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St. JOSEPH'S INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

St. Joseph's Group of Institutions Jeppiaar Educational Trust

OMR, Chennai - 119



DEPARTMENT OF MECHANICAL ENGINEERING News Letter

(2022-23 DAL SEM)

Brief report on the Semester activities undertaken by **Mechanical department** for the month of **JUNE** to **OCTOBER** 2022 year

INDUSTRIAL VISIT



II YEAR INDUSTRIAL VISIT

We had an opportunity to visit The Carborundum Co., USA and the Universal Grinding Wheel Co. Ltd., U.K. The Company pioneered the manufacture of Coated Abrasives and Bonded Abrasives in India in addition to the manufacture of Super Refractories, Electro Minerals, Industrial Ceramics and Ceramic Fibres. The visit was planned and executed on 25-08-2022. Mr. D. Arthur Jebastine Sunderraj and Mr. S. Prathap Singh are the faculties who went along with 48 students of II year mechanical engineering. The visit started at 8am from college campus and reached the CUMI plant at 10:30am. The industry is located at thiruvottiyur near ennore port. The visit was fruitful to students as they learned lot of industrial activities and manufacturing processes and also about the abrasive grinding wheels.

Main objective of the visit is to impart knowledge to students about the industrial activities and various manufacturing processes.

The major outcome of the visit is that students learned much about the industrial activities and manufacturing processes. In addition to that specifically about the abrasive grinding wheels and its application in mechanical field.

The industry provided the visitors maximum safety and two industrial staff Mr. Valliappan & Mr. Valliappan exaplianed the concepts to the students in an understandable manner.

After completing the visit the students were provided lunch that was arranged by the college and all are safely sent back to home while returning back to college.



III YEAR INDUSTRIAL VISIT

We had an opportunity to visit **Vee S. Vee Industries**, it is one of the leading manufacturer company of high quality products / business services such as Mono Jack Plug, J Clamp, Push Rod, Power Steering Adaptor for leading manufacturing industries like Ashok Leyland, Ford, Hyundai, Royal Enfield etc..,

The visit was planned and executed on **20-08-2022**. **Mr. R. Ranjith Kumar** and **Mr. K. Ramesh** are the faculties who went along with **19 students** of **III year mechanical engineering**. The visit started at 9:30am from college campus and reached the Vee S Vee plant at 11:30am. The industry is located at Perungudi. The visit was fruitful to students as they learned lot of industrial activities and manufacturing processes and also about the various spare parts available in automobile.

Main objective of the visit is to impart knowledge to students about the industrial activities and various manufacturing processes.

The major outcome of the visit is that students learned much about the industrial activities and manufacturing processes. In addition to that specifically about the various sub assembly components of automobiles and its application in mechanical field.

The industry provided the visitors maximum safety and two industrial staff Mr. Rajasekar & Mr. Venkatesh exaplianed the concepts to the students in an understandable manner.

After completing the visit the students were provided lunch that was arranged by the college and all are safely returned back to college.



IV YEAR B INDUSTRY VISIT

We had an opportunity to visit **Neyveli Lignite Corporation**, it is the government organization which produces electrical energy. It's a leading power plant in tamilnadu It works on coal and steam is the main fluid which is utlized to produce electricity...,

The visit was planned and executed on 19-09-2022. Mr. R. Ranjith Kumar and Mr. A.Sathish Kumar are the faculties who went along with 52 students of IV year mechanical engineering. The visit started at 4:30am from college campus and reached the NLC plant at 9:30am. The industry is located at Neyveli. The visit was fruitful to students as they learned lot of industrial activities and Process of power plant and various equipment used in power plant.

Main objective of the visit is to impart knowledge to students about the industrial activities and Working of power plant.

The major outcome of the visit is that students learned much about the industrial activities and power plant working principle. In addition to that specifically about the various sub assembly components of power plant and its application in mechanical field.

The industry provided the visitors maximum safety and two industrial staff Mr. Rajan & Mr. Magesh exaplianed the concepts to the students in an understandable manner.

After completing the visit the students were provided lunch that was arranged outside as it was long industrial visit. The students were then dropped at Convenient location to reach their Home safely.



IV YEAR A INDUSTRY VISIT

We had an opportunity to visit **Neyveli Lignite Corporation**, it is the government organisation which produces electrical energy. It's a leading power plant in tamilnadu It works on coal and steam is the main fluid which is utlized to produce electricity...,

The visit was planned and executed on 19-09-2022. Mr. R. Ranjith Kumar and Mr. A.Sathish Kumar are the faculties who went along with 48 students of IV year mechanical engineering. The visit started at 4:30am from college campus and reached the NLC plant at 9:30am. The industry is located at Neyveli. The visit was fruitful to students as they learned lot of industrial activities and Process of power plant and various equipment used in power plant.

Main objective of the visit is to impart knowledge to students about the industrial activities and Working of power plant.

The major outcome of the visit is that students learned much about the industrial activities and power plant working principle. In addition to that specifically about the various sub assembly components of power plant and its application in mechanical field. The industry provided the visitors maximum safety and two industrial staff Mr. Rajan & Mr. Magesh exaplianed the concepts to the students in an understandable manner.

After completing the visit the students were provided lunch that was arranged outside as it was long industrial visit. The students were then dropped at Convenient location to reach their Home safely.

STUDENT WORKSHOP

Student Workshop - I



Date of the event : 22.9.2022

Title : Design Now using Fusion 360

– Phase 1

Resource Person : Mr.Altaf Hussain Khanday

No of Participants : All final year students

(103 students)

Sponsoring Agency : ICT Academy

Venue : CAD/CAM lab

Objectives: The objective of the workshop is to mould the students to understand the fundamentals of design in industrial working environment. The outcome from the course enriches the student knowledge on industrial environment and adapts to suit the industry ready environment.

Student Workshop - II





Date of the event : 20.10.2022

Title : Design Now using Fusion 360

– Phase 2

Resource Person : Mr.Altaf Hussain Khanday

No of Participants : All final year students (103)

students)

Sponsoring Agency : ICT Academy

Venue : CAD/CAM lab

Objectives: The objective of the workshop is to mould the students to understand the fundamentals of design in industrial working environment. The outcome from the course enriches the student knowledge on industrial environment and adapts to suit the industry ready environment.

Student Workshop – III



Date of the event : 12.8.2022 to 13.8.2022

Title : Lean manufacturing to minimize waste

on production system

Resource Person : Mr.R. Balakrishnan

CEO

Viruksa Manufacturing Solutions

Private Limited, Chennai

No of Participants : All II & III year students (80 students)

Sponsoring Agency: Institute of Engineers India (IEI)

Venue : Library Conference Hall

Objectives: The objective of the workshop is to incorporate the knowledge on production systems and value enhancing the product to minimize the waste using lean manufacturing concepts. The workshop helps to enrich the student knowledge on production system and can be applied to industry and mould them to perform in interviews.

STUDENT CHAPTER ACTIVITIES (Institution Engineers of India)

BEST FACUTY AWARD



Date of the event : 26.10.22

Award : Best Faculty Award

Awarded to : Dr. K. Arun Vasantha Geethan

No of Participants: Various Engineering college from

Kanchepuram Local Center

Sponsoring Agency: Institute of Engineers India (IEI)

Venue : Jerusellam College of Engineering

BEST STUDENT AWARD



Date of the event : 26.10.22

Award : Best Student Award

Awarded to : Mr. R. R. Aakash

No of Participants: Various Engineering college from

Kanchepuram Local Center

Sponsoring Agency: Institute of Engineers India (IEI)

Venue : Jerusellam College of Engineering



WORKSHOP



Date of the event: 20.04.2022

Title : Sharpen Your Skill Set Using Intensifying

Software Applications

Resource Person: Mr. S. Karaiadiselvan

Managing Director- CADD Centre

Chennai



No of Participants: All II & III year students (80 students)

Sponsoring Agency: Institute of Engineers India (IEI)

Venue : Audio Video Hall 1

Objectives: The objective of the workshop is to make the students to enhance them with current industrial affairs with 2.0 and automation by the latest software usage and its opportunities in the industry. This workshop brings the students to update themselves in their software development.



Date of the event : 10.05.2022

Title : Recent trends in product design for

sustainable development

Resource Person: Mr. P.G.Ramanan

Director, Partner & MR

CADDAM Technologies Pvt, LTD,

Chennai

No of Participants: All Mechanical students (183 students)

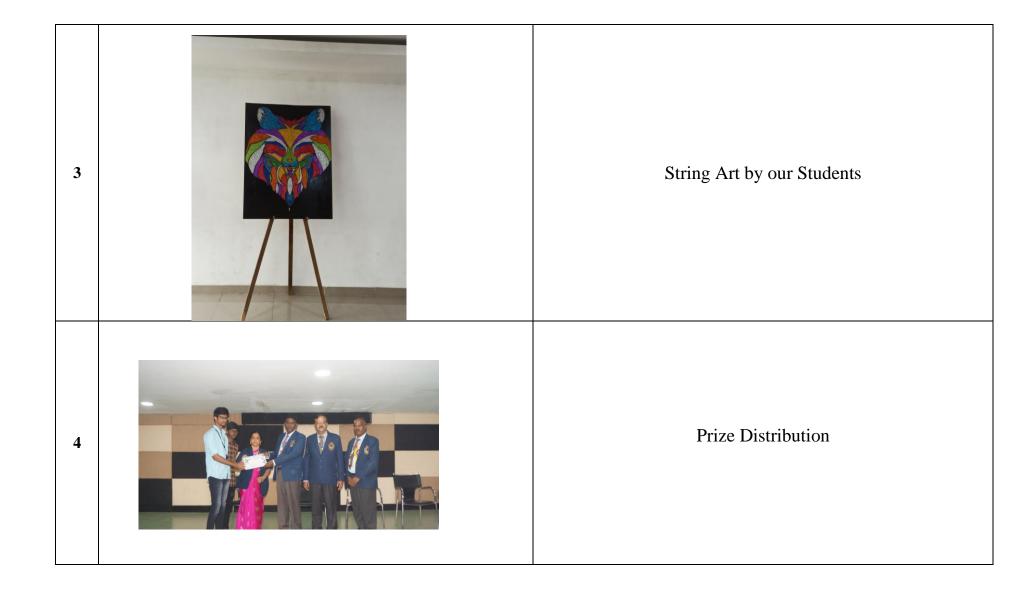
Sponsoring Agency: Institute of Engineers India (IEI)

Venue : Online

Objectives: On behalf of the centenary year celebration of Institution Engineers of India Kanchepuram local center has organized a 100 hours continues program through online for various reputed colleges. In that we our department of mechanical engineering of St. Joseph's Institute of Technology also selected as a one of the participant and the coordinator of the program Dr.K.Arun Vasantha Geethan has given the welcome note and the program was lectured by the chief guest and he shares the knowledge about the recent trends in design development for a product.

SYMPOSIUM (IMPULZ 2022)

> Mechanical Department Symposium conducted on 08.10.2022 > 5 events were Conducted namely, Draftrix, JIT Machining, Pitstop, Ignited Minds and Propelz ➤ More than 50 students from various Colleges were participated. 1 > Total prize money is Rs. 30,000/-**IMPULZ 2K22** Nail Art of Dr.A.P.J.Abdul Kalam by our Students 2





GUEST LECTURES

Sl No	Photos of the Event	Description
1	Guest Lecture 1	Date of the event : 01-09-2022 Title : New product development using CREO" and CATIA Resource Person : Mr. R. Balakrishnan, CEO, Viruksa Manufacturing Solutions Private Limited, Chennai No of Participants : All II & III year students (80 students) Sponsoring Agency : Institute of Engineers India (IEI) Venue : Conference Hall
2	Guest Lecture 2	Date of the event : 19-08-2022 Title : Advances in Machining

Sl No	Photos of the Event	Description
3	Guest Lecture 3	Date of the event : 03-09-2022 Title : Industry 4.0 Resource Person : Mr. R. Balakrishnan, CEO, Viruksa Manufacturing Solutions Private Limited, Chennai No of Participants : All II & III year students (80 students) Sponsoring Agency : Society of Automotive Engineers Venue : Conference Hall
4	Guest Lecture 4	Date of the event : 18-08-2022 Title : Introduction to Academic Project Resource Person : Dr. I. Saravanan, Chief Consultant, Mattest Research Academy No of Participants : All II & III year students (80 students) Sponsoring Agency : Society of Automotive Engineers Venue : Conference Hall

FACULTY DEVELOPMENT PROGRAM ATTENDED BY STAFF MEMBERS

Sl No	Staff Name Title of FDP/ STTP		Funding agency / Sponsoring agency	Venue	Duration (DAYS)	Dates
1	Mr.J.Immanuel Durai Raj	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	6 days	08th August to 13th August 2022
2		Ethics in Engineering practice	MoE, Govt of India	NPTEL , IIT Madras	One week	Aug -Oct 2022
3	Mr.S.A.Muhammed Abraar S.A	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	6 days	08th August to 13th August 2022
4	Mr.N.Suresh	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	6 days	08th August to 13th August 2022
5	Mr.K. Narayanamoorthy	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	6 days	08th August to 13th August 2022
6		AutoDesk Fusion 360	Self	Sri Sairam Engineering college	5 days	01 St August to 5th August
7	Mr.A.Sathish Kumar	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	6 days	08th August to 13th August 2022

Sl No	Staff Name Title of FDP/ STTP		Funding agency / Sponsoring agency	Venue	Duration (DAYS)	Dates
8	Mr.K.Ramesh	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	One Weeks	08th August to 13th August 2022
9		Data Science Tools	Self	Easwari Engineering College	Two Weeks	07th Oct 2022 to 20th Oct 2022
10	Mr.R.Ranjith Kumar	Futuristic Research in Mechanical Engineering	Self	SRM Institute of Science and Technology, Ramapuram Campus	Two Weeks	08th August to 13th August 2022
11		FUNDAMENTALS OF MANUFACTURING PROCESSES	MoE, Govt of India	NPTEL , IIT Madras	One and half week	Sep-Oct 2022
12	Mr.S. Prathap Singh	Accreditation And Outcome Based Learning	MoE, Govt of India	NPTEL , IIT Madras	One week	Sep-Oct 2022

FACULTY'S PUBLICATION IN WOS, SCOPUS

S. No	Staff Name	Month and Year	Name of Journal	All Authors Name, Paper Title, volume, month, year of publication	
1		September 2022	Fresenius Environmental Bulletin	K Arun Vasantha Geethan, S Godwin Barnabas, Vijay Ananth Suyamburajan, S Valai Ganesh, , Obtaining The Zero Landfill For End Of Life Of Automotive Components Using Efficient Recycling And Reusing Approach, Volume 31–No. 09/2022 pages 9821-9830	
2	Dr. K. Arun Vasantha Geethan	June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.	
3		August2022	Soldering & Surface Mount Technology	D. Arthur Jebastine Sunderraj, D. Ananthapadmanaban, K. Arun Vasantha Geethan, <i>Mechanical testing and characterization of tin–zinc–antimony–lanthanum lead-free solders produced using mechanical alloying and furnace melting techniques</i> , August 2022.	
4		June 2022	Material Today Proceeding	S.Prathap Singh, D.Ananthapadmanaban, K. Arun Vasantha Geethan, P. Ravichandran, <i>Microscopical and corrosion studies on Al6061 - 10% Al₂O₃ functionally graded metal matrix composites</i> , 62(2), June 2022.	
5		August 2022	Journal of Ceramic Processing Research	M. Rajeshwaran, B. Shreeram, T. Thangeeswari and D. Elil Raja , Experimental analysis and investigation of the performance of $3Al_2O_3$ · $2Sio2\cdot La_2O_3$ ceramic-coated piston, 23(4), August 2022.	
6		Sep 2022	Materials today: Proceedings	Ramesh Krishnan, K. Gnanasekaran, Dr. D. Elil Raja, S. Jagadeesh, S. Prathap Singh, Experimental Study of Micro-EDM on EN24 Steel with Normal Brass, Tin Coated Brass, Cryogenic Treated Brass Tool by Varying the Machining Parameters, 66(4), September 2022.	
7	-Dr. D. Elil Raja	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.	
8		June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.	

9	Dr. M. Chrispin Das	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.
10		June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.
11	Mr. T.	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.
12	Prabhuram	June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.
13	Mr. J. Immanuel	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.
14	Durai Raj	June 2022	International Journal of Health Sciences	Perumal, T. S. R., Kulshrestha, V., Shastri, R. K., Raj, J.Immanuel Durai Raj , Mahandiran, S. B., & Velu, C, <i>Evaluation of image quality based on visual perception using antagonistic networks in autonomous vehicles</i> . International Journal of Health Sciences, 6(S3), June 2022.
15		August2022	Soldering & Surface Mount Technology	D. Arthur Jebastine Sunderraj, D. Ananthapadmanaban, K. Arun Vasantha Geethan, <i>Mechanical testing and characterization of tin–zinc–antimony–lanthanum lead-free solders produced using mechanical alloying and furnace melting techniques</i> , August 2022.
16	Mr. D. Arthur Jebastine Sunderraj	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.
17		June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.
18	Mr. R. Ranjith Kumar	September 2022	Material Today Proceeding	G R Kannan, B. Vijaya Kumar, T. S. Senthil, Prashant sunagar, R. Ranjith Kumar , Lukesh Parida, Ram Subbiah, <i>optimization and electro chemical grinding surface investigation on eglin steel</i> , 66(3), September 2022.

19	Mr. S. Jagadeesh	September 2022	Materials today: Proceedings	Ramesh Krishnan, K. Gnanasekaran, Dr. D. Elil Raja, S. Jagadeesh, S. Prathap Singh, Experimental Study of Micro-EDM on EN24 Steel with Normal Brass, Tin Coated Brass, Cryogenic Treated Brass Tool by Varying the Machining Parameters, 66(4), September 2022.
20	M. V D	July 2022	Environmental Engineering and Management Journal	Gopinath Dhamodaran, Ganapathy Sundaram Esakkimuthu, Thennarasu Palani, Ramesh Krishnan , "Feasibility of adding fuel oil as an oxygenate to gasoline on reducing MPFI engine emission" July 2022
21	Mr. K. Ramesh	June 2022	Materials today: Proceedings	Ramesh Krishnan, K. Gnanasekaran, Dr. D. Elil Raja, S. Jagadeesh, S. Prathap Singh, Experimental Study of Micro-EDM on EN24 Steel with Normal Brass, Tin Coated Brass, Cryogenic Treated Brass Tool by Varying the Machining Parameters, 66(4), September 2022.
22	Mr. A. Sathish Kumar	September 2022	Materials today: Proceedings	Y. Brucely, Manas Ranjan Sahoo , Shubhajit Halder A Sathish Kumar , Lukesh Parida, Investigating mechanical strength of luffa and pineapple fibre reinforced polymer composite, September 22
23		June 2022	Material Today Proceeding	S.Prathap Singh , D. X. Tittu George, M. Maria Jebin, <i>Optimization of WEDM control parameters for machining of functionally graded Al6061-10 %Al₂O₃ composite, 63</i> , June 2022.
24		June 2022	Material Today Proceeding	S.Prathap Singh, D.Ananthapadmanaban, K. Arun Vasantha Geethan, P. Ravichandran, <i>Microscopical and corrosion studies on Al6061 - 10% Al2O3 functionally graded metal matrix composites</i> , 62(2), June 2022.
25	Mr. S. Prathap Singh	June 2022	Material Today Proceeding	T. Prabhuram, S. Prathap Singh, J. Immanuel Durairaj, D. Elilraja, M. Chrispin Das, D. Arthur Jebastine Sunderraj, <i>Optimization of operation parameters in machining of functionally graded metal matrix composite using TOPSIS</i> , 62(2), June 2022.
26		June 2022	Material Today Proceeding	Chrispin Das M, Arthur Jebastine Sunderraj D, Arun Vasantha Geethan K, Elilraja D, Prabhuram T and Prathap Singh S, <i>Mechanical and Moisture Absorption behavior of Woven Pineapple Leaf Phenol Formaldehyde Composites</i> , 62(2), June 2022.
27		August 2022	Material Today Proceeding	Ramesh Krishnan, K. Gnanasekaran, D. Elil Raja, S. Jagadeesh, S. Prathap Singh, Experimental study of micro-EDM on EN24 steel with normal brass, tin coated brass, cryogenic treated brass tool by varying the machining parameters, 66(4), September 2022.
28	Mr. S. A. Muhammed Abraar	August 2022	AIP Conference Proceedings	Muhammad Abraar S A, Ananthapadmanaban D, Harish R, Gokul M, Ganesh R, Modelling of Conventional Tyre with Different 3D Printing Materials, 2460, August 2022.

INTERNSHIPS

Sl No	Name of student	Year	Date (s)	Name of company	Duration
1	Balamurugan R	IV	18/2/21 To 23/9/22	MAHLE Engine Components India Private Limited Chennai	6 Months
2	Barath Naresh R G	IV	18/2/21 To 23/9/22	MAHLE Engine Components India Private Limited Chennai	6 Months

AWARDS WON BY STUDENTS

Sl No	Photo	Description
	THE INSTITUTION OF	Date of the event : 26.10.22
	HEPURAL CENT	Award : Best Student Award
	28-10-3 Finding	Awarded to : Mr. R. R. Aakash
1		No of Participants : Various Engineering college from Kanchepuram Local Center
		Sponsoring Agency: Institute of Engineers India (IEI)
		Venue : Jerusellam College of Engineering

PRIZE WON BY STUDENTS

S. No	Year	Name of the student	Name of the Institute	Name of the event	Prize won
1	II	Keerthan A		Technical Quiz	Third
2	II	Ilamaran K N		Basketball Shoot	First
3	II	Ilamaran K N	R. M. K College of Engineering and Technology	Technical Quiz	First
4	II	Sudharsanan R		Technical Quiz	First
5	II	Christopher A		MR. MACHINIST	Second
6	IV	Mohan Raj M		Water Rocketry	Third
7	IV	Saravanan M	St. Joseph's College of Engineering	Water Rocketry	Third
8	IV	Sankar Ganesh B		Water Rocketry	Third

Prepared By,

D. Arthur Jebastine Sunderraj Department Coordinator

Head of the Department

1. Dr.K. Arun Vasantha Geethan HOD- Department of Mechanical

2. Dr.D.Elil Raja HOD-Lab Affairs Dept of Mechanical

Note:

- Kindly submit the reports of June 2022 to October 2022 by November 25
- This Report need to be submitted (soft and hard copy) on or before Last Friday of every month.
- Soft copy of the report need to be sent to iqac@stjosephstechnology.ac.in with a CC to Principal.
- Hard Copy of Report needs to be submitted to IQAC coordinators.