

EASWARI ENGINEERING COLLEGE

An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY

RAMAPURAM CHENNAI

DEPARTMENT OF

MECHANICAL ENGINEERING

CHEIF EDITOR:

DR. M VETRIVEL SEZHIAN PROF & HEAD MECH

FACULTY:

Mr. K KARTHIKEYAN

ASST.PROF

MECHANICAL DEPARTMENT



LETTER

OCTOBER - DECEMBER

2021

STUDENT EDITORS

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VISION

To be an acknowledged leader in imparting Mechanical Engineering education, research and be a recognized resource center for industry and society

MISSION

- M1:To make the students understand the basic and advanced Engineering concepts in the core fields of Mechanical Engineering through Under-Graduate and Post-Graduate Courses.
- **M2**:To prepare the students and expose them to the basic and applied research, thus fostering creativity through recognized research canters.
- **M3**:To make the students undergo training in the Industries, identify the current problems and solve them with multidisciplinary and professional approach.
- **M4**:To prepare the students to integrate Engineering with business that encourages technological commercialization by inviting eminent entrepreneurs for seminars and workshops.
- **M5**:To make the students do application oriented projects which identify the current problems, solving them and thus contribute to the societal needs.
- **M6**:To inculcate the value of ethics, lifelong learning and widening the knowledge frontiers through long term interaction with other academia and industry.

PROGRAM OUTCOMES (PO)

- **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 modeling 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
- **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 EDUCATIONAL OBJECTIVES (PEO)

- **PEO1**: Our graduates will have fundamental technical knowledge and develop core competency in diversified areas of Mechanical Engineering along with Mathematics, Science and other allied engineering subjects in a view to expand the knowledge horizon and inculcate lifelong learning.
- **PEO2:** A fraction of our graduates will pursue advanced studies, research and develop products in the field of Mechanical engineering by developing partnerships with industrial and research agencies thereby serving the needs of the industry, government, society and scientific community.
- **PEO3:** Our graduates will be capable of building their own career upon a solid foundation of knowledge and with a strong sense of responsibility serve their profession and society ethically.
- **PEO4:** Our graduates will be prolific professionals with effective communication, leadership, teaming, problem solving, decision making skills by understanding contemporary issues and improve their overall personality for career development

PROGRAM SPECIFIC OUTCOMES (PSOs)

- **PSO1**: Students will be competent in design and analysis of thermal and fluid systems.
- **PSO2**: Students will possess the skill to apply design concepts for mechanical structures and systems.
- **PSO3**: Students will be able to design and develop industrial products using modern machines in the field of manufacturing.
- **PSO4**: Students will be able to use software to solve structural, thermal, fluid and manufacturing problems.

EASWARI ENGINEERING COLLEGE Department of Mechanical Engineering

List of Events (2021)

Event No	Date	Event	Remarks
EEC/DME/018	08.10.21 - 09.10.21	Two days webinar on Energy Simulation in Buildings	Resource Person: Dr. V. Antony Aroul Raj, Professor, Department of Mechanical Engineering, Easwari Engineering College
EEC/DME/019	10.10.21	A webinar on Thermal Product Development using Simulation Driver Design	Guest Speaker: Mr. Mahendravarman Radha, Assistant manager (Evaluation and Analysis Group) Daikin Air Conditioning India Pvt. Ltd (R&D)
EEC/DME/020	29.10.21	International Webinar on Additive manufacturing	Mr.S.Mohan Raj, Research Scholar, Lodz University, Poland
EEC/DME/021	30.10.21	Acing Mechanical job Interviews	Mr.R.Rajesh, Director, Fujitec India
EEC/DME/022	10.11.21	Let's Debate [An awareness event on World Science Day for Peace and Development]	Debate competition of students

EEC/DME/02 3	10.11.2	Quiz-O-phile [An awareness Quiz event on World Science Day for Peace and Development]	Quiz competition of students
EEC/DME/02 4	09.12.2	Debate: INDUSTRIALIZATIO N VS ENVIRONMENT	Dr. K.R. Suresh Kumar and Dr D. Peter Puspanathan judged the event
EEC/DME/02 5	27.11.2	Automotive products- Design and development	Mr.B.Balaji, Manager, Vendor development, Hyundai Mobis India
EEC/DME/02 6	18.12.2	CLUELINK – Connection Competition	Interactive event for students
EEC/DME/02 7	18.12.2	FUTSAL – 3x3 Football Competition	Football competition for students
EEC/DME/02 8	18.12.2	Shipwreck – Role Play Competition	Role play event for students
EEC/DME/02 9	16.12.2 1	DRDO/CVRDE Sponsored Special Lecture Program	Dignitaries Dr.S.Krishnakumar,Senior Technical officer,CVRDE, Dr.K.Ravichandran,Scieistn t-E, Robotics Division, Dr.B.Venkatachalapathay, Dean Research, SRM Group of Instituions, Dr. R. S. Kumar, Principal, EEC

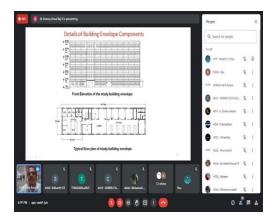
WORKSHOP

"Two days webinar on Energy Simulation in Buildings" ISHRAE Student chapter of Easwari Engineering College conducted **Two Days special** webinar on Energy Simulation in Buildings during 08th October 2021 to 09th October 2021 from 6.30 pm to 7.30 pm.

This event is exclusively for the NSDC and Solar Decathlon registered EEC Students The event was conducted online mode and about 35 participants from Easwari Engineering College attended this event actively. The event was graced by HOD, Department of Mechanical Engineering. Principal and Vice Principal gave the presidential address whereas Dr. V. Antony Aroul Raj deliberated the importance of the workshop in the current scenario.

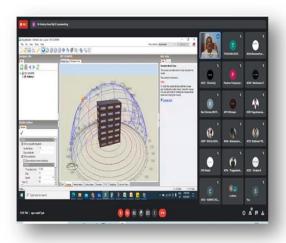
Day 1 (08.10.2021):

The objective of the workshop was to nurture the basics of Building models and Solar energy interactions and its effects. Basic Energy Simulation of Delhi site is selected and energy simulation is performed. During the session, the presenter discussed the possible ways to reduce the consumption and usage of electrical power by changing the model orientations. And it was continued by the discussion about the building materials and glazing types used.



Then he discussed about solar orientation to attain net zero energy goals, as they have significant impact on energy efficiency of the

buildings, by harnessing Sun and prevailing winds to our advantage. Followed by that there was an overview about design builder software and the drawings. On the second day, a discussion about sun path diagram is discussed as it helps in reducing both heat and cooling loads while designing a building. The discussion on sun path diagram was followed by an explanatory session on the Energy performance index by which he concluded that it as the most relevant indicator for qualifying a building as energy efficient building.





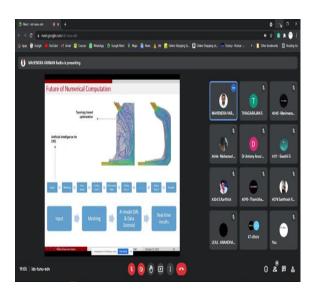
Then he rendered the diagram in design software and did a simulation on less power-consuming building with a summary of values, orientation, and materials used and concluded by producing the energy performance index which is needed. The session was made interactive and it was a great experience for students and gave an idea on energy simulation. "A webinar on
Thermal Product
Development
using Simulation
Driver Design"

ISHRAE Student chapter of Engineering Easwari College conducted a webinar Thermal **Product** on Development using Simulation Driver Design on **10th October** 2021 from 6.30 pm 7.30 to pm exclusively **ISHRAE** registered EEC Students

The event was conducted online mode and about 97 participants from Easwari Engineering College attended this event actively. The event was graced by HOD, Department of Mechanical Engineering.

The principal and Vice Principal gave the presidential address whereas **Dr. V. Antony Aroul Raj** deliberated on the importance of the workshop in the current scenario. The objective of the webinar was to understand how a Thermal Product is developed using Stimulation Driver Design.

During the session, the presenter started with Industrial Revolution (Industry 1.0 to 4.0) and started to explain about the benefits of Industry 4.0 The product development discussion was followed by a discussion on Fluid and Thermodynamic simulation, what is the need of simulation;



Computational fluid analysis as it helps in quantitative predictions of fluid flow phenomena based on conservation laws. Then he explained the SDD and the importance of CFD.

It was followed by an explanatory session on Exhaust systems. Then the presenter talked about Thermal performance study and Flow performance study followed by an overview.













SRM Easwari Engineering College





mech.srmeaswari.ac.in

"Let's Debate
(An awareness
Quiz event on
World Science
Day for Peace
and
Development)"

ISHRAE Student chapter of Easwari Engineering College conducted Let's Debate -" Is Technology helping people or making them lazy?" on 10th November 2021 from 6.30 pm to 7.30 pm exclusively for the students of Easwari Engineering

College. The event was conducted online mode and about 20 participants from Easwari Engineering College attended this event actively. The event was graced by HOD, Department of Mechanical Engineering. Dr. V. Antony Aroul Raj deliberated the Importance of Science and Technology in the current scenario



The objective of the event was to nurture the basics of technology and its effects. Dr. Ajith looked after the event as Jury of the day. During the session, the participants were divided into two teams Team A made their points on Technology helping people and Team B opposed and made their points on Technology making people lazy. After all the points made by the participants, Jury gave a small justification for their points and selected six winners who came out with their points very well. Certificates for participants and winners were issued after the event.



Quiz-O-phile [An awareness Quiz event on World Science Day for Peace & Development

ISHRAE Student Chapter of Easwari Engineering College conducted an online Quiz event on the account of World Science Day in the topic Peace and Development during 10th November 2021 from 5:30 pm to 6:30 pm exclusively of students of Easwari Engineering College.

The event was conducted in online and about participants 94 students attended this event through Google forms. The objective of the Quiz is to celebrate World Science Day in a knowledgeable way. A Google form was created to attend the quiz of 30 questions in a time period of 25 minutes

WINNERS









DEPARTMENT OF MECHANICAL ENGINEERI

ISHRAE STUDENT CHAPTER

PRESENTS





(A OUIZ COMPETITION)

"As engineers, we were going to be in a position to change the world



TOPIC : PEACE AND DEVELOPMENT

DATE: 10/11/2021

TIME: 5.30 TO 6.30PM

REGISTRATION LINK:

https://forms.gle/jsTSeLb3j94r7fQt8

FOR FURTHER QUERIES:

STUDENT COORDINATORS

STAFF COORDINATORS

fr. V. Dhachanamoorthy - +91 86789 40993 Mr. G. Yugeshwaran - +91 86675 00815

. Paulmer Pushparaj ASST.PROF/MECH Mr. D. Prabhakaran ASST.PROF/MECH

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SRM Easwari Engineering Co.



Department of MECHANICAL ENGINEERING



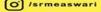


CONVENOR Dr. M. Vetrivel Sezhian, Prof. & Head / MECH

COORDINATORS Mr.B.Gopinath, Asst. Professor / MECH Mr.G.Chakravarthi, Asst. Professor / MECH







"INDUSTRIALIZATION VS ENVIRONMENT"

On account of ISHRAE day (09.12.2021), a debate competition was conducted exclusively for ISHRAE members of Easwari Engineering College. The Student Event Coordinators, Ms. Niranjana Devi S and Mr. Ahamed Mustafa M organized the event. The topic for the debate was **Industrialization Vs Environment**. The welcome speech was given by Ms. Swathi G, Student President Elect, EEC ISHRAE Student Chapter. Dr. M Vetrivel Sezhian, HOD Mechanical Engineering, Easwari Engineering College and Dr. V. Antony Aroul Raj, Professor inaugurated the event with felicitated addresses.



Our prestigious faculty members, Dr. KR. Suresh and Dr D. Peter Puspanathan sir were invited as Judges. Two groups of students debated for Industrialization and Environment. Around 26 students actively participated. The students proved their points in such a manner that the audience was convinced. Some of the points even made us think about the facts The competition was worth-enjoying for the audience. Every debater was cheered and clapped up for their pleasing presentation and sharp arguments. There were so many notable points presented by each team and the final decision was up to judges.

At the end of the event judges declared

- 1. MR KIRIPA HARI AS BEST SPEAKER
- 2. MR NISHANTH AS BEST STRIKER
- 3. MR DANIEL AS BEST FACT COLLECTOR,
- 4. MR AMAL AS BEST CONTENT DELIVERER,
- 5. MR NAVEEN AS BEST DEFENDER AND
- 6. MR HARISH AS BEST STARTER.

AND FINALLY THE EVENT WAS CONCLUDED WITH POSITIVE COMMENTS.

CLUELINK – Connection Competition

ISHRAE Student chapter of Easwari
Engineering College conducted a
CLUELINK – Connection Competition
on 18th December 2021 from
2.30 pm to 4.00 pm exclusively
ISHRAE registered Students.

The event was non-technical Connection Fun Competition. The team contains two members. About 16 teams attended this event actively. The event was graced by HOD, Department of Mechanical Engineering. Principal and Vice Principal gave the presidential address whereas Mrs. Nagachandrika, Assistant Professor deliberated the importance of the competition in the current scenario. The objective of the event was to create the team spirit, enthusiastic and sportiveness among the students. Many students actively enjoyed the event.

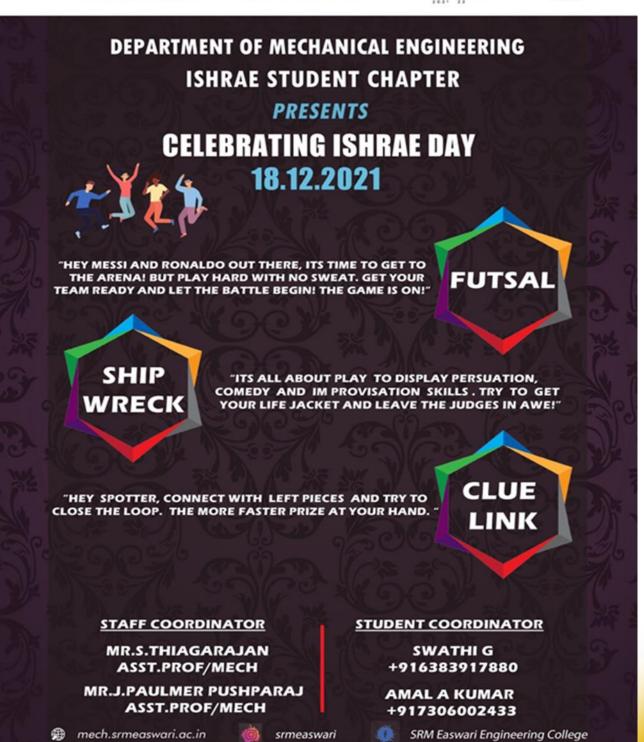












FUTSAL 3x3 Football Competition

ISHRAE Student chapter of Easwari Engineering College conducted a 3x3 football games of various ICC colleges on 18th December 2021 from 9.00 am to 11.30 am exclusively ISHRAE registered Students

The Futsal event was 3x3 football event with students of various colleges. The team contains three members. About 16 teams attended this event actively. The event was graced by HOD, Department of Mechanical Engineering. Principal and Vice Principal gave the presidential address whereas





Dr. Prasana Raj Yadav, Associate Professor deliberated the importance of competition the in current scenario. The objective of the event was to create the team enthusiastic spirit, sportiveness among the students.

Role Play Competition

ISHRAE Student chapter Shipwreck - Easwari Engineering College conducted a Role Play Competition on 18th December 2021 from 1.00 2.00 pm exclusively pm ISHRAE registered EEC Students

The event was Shipwreck – Role Play Competition. About 22 students attended this event actively. The event graced by HOD, Department of Mechanical Engineering. Principal and Vice principal



gave the presidential address whereas Mrs. W. Jean Ida Gunaseeli, Assistant Professor deliberated the importance of the competition in the current scenario. The objective of the event was to create the English Proficiency, creativity, enthusiastic and logical among the students. Many students actively enjoyed the event



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EXTRARCO.	. CURRICUI ARI	ACTIVITIES	FOR ACADEMIC	C YEAR 2020 -21
	· OUTHINGULARIA			

S.NO	Name of the Student	Year & Sec	Name of the Event	Name of the Institute/University/ Industry Organized	Awar d/ Partici patio n	Date
46	Surendar S	IV C	2nd Virtual National Conference NCETMEA'21	SRM Institute of Science and Technology	Partic ipatio n	04/ 10/ 2021
9	Kabeer M	IV				
10	Radhakrishnan Nair	IV				
11	G. Anantha Krishnan	IV				
12	S R Sidhart	IV				
13	Sharvesh R	fV				
14	Karthikeshwar K	IV				
15	Tharun A	IV			Partic	29
16	Shashank.G	FIE	International Webinar	Easwari Engineering College	ipatio	/10
17	Karthikeyan.B	IV			n	/2021
18	K Dhanush Kumar	IV				
19	Kirish Kumar R	IV				
20	Niranjana devi S	1V				
21	Nilavarasu T	IV				
22	Chandrika.S	íV				
23	Keerthivasan.A	IV				
24	Chris Harris Vasanthan. G	IV				

EXTRA & CO - CURRICULAR ACTIVITIES FOR ACADEMIC YEAR 2020 -21

(OCTOBER - DECEMBER)

S. N O	Name of the Student	Year	Name of the Event	Name of the Institute/University /Industry Organized	Award/ Participatio n	Date
27	G Swathi	IV				
25	Premraj.N	IV				
28	Karthigeyan s	IV			Participatio n	
29	Yogeshwaraan U	IV				
30	Srinivasan.S	IV				
31	Srikrishnan	ľV				
32	Varaprasanth R	IV				
33	T. Akash	IV	-			
34	Sandeep J	IV		Easwari		29
35	Vignesh p	ľV	International Webinar	Engineering		/10
36	Shaheen salahudeen	ΙV		College		/202 1
37	SURYA M	IV				
3.8	S.Sathish Kumar	IV				
39	Kavya G V	111				
40	Arun V	III				
41	Prasaath S	HII				
42	Saran G	111				
43	Aswin sundar V	HE				
c	Mohan raj	IV	NSS Best Volunteer	EEC	Best Voluntee r	291 2.2 021

Faculty Publications October – December 2021

SI. No.	Name of the faculty	Research Paper Title	Index	Impact factor	Month & Year	Volume/ Issue/ Pg. no.	Journal Name
1	Elumalai. B	Experimental investigations on µeD milling of inconel 718 with nanoSiC abrasive mixed dielectric	SCIE	1.524	Nov-21	Volume 25	Materials Research
2	Joel.C	Evaluation of Waste Plastic Pyrolysis Oil Performance with Diethyl Ether Additive on Insulated Piston Diesel Engine	WoS	0.7	November 2021	Volume 20, Issue 5, Pages 2079-2086	Nature Environment and Pollution Technology
3	Kalimuthu Gopi <u>Kannan</u>	Thermodynamic and economic analysis of heat pump-assisted solar still using paraffin wax as phase change material	SCIE	4.223	Nov-21	Volume 29 , Issue 2	Environmental Science and Pollution Research
4	Prasanna Raj Yadav.S	Performance and Emission Characteristics of Pyrolysis Oil Obtained from Neem de Oiled Cake and Waste Polystyrene in a Compression Ignition Engine	SCIE	1.726	Dec-2021	Volume 2021	Advances in Materials Science and Engineering
5	Peter Pushpanathan.D.	Investigations on the properties of composite coatings electro co-deposited on AZ80 Mg alloy using triangular waveform pulse current	SCIE	2.352	Dec-21	Vole 9, Issue 4, Article No 045048	Surface Topography: Metrology and Properties

