

NEHRU COLLEGE

OF ENGINEERING & RESEARCH CENTRE

NAAC ACCREDITED | ISO 9001:2015 CERTIFIED INSTITUTION



INSTITUTE VISION

To mould true citizens who are millennium leaders and catalysts of change through excellence in education.

INSTITUTE MISSION

NCERC is committed to transform itself into a center of excellence in Learning and Research in Engineering and Frontier Technology and to impart quality education to mould technically competent citizens with moral integrity, social commitment and ethical values.

We intend to facilitate our students to assimilate the latest technological know-how and to imbibe discipline, culture and spiritually, and to mould them in to technological giants, dedicated research scientists and intellectual leaders of the country who can spread the beams of light and happiness among the poor and the underprivileged.

DEPARTMENT VISION

Producing internationally competitive Mechanical Engineers with social responsibilities and sustainable employability through viable strategies as well as competent exposure oriented quality education.



DEPARTMENT MISSION

MD 1: Imparting high impact education by providing conducive teaching learning environment.

MD 2: Fostering effective modes of continuous learning process with moral and ethical values.

MD 3: Enhancing leadership qualities with social commitment, professional attitude, unity, team spirit and communication skill.

MD4: Introducing present scenario in research and development through collaborative efforts blended with industry and institution.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: Graduates shall have strong practical and technical exposures in the field of Mechanical Engineering and will contribute to the society through Innovation and Enterprise.

PEO2: Graduates will have the demonstrated ability to analyze, formulate and solve design engineering/thermal engineering/materials and manufacturing/design issues and real life problems.

PEO3: Graduates will be capable of pursuing Mechanical Engineering profession with good communication skills, leadership qualities, team spirit and professional ethics.

PEO4: Graduates will sustain an appetite for continuous learning by pursuing higher education and research in the allied areas of technology.

PROGRAM SPECIFIC OUTCOMES

PSO 1: Students will be able to apply principles of engineering, basic sciences & analytics including multi variant calculus & higher order partial differential equations.

PSO 2: Students will be able to perform modeling, analyzing, designing & simulating physical systems, components & processes.

PSO 3: Students will be able to work professionally on mechanical systems, thermal systems & production systems.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

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.

ACHIEVEMENTS



1. Ashish D, Subin S, Jishad J and Hareesh M (Team Plasma) of III Year Mechanical Engineering, received fund from NCERC on 11th May 2021, for their innovative project named **MEDICAL OXYGEN CONCENTRATOR** which has been designed to fight against the shortage of Oxygen in hospitals

2. Ashish D, Subin S, Jishad J and Hareesh M (Team Plasma) of III Year Mechanical Engineering, received fund from IMIT on 20th Feb 2021, for their innovative project named **WASTE INCINERATOR BOX** which has been designed to reduce the pollutions caused by non-degradable materials

3. Ashish D and Team Plasma of III Year Mechanical Engineering, received certificate from IMIT on 20th Feb 2021, for their innovative project named **PLASMA HYBRID ENGINE** which has been designed to run in both air and electrical energy as fuel for automobile

4. Ashish D and Team Plasma of III Year Mechanical Engineering, received certificate from INNOVISM on 1st Nov 2020, for their innovative project named **PLASMA WASTE INCINERATOR** which has been designed to reduce the pollution and also to generate electrical energy from waste materials.

5. Ashish D and Team Plasma of III Year Mechanical Engineering, received certificate from BRINC on Nov 2020 for their innovative project named **PLASMA WASTE INCINERATOR** which has been designed to reduce the pollution and also to generate electrical energy from waste materials

6. Ashish D received certificate from Kerala Start-up Mission on 25th July 2020 for the innovative project **MASK AND GLOVES INCINERATOR** which has been designed to fight against the COVID 19 spreading due to used mask and gloves



brinc CSL
NEW GEN IEDG IKP EDEN
CERTIFICATE OF RECOGNITION

ASHISH.D

For their attendance of Empowering Youth Hackathon November 2020




VENU **ZAINAB KHAMIS** **VISHNU NAGARAJ** **VARAD RAJAN**
Strategy Manager, Binz MENA Founder, CSL Co-Founder, 100 Startups



DST recognizes 20 projects of Nehru Institutions



P. Krishna Kumar, CEO & Secretary of NGI (3rd Left) appreciating the faculty and students behind the projects.

The Covai Mail

The Department of Science and Technology (DST), Government of India has accorded recognition for 20 of the projects of creative and innovative skills of Nehru Group of Institutions (NGI) both Kerala and Tamilnadu for the academic year 2021-2022.

It has given a financial support of 2.5 lakhs each for twenty projects. The NGI management has also sanctioned a sum of Rs.25 lakhs to take up 10 startup programmes.

Some of the innovative projects include, IoT based Smart Water Monitoring System, Women Safety Watches, Intelligent Body

Temperature, Mask and Facial Recognition, Projecting Computer, Automated Money Counting Machines for Treasuries and Message Interface through Mind Engineering.

Other important projects include IRF Trident Remote, Papercrete Paver Block with Plastic Waste, Table Top Low Speed Subsonic Wind Tunnel, Low cost 8 Channel Pressure Scanner, Smart and Self Reliant Two wheelers, Automotive Black Box and Manufacturing of Interlocking Tiles from Oyster Shell and Arecanut Fibre

Projects like Incorporation of Raw Banana Peel Powder in the preparation of Healthy

Millet Bar, Watermelon Seed Powder Instant Soup Mix, Development of Natural Soft Drinks Incorporated with Betel and Sarasparilla Extracis, Ayuroimmune, Development of Instant Herbal Waxing powder, Organic face Mask With Silver Nanoparticles, Development of Natural Peptide Anti-Microbial Coats as Biological Tools, Green Pouches, Production of Enzymes for Degrading polythene Bags, Fabrication of Helical Wind Mill, Plasma Waste Incinerator, were also recognized.

P. Krishna Kumar, CEO & Secretary of Nehru Group of Institutions, Kerala & Tamil Nadu appreciated the project-undertakers.

COVID-19 IS NOT OVER; FOLLOW THE RULES !



Ashish D, Aswin R, Jishad J, Amal Kumar T (Team Plasma) of IV Year Mechanical Engineering, Received a grant of Rs 2.5 Lacs from NGI NewGen IEDC for their innovative project Plasma waste power generator



Ashish D, Subin S, Jishad J, Amal Kumar, Anand Krishnan, Aswin Radhkrishnan and Hareesh M IV Year Mechanical Engineering, Received a grant of Rs 32,000/- from IEDC, NGI for their ongoing innovative project named OxyCon (Oxygen Concentrator)

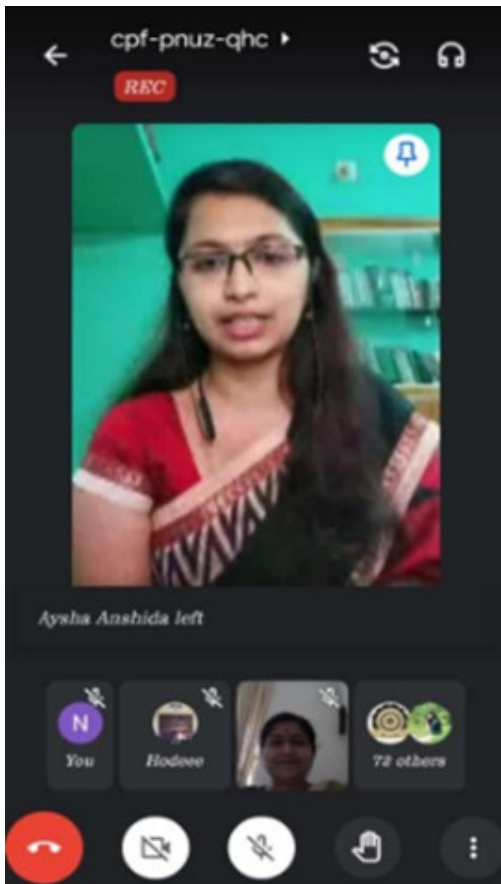


Ashish D and Jishad J Received certificate for their innovative project named PLASMA WASTE INCINERATOR in Nov 2020



Ashish D, Subin S, Jishad J, Anand Krishnan, Aswin R, Received certificate of recognition from IMIT on 20th Feb 2021, for their innovative project named PLASMA HYBRID ENGINE

International Women's Day Celebration-2021



The International Women's Day celebration organised by Department of Mechanical Engineering was conducted on 08th March 2021 at 2:30 pm to 4.00 through online mode(Google meet).

Dr. George Job K (Professor & HOD, Mechanical Department) welcomed the dais and all others present. Presidential address was given by Prof. Dr. Ambika Devi Amma T (Principal, NCERC). Then , Dr.Sunilaa George (Professor & HOD, Civil Department, EASA College Of Engineering &Technology) inaugurated the programme followed by a webinar on Women In Leadership position".

International Women's Day on 8 March is a day to celebrate the social, economic and political achievements of women, reflect on progress and demand gender equality. For over a hundred years, International Women's Day has put the spotlight onto issues affecting women all over the world.

All events were conducted in presence of Dr.George Job K, Professor & HOD, Mechanical Department, NCERC, PAMPADY by respecting all the covid-19 protocols

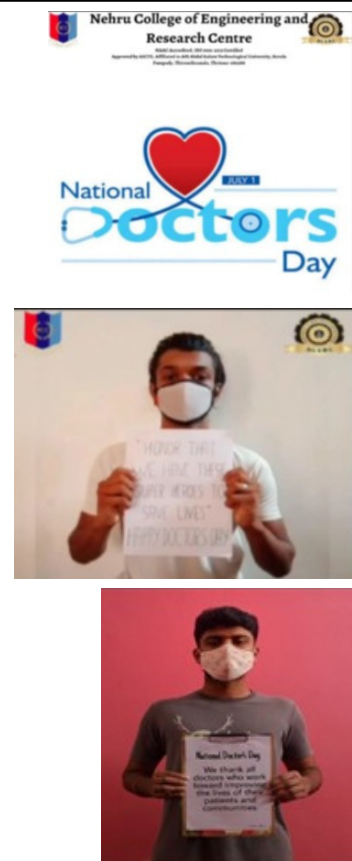
Doctor's Day Celebration-2021

Doctor's Day celebration organised by Department of Mechanical Engineering was conducted on 01st July 2021 at 10:30 am to 12.00 pm through online mode(Google meet).

Dr. George Job K (Professor & HOD, Mechanical Department) welcomed the dais and all others present. Presidential address was given by Prof. Dr. Ambika Devi Amma T (Principal, NCERC). Then , Dr. P Thulasi (Obstetrics Gynecology, PK DAS Institute Of Medical Science, Palakkad) inaugurated the programme.

Students expressed their gratitude towards doctors for their selfless services especially during the current Covid pandemic . They were shown video highlighting contributions of the medical fraternity to the society. Students designed posters which shows respect towards the Doctors . They also participated in an online interactive session with Dr. Thulasi, Obstetrics Gynecology, PK DAS Institute Of Medical Science, Palakkad.

All events were conducted in presence of Dr.George Job K, Professor & HOD, Mechanical Department, NCERC, PAMPADY by respecting all the covid-19 protocols.



INAGRUAL FUNCTION OF MECHANICAL ASSOSIATION 2021



NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE
(Accredited by NAAC)
Pampady, Thiruvilwamala, Thrissur-680588

DEPARTMENT OF MECHANICAL ENGINEERING
PROUDLY ORGANIZES . . .

MECHANICAL ASSOCIATION 2021
(ASSOCIATION OF ROYAL MECHANICAL ENGINEERS)

OFFICIAL INAUGURATION
AGENDA

Welcome Address : **Dr. George Job K**
Professor & HOD ME Dept.

Presidential Address : **Prof. Dr. Ambikadevi Amma T**
Principal, NCERC

Inaugural Address : **Mr. Sreejith A**
Assistant Engineer, Irrigation,
Government of Kerala.

Expert Talk : **Dr. V Rajkumar**
Associate Professor, ME Dept.,
PSGiTech,Coimbatore

Vote of Thanks : **Mr. Rahul R**
Assistant Professor, ME Dept.

LINK: [HTTPS://MEET.GOOGLE.COM/IYH-JRJV-EGB](https://meet.google.com/IYH-JRJV-EGB)

12/06/2021
02:00 PM- 04:00 PM

The installation of Mechanical Engineering Association started with the energetic welcome address by Dr. Gorge Job K, HOD of Mechanical Department. The Chief Guest, Mr. Sreejith A, Assistant Engg., Irrigation, Gov of Kerala, emphasized on the Importance of Interdisciplinary Knowledge and to prepare oneself according to the growing needs of the engineering society. Joint Correspondent, Dr. V Raj Kumar Associate Proff. Department ME ,PSG iTech, Coimbatore

MEconnect, a platform that will help students prepare themselves for placements. Its aim is to make the students to set up the right path and decide their career. It is a developed forum from the prototype of the Skill Development courses conducted for the 1st year students with the help of the feedback and experience we the association taken a step ahead where the MEconnect acts as a platform for the students to get connected with

technical flow between the seniors and juniors so that they are aware and will be able to develop themselves in recent technical development areas and also a platform to prepare themselves for the placements. Its aim is to make the students to set up the right path and to decide their career



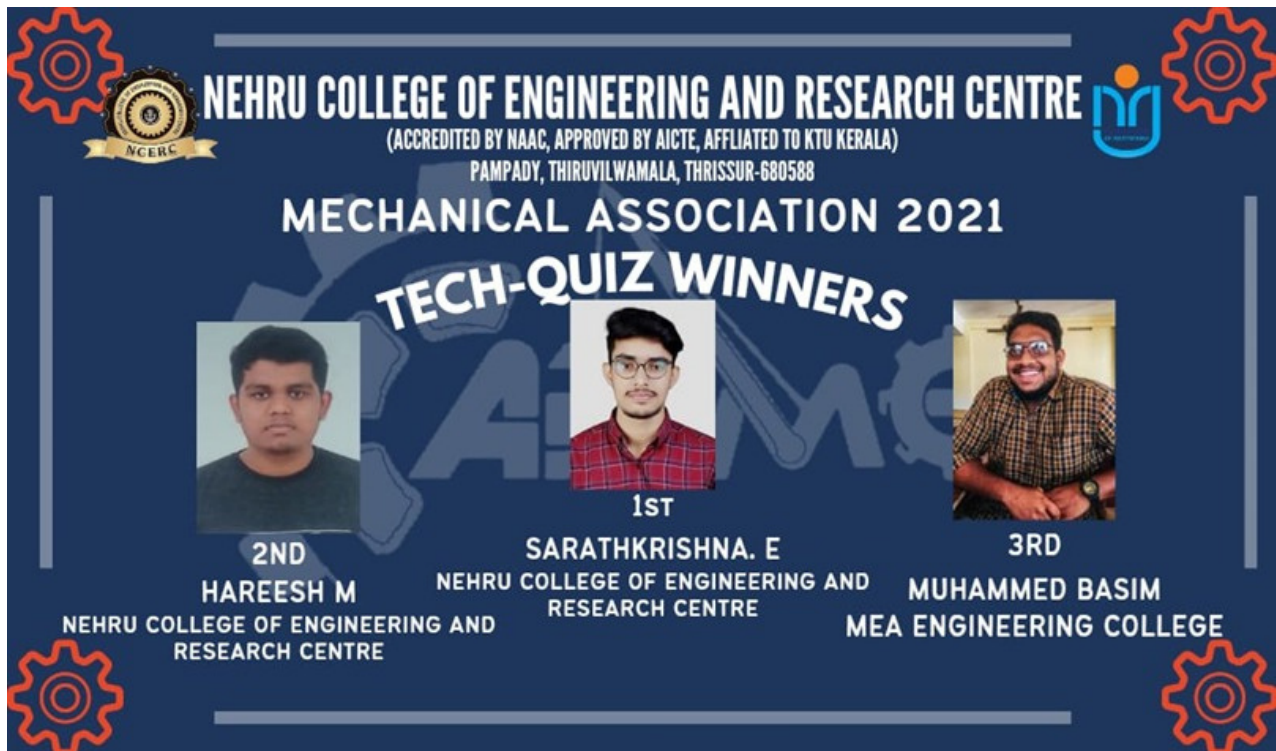
ONLINE POSTER MAKING CONTEST



In light of the celebration of the Association day, the Mechanical department of ncerc launches the Digital Poster Making Contest on the topic "GREEN MANUFACTURING"

The participants may hand draw/sketch the poster on A3 or A4 pages or create digitally designed posters through computer software as well. Posters can be submitted in PDF or JPEG format

TECH QUIZ



THE MECHANICAL ASSOCIATION contected tech quiz as inter college completion. It was won by 1st SARATH KRISHNA, 2ND HAREESH M , 3RD MUHAMMED BASIM.

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