed quiz on the topic robotics conducted by alphasys 3D printing solutions on 13th December 2021.
- Participated in the SAEINDIA northern section EFFI CYCLE 2021 held from 13th to 21st November 2021

Cyril M Syriac (S5 ME B)

- Completed 5 day internship on Additive Manufacturing by Alphasys 3D printing solitions on September 2021
- Completed 2 day workshop on Lab of Fuse Deposition modelling on September 2021
- Completed quiz on topic Additive manufacturing by Alphasys 3D printing solutions on 2021

Arun Kumar K (S5 ME B)

- Completed quiz on the topic robotics conducted by alphasys 3D printing solutions on 13th December 2021.
- Participated in the SAEINDIA northern section EFFI CYCLE 2021 held from 13th to 21st November 2021
- Participated in online training webinar on IEEE Xplore organized by Viswajyothi College of Engineering and Technology on 16-12-2021

Ashik Raju (S5 ME B)

- Completed quiz on the topic robotics conducted by alphasys 3D printing solutions on 13-12-2021
- Participated in the SAEINDIA northern section EFFI CYCLE 2021 held from 13th to 21st November 2021
- Participated in online training webinar on IEEE Xplore organized by Viswajyothi College of Engineering and Technology on 16-12-2021

Chrisal Thomas (S5 ME B)

- ⇒ Completed quiz on the topic robotics conducted by alphasys 3D printing solutions on 13 -12-2021
- Participated in the SAEINDIA northern section EFFI CYCLE 2021 held from 13th to 21st November 2021

Harigovind S (S7 ME A)

- Participated in navakerala yuvakeralam student meet with Chief minister of Kerala held at Cochin University
- Participated in 5NANO 2021 IEEE International Conference in Nano Technology.
- Presented a paper "Carbon fibre reinforced with vespel and honey comb structure" in 5 NANO 2021
- Successfully completed NPTEL course on Engineering Metrology

Akshay Krishna U (S5 ME B)

- Webinar on "car detailing" by Emil George Turtlewax kochi organized by techmaghi on 29 August 2021
- Webinar on "Automobile journalism"by Sarath Reji Rovokid volgz organized by techmaghi on 28 August 2021
- Workshop on Practical approach of robotics implementation in Thinkercad software by Alphasys 3D printing solutions from 12/12/2021 to 13/12/2021
- Participated in the webinar on Yes U Can, VJCET, Vazhakulam on 19th November 2021
- Completed a 5 day online intership program on "IC Engines" organized by TECHMAGHI from 23 to 27 August 2021

Albert Shaju (S1 ME)

Completed a 5 day online intership program on[™] Zero to Hero of Robotics[™] conducted by Alphasys 3D Printing Solutions from 07-11 December 2021.

Martin K.J (S3 ME)

 Completed a online internship program of additive manufacturing and production system conducted by alphasys 3d printing solutions on 10th May 2021

Basil Eldhose (S3 ME)

- Completed a 5 day online intership program on Zero to Hero of Robotics conducted by Alphasys 3D Printing Solutions from 07-11 December 2021
- Completed 2 days workshop on practical approach of robotics implementation in tinkercad software conducted by alphasy 3D printing solution from 12-12-2021 to 13-12-2021

Participated in the online training/webinar on "IEEE Xplore" organized by Viswajyothi Collage of Engineering and Technology on 16 December 2021

Ben Varghese Thampi (S3 ME)

 Participated in "EV Era", a webinar on electric vehicles by IEEE PES SBC college of Engineering Attingal on 15 August 2021

Aleena Binu (S3 ME)

- ⇒ Participated for IEEE Xtreme Coding Competition
- Volunteered for IEEE Venus campaign under IEEE Wie Kerala Section

Noel Mathews (S3 ME)

 Completed an online Internship program of Additive Manufacturing and Production System conducted by Alphasys 3d printing solutions on 10th May 2021

Chrisal Thomas, Ashik Raju, Arun Kumar K & Basil Mathew of S5 ME B Completed 2 day workshop on practical approach of robotics implementation in tinkercad software conducted by alphasy 3D printing solution from 12th to 13th December 2021.

Akshay Krishna U, Chrisal Thomas, Basil Mathew, Arun Kumar K, & Ashik Raju of S5 ME B Completed 5-day online Intership program on "Zero to Hero of Robotics" conducted by alphasys 3D printing solution from 7th to 11th December 2021

KTU Sponsored Five Days Online Faculty Development Program on Supply Chain Modelling and Logistics Management

KTU Sponsored Five Days online faculty development programme on "Supply Chain Modelling and Logistics Management" was held at the Department of Mechanical Engineering, Viswajyothi College of Engineering and Technology, Vazhakulam from 05th to 09th July 2021. The FDP aims to help any faculty desiring to carry out research in the area of supply chain management and logistics. This course will also aid the faculty to learn the latest trends in the area of supply chain management. The FDP was attended by 64 participants from faculty members of Mechanical Engineering, Management studies and Science and Humanities background. The Coordinators was Dr. Sajan T John, Mr. Nibin B. Mr. Nidheesh K & Mr. Akash Paul Savio





Webinar on "Application of 3D Printing in different fields, the importance of simulation in AM, software used for the simulations"

Department of Mechanical Engineering, VJCET organized a webinar on "Application of 3D Printing in different fields, the importance of simulation in AM, software used for the simulations" for mechanical engineering students of the college on 20th September 2021. The Resource Person was Mr. Deepak Sharma, Ph.D. PMRF (Pursuing) Department of Mechanical Sciences, IIT Madras. The Various objectives of the webinar are introduction to AM processes, Applications of AM in aerospace, biomedical and construction, Design tools for AM, Importance of design tools in AM. The Faculty Coordinators of the webinar was Mr. Lovin Varghese, Mr. Abraham Antony & Mr. Akash Paul Savio. The Student Coorindators are Snobin Mathew & M. Krishnaprasad.

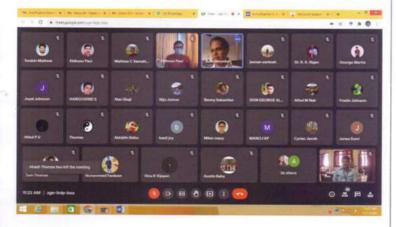


Webinar on "FUTURE OF HIGHER EDUCATION IN INDIA"

A webinar was conducted by department of Mechanical Engineering, in association with R&D cell, VJCET on 17 November 2021 on the topic 'FUTURE OF HIGHER EDUCATION IN INDIA', in connection with National Integration Day. Prof. Achuthsankar S Nair, Professor in the department of Computational Biology and Bioinformatics, University of Kerala, Trivandrum was the speaker. The session was conducted through the online platform 'Google Meet' and started by 11 am with a welcome speech by Dr. K Shunmugesh, HOD, ME. Principal Dr. K K Rajan gave the

presidential address. The speaker, Prof. Achuthsankar S Nair, explained the current scenario of higher education system in India. He also gave awareness about the system followed by top level universities. The session was conducted for final year students and a total of 63 students participated.





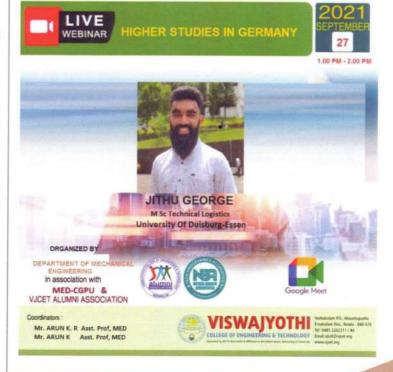
Webinar on "The scope of Mechanical engineering- The evergreen branch"

An Online talk was organized by Mechanical Engineering Department on "The Scope of Mechanical Engineering- The Evergreen Branch" to Selected Plus two students & parents in association with Alumni Association of VJCET chapter on 26th August 2021. The objective of this program is to have an interactive session with Experts & Alumni of VJCET from various domains of Mechanical Engineering. Alumnis shared their the experience on their relevant field of work. They also projected the different scopes of mechanical engineering stream in the current scenario.



Webinar on "Higher Studies in Germany"

Department of Mechanical Engineering and Alumni association jointly organized a Career opportunity program on "Higher Studies in Germany" for final year students on 27 September 2021. Resourse person was Mr. Jithu George, Msc Technical Logeistics, University of Duisburg-Essen. He shared the process for applying Masters in Universities at Germany. He also motivated the students to apply scholarship for higher studies.



S1 ME BEN VARGHESE THAMBI (SGPA-9.76)



S3 ME-A-ASHIN K SUNNY (SGPA-9.55)



S3 ME-B-ALBIN TONY (SGPA-9.23)



ABIL JUSTIN INFOSYS



Placement Details

INFOSYS



BASIL VARGHESE DON GEORGE ALEX **INFOSYS & TCS**



S6 ME A SNOBIN MATHEW (SGPA-9.78)



BASIL VARGHESE (SGPA-9.09)



S8 ME A AMAL PRATHEESH (SGPA-9.58)



HARIGOVIND S **INFOSYS & TCS**



JIBIN GEORGE **INFOSYS & TCS**



ALBIN ROY TCS



S8 ME B **ABY JOSHY** (SGPA-9.63)



S7 ME B Hritik Binoy (SGPA-9.18)



ATHUL M NAIR TCS



AUSTIN BABY TCS



FREDIN JOHNSON TCS



GEORGEY EMMANUEL BASTIAN TCS



JUDSON JOSE TCS*



MATHEW C VAMATTAM TCS

ACADEMIC RESULTS

S1 ME-40.63%

S3 ME-33.33%

S6 ME-56.81%

S8 ME- 95.57%

2017-2021 Batch-69.92%



MATHEW MATHEW GEORGE TCS



ABY JOSHY Fr. Puthenkulam Memorial Award **Best Academic** Performer &

Best Outgoing Student from the Dept.



HRITIK BINOY Fr. Puthenkulam Memorial Award **Best Academic** Performer

