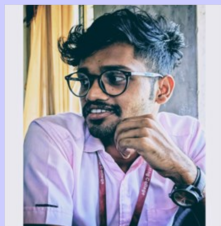


Student Activities

1. University Position –Mr. Kiran AS (2016-2020 Batch- ME-B) has secured one among the top two percentage of all the successful candidates of B.Tech Degree Mechanical Engineering registered under KTU and graduated in the year 2020 based on CGPA.
2. University Position –Ms. Dinsa Davis (2016-2020 Batch- ME-A) has secured one among the top two percentage of all the successful candidates of B.Tech Degree Mechanical Engineering registered under KTU and graduated in the year 2020 based on CGPA
3. Mr. Vishnu V M [S4 ME-B] attended a two days workshop on Emerging trends in mechanical engineering conducted by MUSLIAR COLLEGE OF ENGINEERING in August 2020
4. Mr. Vivek V K [S4 ME-B] attended a programme “3D MODELLING USING AUTODESK INVENTOR conducted by Innovation and Entrepreneurship Development Cell, JECC in the December 2020 .
5. Mr. Sanav S Pulikkal [S4 ME-B] & Mr. Sharun George [S4 ME-B] Participated and completed 40hours Google digital workshop on “The fundamentals of digital marketing” in the month of July 2020.
6. Mr. Justin Jose [S4 ME-B] attended a 2 days Online workshop on “The art of technical writing” Conducted by Department of Mechanical engg., JECC,Thrissur & ISTE,Jyothi chapter in August,2020.



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Approved by AICTE & affiliated to APJ Abdul Kalam Technological University
A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR
JYOTHI HILLS, VETIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777
NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

DEPARTMENT OF MECHANICAL ENGINEERING NEWS LETTER

Volume IX, Issue II

July—December 2020

01

Vision

To provide quality education of international standards in Mechanical Engineering and promote professionalism with ethical values, to work in a team and to face global challenges.

Mission

- To provide an education that builds a solid foundation in Mechanical Engineering.
- To prepare graduates for employment, higher education and enable a lifelong growth in their profession.
- To develop good communication, leadership and entrepreneurship skills to enable good knowledge transfer .
- To inculcate world class research program in Mechanical Engineering.

H.O.D's Desk



Mechanical engineering is the study of objects and systems in motion, one of the most diverse and versatile engineering fields. The role of a mechanical engineer is to take a product from an idea to the marketplace. The field of mechanical engineering touches virtually every aspect of life on earth, including the human body, a highly complex machine.

Department Achievements

- The Department of Mechanical Engineering in association with SAEINDIA Collegiate club & Association of Mechanical Engg. Students(AMES) of Jyothi Engineering College was organized a webinar on "**Biomimicry an innovative tool inspired from nature**" on 09-07-2020 (Tuesday) 11.00am. The session handled by Mr. C.Karunakaran, Project Staff-ADRB, School of Mechanical Engineering, VIT,Vellore.



- The Department of Mechanical Engineering organized a Two days International Online Workshop on "**THERMAL MANAGEMENT OF ELECTRONICS**" In association with ISTE, Jyothi chapter & Association of Mechanical Engineering Students (AMES) on 27/07/2020 & 28/07/2020. The sessions handled by Dr. Ajith Krishnan R & Dr. Uday Kumar G from Kookmin University Seoul, South Korea, Dr. Praveen B(PhD, NIT Trichy) and Dr. Kumaresan G from Bannary Amman Institute of Technology, Tamilnadu.



- The Department of Mechanical Engineering, in association with ISTE-JECC Chapter was organized a two days online workshop on "**THE ART OF TECHNICAL WRITING**". on the 7th & 8th of August, 2020. The sessions handled by Dr. Abhilash Suryan, Dept. of ME, College of Engineering Trivandrum, Dr. Shubhada Nagarkar from Savitribai Phule Pune University, Dr. Ramesh L Gargas from IIT Madras and Dr. Sreenda from KSCSTE Thiruvananthapuram.



Staff achievements

- Mr. Cijil B. John [AP-ME] and Dr. Deepanraj, B.[Asso.Prof.ME] published a research paper titled "**Estimation of fuel properties and characterisation of hemp biodiesel using spectrometric techniques**" in *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (SCI)*, DOI:10.1080/15567036.2020.1842559.
- Mr. Cijil B. John [AP-ME] and Dr. Deepanraj, B. [Asso.Prof.ME] presented a research paper titled "**Palm Stearin biodiesel: Evaluation of fuel properties and characterization using GC-MS, FTIR and TG-DSC/DTG techniques**", in the *1st Virtual International Conference on Electrification and Digital Mobility 2020 (EDiMo-2020)*, 3-4 September 2020, organized by the Department of Automobile Engineering, HITS in association with Trier University of Applied Sciences, Germany.
- Mr Anto Zacharias assistant professor presented a paper on "**E-mobility vehicle for physically challenged**" in the first virtual conference on electrification and digital mobility 2020 held on 3-09-2020 & 04-09-2020.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO I: Graduate Engineers shall have strong practical and theoretical exposure in the field of Mechanical Engineering and will contribute to the society through innovation and enterprise.

PEO II: Graduate Engineers shall have global outlook and technological leadership, good employments or opt for higher studies/research and have creative thinking to initiate and develop innovative ideas.

PEO III: Graduate engineers shall have excellent team works, communication and interpersonal skills having high morales and ethical values.

PROGRAMME OUTCOMES (POs)

PO 1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3. 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.

PO 4. 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.

PO 5. 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.

PO 6. 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.

PO 7. 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.

PO 8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10. 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.

PO 11. 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.

PO 12. 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.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1: Graduates would be able to apply their knowledge in the domains of manufacturing, fluid and thermal sciences to solve engineering problems.

PSO 2: Graduates would be able to apply the principles of design and analysis on product design with the help of modern CAD/CAM tools.

PSO 3: Graduates would be able to apply the basic principles of engineering and management practices in various practical fields to engage themselves in research /Industry/Society.

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