# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI

# MECHNOVA

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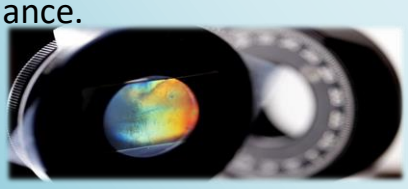
## *LATEST IN MECHANICAL ENGINEERING!!*

**Ceramic-like material help craft heat-tolerant films from industrial waste**

A team of researchers at the University of Michigan employed MXenes, a type of ceramic-like material derived from industrial waste materials to develop heat-tolerant films capable of twisting light beams. This innovation paves the way for imaging applications, such as capturing the hot turbulence of aircraft propulsion systems, helping aerospace engineers improve engine designs for better performance.



## *INSIDE THIS ISSUE:*



## VISION

"To become a centre of excellence in Mechanical Engineering, producing innovative and creative mechanical engineers to meet the global challenges"

## MISSION

1. To Provide a platform to the students towards attaining quality education in Mechanical Engineering.

2. To Educate students about professional & ethical responsibilities and train them to build leadership and entrepreneurship qualities for their career development.

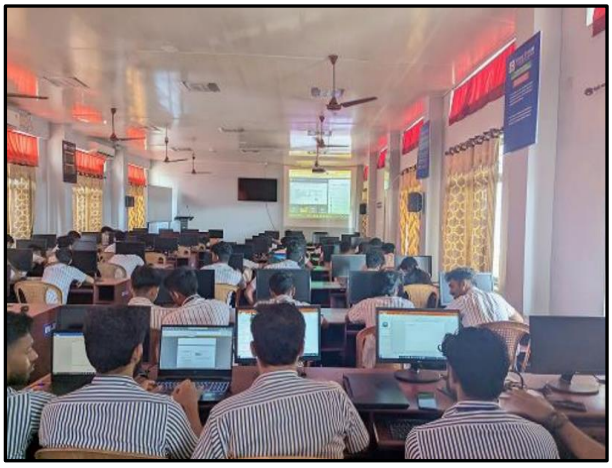
3. To Create opportunities and guide students in acquiring career-oriented jobs in the field of Mechanical Engineering.

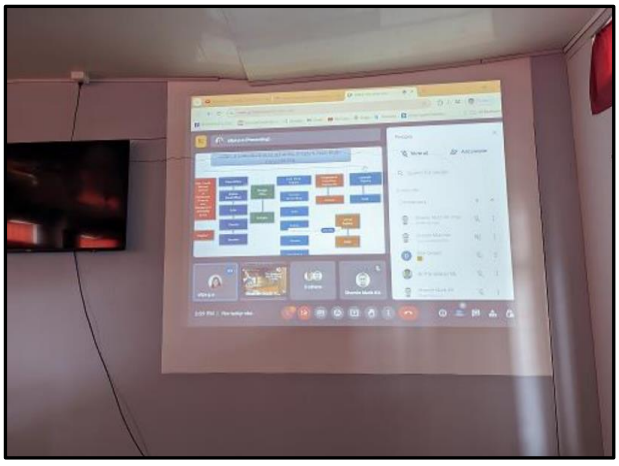
# NAAC ACCREDITATION - A GRADE

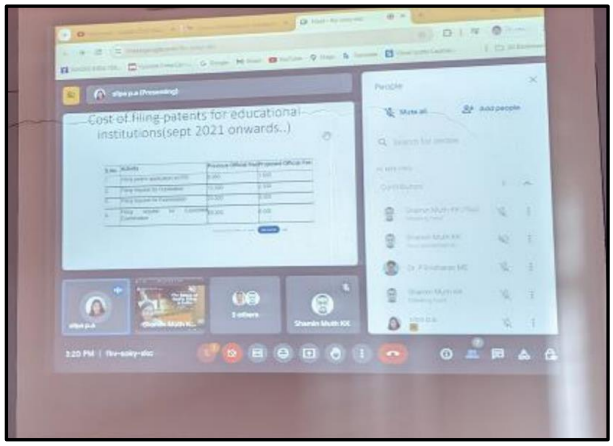


Vimal Jyothi Engineering College has achieved a significant milestone by being NAAC accredited with a CGPA of 3.15 on a seven-point scale, earning an A Grade. This accreditation is valid for a period of five years, starting from May 16, 2024. The accreditation was awarded following an extensive audit conducted on May 9th and 10th by an expert team. This recognition underscores the institution's commitment to academic excellence and quality assurance. It reflects the dedication of the faculty, staff, and students towards maintaining high standards in education and institutional governance.

# WORKSHOP ON ''IPR & PATENTS AND DESIGN FILING''

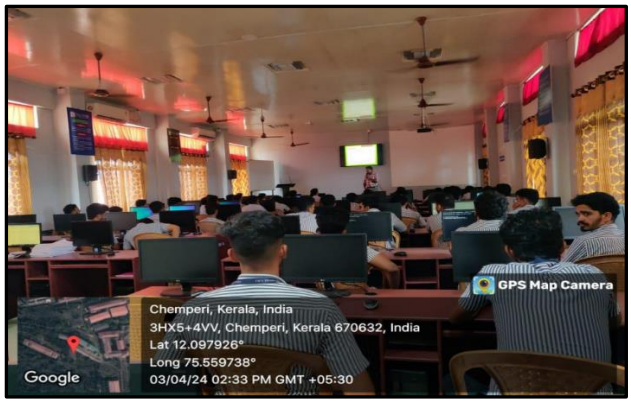







An online workshop on "Intellectual Property Rights (IPR) & Patents and Design filing" was conducted on April 4th, 2024, from 03:00 PM to 04:00 PM. The resource person for the workshop was Dr. Silpa PA, an Indian Patent Agent and Assistant Professor in the Electronics and Biomedical department at Adi Shankara Institute of Engineering and Technology. The convener of the program was Cdr. Raju K K (Retd), HOD of Mechanical Engineering, with Mr. Dilin Dinesh and Mr. Shaminmuth K K, Assistant Professors in Mechanical Engineering, serving as coordinators. The workshop aimed to educate participants on the significance of Intellectual Property Rights, patents, and design filing. Dr. Silpa PA's expertise as an Indian Patent Agent and academician added valuable insights to the session, enhancing the understanding of the attendees on these crucial topics.

# WORKSHOP ON "APPROACH TO NOVEL RESEARCH TECHNIQUES"







On April 3rd from 2:00 to 3:30 PM, a workshop titled "Approach to Novel Research Techniques" was held at the CAD Lab, Mechanical Block. Dr. Anto Sahaya Dhas, Professor and Head of the ECE Department at Vimal Jyothi Engineering College, served as the resource person. The principal objective of the workshop was to empower participants with the ability to define research problems and select suitable research tools, as well as to assist them in preparing research proposals.

This workshop catered to the needs of undergraduate students and faculty members who are either involved in or planning to undertake research projects. Attendees included students from the S8 ME class and faculty members. The workshop aimed to inspire and educate attendees about the world of research and its implications in the field of Mechanical Engineering.

# FINAL YEAR STUDENT'S PROJECT EXPO [2020-24 BATCH]

On April 15th, the final year students of the 2020-2024 batch showcased their projects at the Project Expo. Mr. Mejo M Francis, Assistant Professor of Mechanical Engineering, coordinated the program. A total of 15 projects were presented during the expo, each demonstrating the culmination of the students' efforts and knowledge acquired throughout their academic journey. The projects covered a diverse range of topics and disciplines, reflecting the students' interests and expertise across various fields. The expo provided an excellent platform for the students to exhibit their innovative ideas and practical skills, receiving feedback and recognition from peers, faculty, and industry professionals present at the event.

# FAREWELL TO 2020-24 ME BATCH

## Program Educational Objectives (PEO'S)

**PEO1:** Graduates will be able to pursue successful professional career in Mechanical Engineering with sound technical and managerial capabilities.

**PEO2**: Graduates will have skills and knowledge to formulate, analyze and solve problems in mechanical engineering to meet global challenges.

**PEO3**: Graduates will be capable of pursuing mechanical engineering profession with good communication skills, leadership qualities, team spirit and professional ethics to meet the needs of the society.

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

## 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, review 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 modelling 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 (PSOs)

**PSO1:** Ability to use advance design, modelling, analysis, manufacturing tools and techniques to provide a solution in mechanical engineering problems.

**PSO2:** Ability to design, develop, implement and manage a product development process.


***Mr. Arunlal M P (Asst. Prof, ME)***

***Student Editors:***

***Mr. Nirmal Dev P (S8 ME), Ms. Anusree P Nair (S8 ME)***