

St. JOSEPH'S COLLEGE OF ENGINEERING

You Choose, We Do It (AN AUTONOMOUS INSTITUTION) OMR, CHENNAI - 119



DEPARTMENT OF MECHANICAL ENGINEERING



NEWSLETTER

APRIL 2024







St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR. CHENNAI - 119





The Choice of **Disciplined Toppers**



St. JOSEPH'S COLLEGE OF ENGINEERING

You Choose, We Do It (AN AUTONOMOUS INSTITUTION) OMR, CHENNAI - 119



VISION

To become a world class Educational center of the Nation for Engineering, Technology, Computer Applications and Management with moral and professional standards to serve the community at large.

MISSION

To achieve academic excellence in Engineering, Technology, Computer Application and Management Education.

To inculcate high moral and professional standards among our students.

To develop the overall personality of our students.

To promote Industry Institute Interaction through more number of collaborative programs with Industries, Research and Development centers.

To venture for sustained placement for our students through campus interviews.





St. JOSEPH'S COLLEGE OF ENGINEERING





DEPARTMENT OF MECHANICAL ENGINEERING

VISION

To become a center of excellence in Mechanical Engineering, producing competent engineers, who are innovative, entrepreneurial and skilled to meet the global challenges.

MISSION

Excellence: To offer state-of-art education in Mechanical Engineering, by providing opportunity to students to enhance their knowledge base and develop core specific skills.

Research: Build a research capability that is recognized nationally and internationally as a leading source of technological innovation and explore core research.

Professional Integrity: To create opportunities and train students to build leadership qualities blended with entrepreneurial mindset and lead an ethical and environmentally responsible career.

PROGRAMME EDUCATIONAL OBJECTIVES

Engineering graduates will be able to:

PEO1: Profession – Practice manufacturing engineering in a broad range of industries both core engineering and non-engineering fields such as medicine, space, law or business.

PEO2: Continuing Education – Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.

PEO3: Technophile – Conduct them in a responsible, professional, and ethical manner and attain professional maturity with deep understanding of the impact of the technological solutions in a societal and global context and a need for sustainable development.

PEO4: Service – Participate as leaders in their fields of expertise and in activities that support service and economic development nationally and throughout the world.

PROGRAMME OUTCOMES

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 solution for complex engineering problems and design systems components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



St. JOSEPH'S COLLEGE OF ENGINEERING





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.

Environmental 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.

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.

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.

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.

PROGRAMME SPECIFIC OUTCOMES

PSO 1: The students graduating in Manufacturing Engineering will have profound foundation in mathematical, scientific and engineering domains necessary to achieve professional and productive excellence in technical and non-technical problem solving and analyzing engineering problems.

PSO 2: The students graduating in Manufacturing Engineering will have the ability to synthesize the engineering data and apply scientific principles for applications involving manufacturing engineering using high end CAD/CAM/CAE computational packages such as CATIA, ANSYS and MATLAB.

PSO 3: The students graduating in Manufacturing Engineering will have the ability to pursue advanced careers and discharge his/her duties entrusted with high degree of commitment to address professional and ethical responsibilities, including a respect for diversity and provide cost effective engineering solutions.

EVENTS & ACHIEVEMENTS APRIL 2024



CONTENTS

- Event Organized
- Students Achievements
- Students Activities
- Staff Achievements
- Alumni Activities



St. JOSEPH'S COLLEGE OF ENGINEERING





DEPARTMENT OF MECHANICAL ENGINEERING

Intra-College Project Expo 2024





The Intra-College Project Expo 2024, organized by the Department of Mechanical Engineering, was successfully held on 4th April, 2024 at the Periwinkle Hall, Placement Block, St. Joseph's College of Engineering. The expo provided an exceptional platform for students to showcase their innovative hardware and software projects, aligning with one or more of the 17 Sustainable Development Goals (SDGs) outlined by the United Nations.

The Expo showcased **45 Project** addressing different challenges while aligning with sustainable development objectives. These projects were evaluated by a panel of judges from various departments based on criteria such as innovation, feasibility, and potential impact.



St. JOSEPH'S COLLEGE OF ENGINEERING





DEPARTMENT OF MECHANICAL ENGINEERING

Intra-College Project Expo 2024

Prior to the event, teams were selected through a structured process. Students submitted projects focusing on one or more SDGs, with teams formed within their departments, each comprising a maximum of five members. Projects were then screened based on their alignment with the SDGs and potential impact, with exceptional projects selected for inclusion in the Expo.



After careful evaluation and deliberation, the following projects were awarded prizes:

S. No	Project Title	Team Members	Branch & Year	Mentor	Prize	Prize Amount
1	Kavach- Police & Citizen Assistance Model	Sri Sathvig K Kishore Harshan Kumar R Sanjana M Priyanka Bharathi LN Harshini Sathya AS	III ADS	Dr. J. Ramya	I	Rs.15,000/-
2	AI- based Remotely Piloted System Drone for search & Rescue and medical Emergency	Jasmine J Jasigo Krifi S Jaison Alexander F Jeganthan R	III EEE	Dr. Jayarama Pradeep	п	Rs.10,000/-
3	RC Aircraft for defence and Agricultural Applications	Kailash Kumar G Jones Rojar Rahul Senthilkumar Jerlin Raj A B Nithesh M	III Mech	Mr. D. Sakthivel	Ш	Rs.5000/-
4	Cadmium Recycling using Eco- Conscience Technology involving Bioaccumulation by Pseudomonas Aeruginosa	1. Bharathi V 2. Divya Dharshini M 3. Priyadarshini M 4. Shivani R	III Biotech	Dr. M. Chamundeeswari	IV	Rs.3000/-
5	Ecolopper - A software that ensures Grid Resilience	Asmitha M Harini S Adlin Felicia D	III CSE	Dr. B. Uma Maheswari	v	Rs.2000/-

The Expo's success highlighted the talent and innovation of our student community and fostered a culture of sustainability and innovation within the institution.



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DEPARTMENT OF MECHANICAL ENGINEERING

Intra-College Project Expo 2024















STUDENTS' ACHIVEMENTS

Our Mechanical Department Students Secured Third Position in Intra Project Expo with a cash award of Rs.5000/-, Third year students- Mr. Kailash kumar, Mr. Jones Rojer, Mr. Rahul Senthilkumar along with Second year students Mr. Jelin Raj and Mr. Nithesh mentored by Mr. D. Sakthivel presented Project on the Title "RC Aircraft for defence and agricultural Application".



PROJECT EXPO



DEPARTMENT ACTIVITIES

Communication skill & skill rack practice classes was planned and organized for third year students of Batch 2021-2025 on 3rd April, 2024. The out come of the session is to improve communication skills, which is a essential one for effective interaction.

SEERA



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DEPARTMENT OF MECHANICAL ENGINEERING

CONDUCTED

COMMUNICATION SKILL AND SKILL RACK PRACTICE FOR III YEAR STUDENTS







Student

E mployability

Enhancement 1 4 1

Research

A ctivities









VENUE: CAD LAB & MECHANICAL CLASSROOM



OMR, CHENNAI - 119







DEPARTMENT ACTIVITIES

On Innovative Idea for projects and skill rack practice was planned and organized for second year students of Batch 2022-2026 on 5th April, 2024. Engineering project classes offer students a unique opportunity to apply theoretical knowledge to real-world challenges, fostering creativity, problem-solving skills, and hands-on experience.

SEERA



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DEPARTMENT OF MECHANICAL ENGINEERING

CONDUCTED

Innovative Idea for Projects And Skill Rack Practice FOR II YEAR STUDENTS

- Student
- **E** mployability
- Enhancement 1
- Research
- A ctivities











VENUE: CAD LAB & MECHANICAL CLASSROOM



OMR. CHENNAI - 119





The Choice of Disciplined Toppers

DEPARTMENT ACTIVITIES

On 25thApril, 2024, second-year students of Batch 2022-2026 were categorized and trained on resume preparation, mock interviews, group discussions, and arrear coaching classes. The sessions aimed to enhance their professional skills, including crafting tailored resumes, refining interview techniques, improving communication in group settings.

SEERA



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DEPARTMENT OF MECHANICAL ENGINEERING

CONDUCTED
SEERA ACTIVITIES

FOR II YEAR STUDENTS



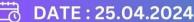




- Student
- **E**mployability
- **E**nhancement
- Research
- A ctivities

Topics covered
Resume preparation
Mock interview
Group discussion
Skill rack practice
Arrear coaching





VENUE: MECHATRONICS, THERMAL LAB & MECHANICAL CLASSROOM



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The Choice of Disciplined Toppers

PLACEMENT ACTIVITIES

S.No	REGISTER NO	NAME	COMPANIES PLACED	TOTAL NO OF OFFERS
			CAPARO,MICROMATIC	OI OII ERO
1	312320114001	AARON FELITTO	MACHINE, RISHABA	3
2	312320114002	ABHISHEK PA	RENAULT NISSAN, CAPARO	2
		ADITHYA		
3	312320114004	KAMILLA	KEYENCE	1
4	312320114007	AKASH A	CAPARO	1
5	312320114008	AKASH.K	SHARDA MOTOR	1
6	312320114011	ALOYSIUS ANTONY	ANDRITZ	1
7	312320114302	AMOS RUBAN P	SHARDA MOTOR	1
8	312320114014	ANCIC RANCE R	CAPARO	1
9	312320114015	ANDROW D H	CAPARO,SHARDA MOTOR, KEYENCE	3
10	312320114016	ANIRUDHA H	ANDRITZ, ACCENTURE ASE,RENAULT NISSAN	3
11	312320114018	ANVITA PANDEY	RENAULT NISSAN	1
12	312320114307	ARMAAN R	JSE	1
13	312320114020	AROCKIA ROBINSON A	JSE	1
14	312320114021	AROCKYA MARKLINSE U	CORIZO	1
15	312320114022	ARSATH ANAND A	JSE	1
16	312320114024	ASWIN S	SHARDA MOTOR	1
17	312320114308	ASWIN.R.J	SHARDA MOTOR,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2
18	312320114025	BADHRINATH S	RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	1
19	312320114027	BHARATH S	CAPARO,BHARATH FIH	2
20	312320114029	CHANDRA KISHOR R K	SHARDA MOTOR,BHARATH FIH	2
21	312320114309	CHANDRU S	SHARDA MOTOR,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2
22	312320114032	CYRIL MOSES L	RENAULT NISSAN	1
23	312320114033	DEEPAK G M	SHARDA MOTOR	1
24	312320114034	DHANUSH S	SHARDA MOTOR	1
25	312320114035	DHARSHIN.M	CAPARO	1
16	312320114024	ASWIN S	SHARDA MOTOR	1

PLACEMENT ACTIVITIES

	S.No	REGISTER NO	NAME	COMPANIES PLACED	TOTAL NO
					OF OFFERS
	17	312320114308	ASWIN.R.J	SHARDA MOTOR,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2
	18	312320114025	BADHRINATH S	RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	1
	19	312320114027	BHARATH S	CAPARO,BHARATH FIH	2
	20	312320114029	CHANDRA KISHOR R K	SHARDA MOTOR,BHARATH FIH	2
	21	312320114309	CHANDRU S	SHARDA MOTOR,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2
	22	312320114032	CYRIL MOSES L	RENAULT NISSAN	1
	23	312320114033	DEEPAK G M	SHARDA MOTOR	1
	24	312320114034	DHANUSH S	SHARDA MOTOR	1
	25	312320114035	DHARSHIN.M	CAPARO	1
	26	312320114037	DHEERAJKUMAR S	FIIT,CAPARO	2
	27	312320114039	EDIN WESLEY.A	CAPARO	1
	28	312320114005	AJAI GOVIND P S	CAPARO , KODNEST	2
	29	312320114040	ESHWAR N K	RENAULT NISSAN	1
	30	312320114312	GANESH M	SHARDA MOTOR	1
	31	312320114124	SHANKARA NARAYANAN C S S	KODNEST	1
	32	312320114042	GIRIDHARAN D V	EWAC ALLOYS, RISHABA	2
	33	312320114044	GOKULNATH K	SHARDA MOTOR	1
	34	312320114045	GOPALAN S	CAPARO , EQUAD,BHARATH FIH,MICROMATIC MACHINE TOOLS	4
	35	312320114046	HARIHARAN U	SHARDA MOTOR	1
	36	312320114048	HARIRAM M	CAPARO	1
	37	312320114051	INFANT KENETH X	CORIZO	1
	38	312320114313	JAGINDAR R	SHARDA MOTOR	1
	39	312320114054	JEEVA R	RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD,NEEYAMO	2
	40	312320114055	JEEVASARAN L	SHARDA MOTOR	1
	41	312320114056	JEFFRIN INFANT JOSE J	SHARDA MOTOR	1
	42	312320114061	JOHN SAMUEL T	BHARATH FIH	1
1					

PLACEMENT ACTIVITIES

/					· ·
	S.No	REGISTER NO	NAME	COMPANIES PLACED	TOTAL NO OF OFFERS
	43	312320114063	KAMALESH.S	CAPARO	1
	44	312320114065	KATHIRAVAN P	CAPARO , SHARDA MOTOR,BHARATH FIH	3
	45	312320114067	KINGSLY S	SHARDA MOTOR	1
	46	312320114071	LOGESHWARAN R	RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	1
	47	312320114072	MADHUSUTHAN A V	RENAULT NISSAN	1
	48	312320114073	MAIGNANASIVA M R	EMERSON	1
	49	312320114081	MOHAMED IMRANSHA B	SHARDA MOTOR	1
	50	312320114082	MOHAMED THOUFIQ H	MITSOGO,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2
	51	312320114084	MUGILAN M A	CAPARO , SHARDA MOTOR	2
	52	312320114088	NANDHAKUMAR M V	SHARDA MOTOR	1
	53	312320114091	NAVEEN DSOUZA A	SHARDA MOTOR	1
	54	312320114323	NIRMAL KUMAR P	SHARDA MOTOR	1
	55	312320114324	NITHINSAI M	SHARDA MOTOR	1
	56	312320114093	OMKUMAR M S	CAPARO , SHARDA MOTOR	2
	57	312320114047	P.HARI HARAN	SHARDA MOTOR	1
	58	312320114094	PAVEES J	SHARDA MOTOR	1
	59	312320114095	PAVITHRAN M	SHARDA MOTOR	1
	60	312320114098	PRASANNA SHANKAR D	CAPARO , SHARDA MOTOR	2
	61	312320114100	PRAVEEN S	CAPARO	1
	62	312320114326	PRAVIN A	SHARDA MOTOR	1
	63	312320114102	PREAM KUMAR D	CAPARO	1
	64	312320114103	RAHUL M	CAPARO	1
	65	312320114131	RM SRI SIVAPRATHISHW ARAN	SHARDA MOTOR	1
j	66	312320114106	ROBINWESLY A	CAPARO, RISHABA	2
j	67	312320114108	ROJER JOHN R	SHARDA MOTOR,GEA BGR	2
	68	312320114109	ROSHAN K.P.	ANDRITZ	1
	69	312320114111	RUFFES RAJA E	BHARATH FIH	1
\	70	312320114112	SAFIN FERNANDO.S	CAPARO,RENAULT NISSAN AUTOMOTIVE INDIA PVT LTD	2

PLACEMENT ACTIVITIES

S.No	REGISTER NO	NAME	COMPANIES PLACED	TOTAL NO OF OFFERS
71	312320114113	SAIHARIHARAN S	RISHABA	1
72	312320114328	SAIRAM. B	SHARDA MOTOR	1
73	312320114115	SAMRAJITH.R	SHARDA MOTOR	1
74	312320114122	SATHISH KUMAR V	CAPARO, SONA COMSTAR	2
75	312320114125	SHANMUGASUN DARAM M	CONSERVE SOLUTION	1
76	312320114128	SIVAGANESAN K	CAPARO	1
77	312320114331	SUNIL KUMAR V	SHARDA MOTOR	1
78	312320114332	SURIYA G	SHARDA MOTOR	1
79	312320114135	SURYA PRAKASHS M	SHARDA MOTOR	1
80	312320114333	TAMILSELVAN.K	SHARDA MOTOR	1
81	312320114137	THANIGAIVEL G	CAPARO	1
82	312320114142	VARUN KUMAR V	BHARATH FIH	1
83	312320114143	VENGAL RAO	CAPARO	1
84	312320114336	VIJAYSEKAR R	CAPARO, SHARDA MOTOR,BHARATH FIH	3
85	312320114146	VINAY SANTOSH S	SHARDA MOTOR	1
86	312320114147	YOKESHWARAN. M	ZOHO(INTERN)	1

Total No of students placed = 86

Students Total No of Offers = 116

Total No of Students (UG) = 180

Total No of Eligible Students (UG) =101

(All Clear) % of students Placed (UG) = 86/180 = 47.77 %

No of students having single offers = 63

No of students having Double offers = 17

No of students having Triple offers = 5

No of students having Four offers = 1

* as on April 2024

STAFF ACHIVEMENTS

- •Mr. N. Sathish Kumar, Assistant Professor, Department of Mechanical Engineering Received "Gold" certificate in the title of "*Introduction to 3D Printing and CAD Modeling*" from the Ministry of Electronics and Information Technology and Nasscom through futureskills prime portal.
- •Mr.M.Ganesh, Assistant Professor, Department of Mechanical Engineering attended 5th International Conference on Computational Intelligence and Industry5.0 (ICCII-2024) ISBN Number:97881-967851-7-8 at Velammal Institute of Technology on 03rd April 2024 and presented a paper on "Deep hole drilling of aluminium alloys using MQL".

ACHIEVEMENTS

- •Dr. N.E. Arunkumar, Associate Professor, Department of Mechanical Engineering attended 5th International Conference on Computational Intelligence and Industry5.0 (ICCII-2024) ISBN Number:97881-967851-7-8 at Velammal Institute of Technology on 03rd April 2024 and presented a paper on "Experimental Investigation of the effect of grinding wheel paramaters on surface grinding in Inconnel"
- •Dr. N.E. Arunkumar, Associate Professor, Department of Mechanical Engineering attended 5th International Conference on Computational Intelligence and Industry5.0 (ICCII-2024) ISBN Number:97881-967851-7-8 at Velammal Institute of Technology on 03rd April 2024 and presented a paper on "Experimental Investigation of the effect of grinding parameters on cylindrical grinding in GVN Metal"
- •Mr. T. Balasubramanian, Assistant Professor, Department of Mechanical Engineering, Published a Article on "Enhancement of the mechanical properties of EPDM/NBR rubbers using nanosilica for seal applications" in AIP Conference Proceeding on 02/04/2024.

STAFF ACHIVEMENTS

- •Mr. M. Subramanian and Mr. T. Balasubramanian Assistant Professors from Department of Mechanical Engineering Published a paper in Material Today Proceedings on the topic " Optimum cutting performance of AWJM for Fiber/Metal hybrid composites using GRA-ANN methods".
- •Dr. R. Sathish, Professor from Mechanical Department published a article in Bull. Chem. Soc. Ethiopia 2024 on the title "Corrosion and inhibition studies on AISI 316 with AISI 410 fiber laser welded joints".
- •Dr. Vaddi Seshagiri Rao, Professor and Mr. J. Vijayanand, Assistant Professor from Mechanical Department published an article in Transactions of FAMENA, Vol. 48 No. 2, 2024 on the title "An artificial neural network model supported with hybrid multi-criteria decision-making approaches to rank lean tools for a foundry industry".



STUDENTS' ACTIVITIES

S.No	Register No	Name	Company	Duration
1			Mangal Engineering Pvt Tech Ltd,	10/4/2024 to
	312322114041	Gourav Paul	ourav Paul Oragadam.	
2			Mangal Engineering Pvt Tech Ltd,	10/4/2024 to
	312322114093	Roshan Santosh	Oragadam.	17/4/2024



STUDENTS'
INTERNSHIP

ALUMNI ACTIVITIES

Our Elite Alumni, Mr. A. Joseph Rijul Raj, Baker Hughes, Japan, gave a talk on "Industrial Design and Manufacturing" for our department students on 27th April, 2024.



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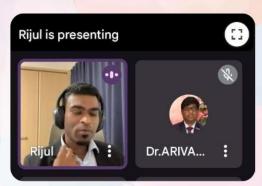
DEPARTMENT OF MECHANICAL ENGINEERING

ALUMNI TALK

BRIEF INTRODUCTION ON INDUSTRIAL DESIGN
AND MANUFACTURING









BY

MR. A.JOSEPH RIJUL RAJ
INDUSTRIAL DESIGN ENGINEER
UNDER PRODUCT TECHNOLOGY
DEPARTMENT AT BAKER HUGHES, JAPAN





27/04/2024



06:00PM - 07:00PM



Google Meet



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