

VOLUME XIII - B

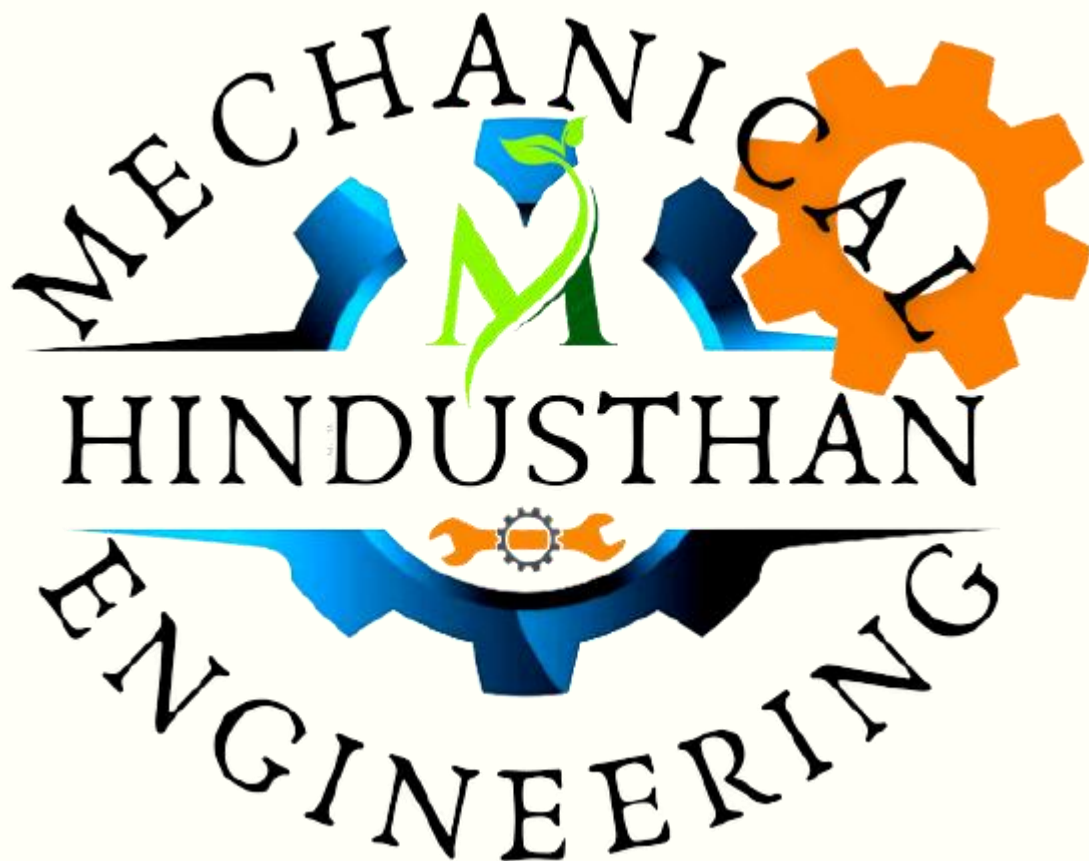
2020-2021

EVEN SEMESTER

# ALMANAC

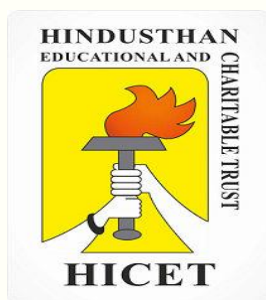
DEPARTMENT OF MECHANICAL ENGINEERING

NEWS LETTER



## FROM THE EDITOR'S DESK

Warm greetings! I take immense pleasure and privilege to pen a few words for our college Newsletter. A recap of all the activities and programmes that were conducted during the academic year 2020-2021 is presented in this edition. Eminent speakers from industries, premier institutions and professional academies were invited to share their valuable experience and knowledge with our anxious students. With razor sharp perfection, all these activities were unitedly conducted by a team of energetic, enthusiastic faculty of our department. We are highly indebted to the invaluable assistance and support extended by the Management, Principal, department staff, office staff and other for all our entire endeavors.



**Dr.K.Siva**  
**Head of the Department**  
**Mechanical Engineering**

### **DEPARTMENT VISION**

To provide quality technical education in Mechanical Engineering and build holistic professionals who can excel in the engineering establishments and serve for the country with ethical values.

### **DEPARTMENT MISSION**

**M1:** To prepare graduates with good technical skills and knowledge.

**M2:** To prepare graduates with life-long learning skills to meet the requirements in the higher education and in society.

**M3:** To prepare graduates as a successful entrepreneur with employment skills, ethics and human values.

### **PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)**

**PEO1:** Graduates able to apply technical expertise and skills to face the Industrial challenges.

**PEO2:** Graduates able to design create and innovate economically, environment-friendly and technically feasible products with social acceptance.

**PEO3:** Graduates able to exhibit professionalism in their profession with good communication, ethics and entrepreneurship skills to meet the social challenges.

### **PROGRAMME SPECIFIC OUTCOMES (PSOs)**

**PSO1:** Able to design, analyze and apply knowledge in complex mechanical engineering problems with time effective solutions.

**PSO2:** Able to understand the relevance of engineering practices for societal requirements and become a multi faceted leader.

## **PROGRAMME OUTCOMES (POs)**

### **Engineering Graduates will be able to**

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

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.

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.

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.

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.

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.

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.

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

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

**FACULTY ACHIEVEMENTS**

S. No	Name of Faculty	Date of Award	Name of the Award	Name of the Professional Society
1	Dr.K.Siva	-	Treasurer (2020-2022)	SAEINDIA Southern Section.
2	Dr.Y.Ras Mathew	-	Treasurer (2020-2022)	SAEINDIA Southern Section, Coimbatore Division.

**BEST STUDENTS U.G PROJECT OF 2021**

S.No.	Title of Project	Name of Student	Guided by
1	Design & Fabrication of Automatic Fire sprinkler Using Shape Memory Alloys(NiTiInol)	Dheepan.S , Dhinesh.S , Divyakumar. & Jeeva.K	Mr. Y. Ras Mathew
2	Finite Element Analysis Of Shape Memory Alloy Wire (NiTiInol) At Constant Stress And Strain	Ram Kumar. S., Soundarraj. B, Thirumurugan. P & Velmurugan. P	Mr. Y. Ras Mathew
3	Design and Fabrication of wind powered air compressor	Gobinath.V.P, Gokularasu.D, Joel.R& Kabilan.M	Dr.K.Siva
4	Solid Particle Erosion Behavior Of Epoxy/MWCNTs Nano composites	Subramanian. B, Sasi Kumar. P Shankar. R & Vasanth. A	Mr. S.Alagar
5	Finite Element Method Analysis Of Panel Lug Assembly For Super Critical Boilers	Selvaprakash. M., Venkateshwaran. S Sabaresh Kumar. A & Suganthan. S	Dr.K.Siva
6	Design and Fabrication of Carbon-Ceramic Disc brake In Two Wheelers	Manoj.s Meganathan.k Navin kumar.c Peer mohamed	Mr. P.N.Karthikeyan
7	Design, Analysis and Implementation of Clamping Fixture in CNC Machine	Balaji.M Mahenthiran.S Mohamed anis.M.S	Mr. N.Prasana Venkatesan
8	Design And Fabrication Of Coconut Tree Climbing Machine	Sasikumar. A. Supratheeban. R Sakthivel.M Santhosh. K.	Mr. N.Prasana Venkatesan

9	Design and Fabrication of Disc pump for Inviscid liquids	Gokulprasad.S Kishorekumar .R Logesh kumar.A Raj kumar.R	Mr. S.Sivakumar
10	Design & Fabrication Of Lever Operated Cycle Rickshaw	Sasikumar. G Ramkumar. G Saravanakumar. M	Mr. A.Nazeer Ahamed

## PROGRAMMES CONDUCTED

**HINDUSTHAN**  
College of Engineering and Technology  
An Autonomous Institution  
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai,  
Accredited with "A" Grade by NAAC and NBA, Coimbatore - 641032.

**Department of Mechanical Engineering**

Organizes  
**A WEBINAR**  
on  
**"Job Applications, Resume Preparation and Industry Preparedness"**

**RESOURCE PERSON**  
Mr.C.Ragunath,  
Project Lead,  
Arabian Industries LLC Oman

**JUNE 26, 2021 @ 11.00 AM**

Coordinators: Mr.L.Karthick, Mr.S.Sivakumar, Mr.A.Sasikumar  
Convenor: Dr. K. Siva  
CEO and Principal: Dr. K. Karunakaran

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+91994 480 5552

[www.hicet.ac.in](http://www.hicet.ac.in)

International Webinar on "Job Applications, Resume Preparation and Industry Preparedness"  
Chief Guest  
Mr. C. Ragunath ,Project Lead,  
Arabian Industries LLC Oman.

National Webinar on "Building Student Resilience"  
Chief Guest  
Mr.Brighton Anbu,  
Haggai Institute.

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**Department of Mechanical Engineering**

Organizes  
**WEBINAR**  
on  
**"Building Student Resilience"**

**RESOURCE PERSON**  
Mr.Brighton Anbu,  
Counselor and Facilitator,  
Haggai Institute & Transform 4 Life.

**JUNE 29, 2021 @ 10.30 AM**

**Stressed! Depressed!  
Feeling Lonely!  
Going through some  
tough times!  
THEN THIS IS FOR YOU...**

Join us on  
<https://meet.google.com/csi-xfdt-die>

Coordinators: Dr. P.Jeyalakshmi, Mr.K.Sivakumar, Mr.P.John Britto  
Convenor: Dr. K. Siva  
CEO and Principal: Dr. K. Karunakaran

+91 98436 26060

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**Department of Mechanical Engineering**

Organizes

**WEBINAR**  
on

தொற்று நோய்களுடனான போராட்டத்தில்,  
மரபு சார்ந்த மருத்துவங்களின் பங்கு.

**RESOURCE PERSON**  
Mr.K.Sivakumar,  
Traditional Healer and Nature Enthusiast.

**JULY 02, 2021 @ 06.30 PM**

Join us on  
<https://meet.google.com/fqk-nxf-dnn>

Join for further updates  
<https://chat.whatsapp.com/KzrOBEROKO8BEpom27cpD>

For Queries  
9789721297 ; 9843626060

Coordinators  
Dr. P.Jeyalakshmi  
Mr.K.Sivakumar  
Mr.P.John Britto

Convenor  
Dr. K. Siva

CEO and Principal  
Dr. K. Karunakaran

We are together  
in the fight  
against  
COVID - 19

National Webinar on “Traditional Medicines”  
Chief Guest  
Mr. K.Sivakumar,  
Traditional Healer and Nature Enthusiast

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**Department of Mechanical Engineering**

Organizes

**A TECHNICAL TALK**  
on

**"Ergonomics in Everyday Life"**

**RESOURCE PERSONS**

  
Dr. M.Wilson Kumar  
Assistant Professor (SG),  
Karunya Institute of Technology  
and Sciences, Coimbatore.

  
Dr. Mona Sahu  
Assistant Professor,  
Karunya Institute of Technology  
and Sciences, Coimbatore.

**JULY 17, 2021 @ 10.30 AM**

Coordinators  
Dr. P.Jeyalakshmi  
Mr.P.John Britto  
Mr.K.Sivakumar

Convenor  
Dr. K. Siva

CEO and Principal  
Dr. K. Karunakaran

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978 972 1297

[www.hicet.ac.in](http://www.hicet.ac.in)

National Webinar on “Ergonomics for  
Everyday life”  
Chief Guest  
Dr.M.Wilson Kumar & Dr.Mona Sahu  
Karunya University.



National Webinar on "How to become an Entrepreneur"

Chief Guest  
Mr. Husain Ahmed,  
Managing Director,  
Cheran Academy, Coimbatore.



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Department of Mechanical Engineering

Organizes

IIC - SELF DRIVEN ACTIVITY  
WEBINAR

on

"How to become an Entrepreneur"



RESOURCE PERSON  
Mr. Husain Ahmed,  
Managing Director,  
Cheran Academy, Coimbatore.

JULY 06, 2021 @ 10.00 AM

Coordinators	Convener	CEO and Principal
Mr.A.Sasikumar	Dr. K. Siva	Dr. K. Karunakaran
Mr.L.Karthick		
Mr.S.Sivakumar		

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Department of Mechanical Engineering

Organizes

A TECHNICAL TALK  
on

"Role of AI and Machine Learning in  
Mechanical Engineering"



RESOURCE PERSON  
Mr. Dineshkumar Ponnusamy,  
Senior Application Consultant,  
Capgemini America, INC

JUNE 25, 2021 @ 10.00 AM

Coordinators	Convener	CEO and Principal
Dr. M.Mohanraj	Dr. K. Siva	Dr. K. Karunakaran
Mr.L.Karthick		
Mr.C.A.Jagadish		

Join us on  
<https://meet.google.com/xcy-gczx-aub>

+91994 480 5552

National Webinar on "Role of AI in  
Mechanical Engineering"  
Chief Guest  
Mr. Dineshkumar Ponnusamy,  
Capgemini.

**PAPERS PUBLISHED BY FACULTY**

S.No	Calendar Year	Title of paper	Name of the author/s	Name of Journal
1	2021	Thermal analysis of photovoltaic-thermal collectors - A review	Dr.M.Mohanraj	Journal of Thermal Analysis and Calorimetry
2	2021	Characterization of mechanical, electrical & thermal properties of Ag nanoparticle-reinforced Al6061 alloy	Dr.M.Mohanraj	Journal of Thermal Analysis and Calorimetry
3	2021	Photovoltaic-thermal collector assisted heat pumps using environment-friendly refrigerants.	Dr.M.Mohanraj	Journal of Processes Mechanical Engineering
4	2021	CFD modeling of a gravel coarse aggregate sensible heat storage assisted single slope solar still	Dr.M.Mohanraj	Desalination and Water Treatment
5	2021	Environment friendly alternative options for automobile air conditioners – A review	Dr.M.Mohanraj	Journal of Thermal Analysis and Calorimetry
6	2021	Performance improvements of single slope solar stills using magnets and graphite plate fins.	Dr.M.Mohanraj	Environment Science and Pollution Research
7	2021	Experimental assessment of vehicle air conditioners working with R134a and R430A	Dr.M.Mohanraj	Journal of Brazilian Society of Mechanical Sciences and Engineering
8	2021	Studies on adhesion strength and corrosion behaviour of ZnO-Mg coated on AISI 4140	Dr.M.Mohanraj	Surfaces and Interfaces
9	2021	Performance & economic analysis of a heat pump water heater assisted regenerative solar still using latent heat storage	Dr.M.Mohanraj	Journal of Applied Thermal Engineering

10	2021	Assessment of single slope solar still using block & disc magnets via productivity, economic, & enviro-economic perspectives : A comparative Study	Dr.M.Mohanraj	Journal on Environmental Science & Pollution Research
11	2021	Evaluation of welding strength & optimization on seam welding of domex steel	Dr. J. Manikandan	Journal of Materials today Proceedings
12	2021	Sustainable Manufacturing - A review of the state of the art	Dr.S.Kannan	Renewable & Sustainable Energy Reviews
13	2021	Optimization on Aircraft Landing Schedule Problems by Cuckoo Search Algorithm	Dr.C.Nithyanandam	Tierärztliche Praxis
14	2021	Investigations on Machining Performance of Monel 400 Super Alloy	Dr.C.Nithyanandam	International Journal of Innovations in Engineering and Technology
15	2021	Optimization on Aircraft Landing Schedule Problems by Cuckoo Search Algorithm	Dr.P.N.Karthikeyan	Tierärztliche Praxis
16	2021	Investigations on Machining Performance of Monel 400 Super Alloy	Dr.P.N.Karthikeyan	International Journal of Innovations in Engineering and Technology
17	2021	Assessment of single slope solar still using block & disc magnets via productivity, economic, & enviro-economic perspectives : A comparative Study	Dr.V.Senthil Murgan	Journal on Environmental Science & Pollution Research
18	2021	Performance & economic analysis of a heat pump water heater assisted regenerative solar still using latent heat storage	Mr.L.Karthik	Journal of Applied Thermal Engineering

## FACULTY MEMBERS ATTENDED TRAINING IN INDUSTRY

S. No	Date	Name of the Faculty	Name of the Industry	Outcomes of the visits
1.	7.1.2021 to 30.4.2021	Dr.S.Kannan	VOLVO EICHER	Mechanisms, Assembly & Disassembly
2.	7.1.2021 to 30.4.2021	Dr.C.Nithyanandam	VOLVO EICHER	Mechanisms, Assembly & Disassembly
3.	7.1.2021 to 30.4.2021	Mr.K.Sivakumar	VOLVO EICHER	Mechanisms, Assembly & Disassembly
4.	7.1.2021 to 30.4.2021	Mr.P.Johnbritto	VOLVO EICHER	Mechanisms, Assembly & Disassembly
5.	7.1.2021 to 30.4.2021	Mr.L.Karthick	VOLVO EICHER	Mechanisms, Assembly & Disassembly
6.	7.1.2021 to 30.4.2021	Mr.P.Sriharrish	VOLVO EICHER	Mechanisms, Assembly & Disassembly

### DOCTORAL DEGREE AWARDS

Heartfelt congratulations to **Dr.K.R.Sakthivel (Metal Casting)** on his successful completion of PhD.



**CHIEF EDITOR**

**Dr. K.Siva, M.Tech., Ph.D.  
Professor and Head**

**EDITORS**

**Mr.A.Nazeer Ahamed, M.E., Ph.D\*,  
Assistant Professor**

**Mr.P.John Britto, M.E.,  
Assistant Professor**

