

# **S.A. ENGINEERING COLLEGE**

(An Autonomous Institution , Affiliated to Anna University , Chennai)

Accredited by NAAC with 'A' Grade & ISO 9001:2015 Certified Institution

Approved by AICTE and Affiliated to Anna University, Chennai



## **DYNAMIX'24**

### **EVEN SEMESTER**

*Newsletter 2023 - 2024*

## **DEPARTMENT OF**

### **MECHANICAL ENGINEERING**

## ABOUT THE DEPARTMENT



The department of Mechanical Engineering was established in the year 1998 in our college; it was affiliated to Anna University in 2001 and got permanent affiliation in 2013. It has been accredited by the National Board of Accreditation (NBA) from the year 2009. The post graduate programme, M.E. CAD/CAM was established in the year 2014 with an intake of 18 students. The department has been recognized as a research center by Anna University in the year 2012. The students are given hands on training about the theoretical concepts they are learning through various labs such as Manufacturing Technology Lab, Fluid Mechanics Lab, I C Engines lab, Heat Transfer Lab, CAD CAM LAB, Dynamics Lab, Mechatronics Lab.

The department has eminent faculties to guide the students in learning the various concepts of mechanical engineering. The faculty are well versed in research and publish papers periodically in reputed journals like WOS, SCI, SCOPUS. The faculty of mechanical engineering also have patent grants for their research and innovation projects in emerging fields of mechanical engineering. In addition to this, various funded projects are also being carried out with the grants received from AICTE, DST, TNSCST etc. The students are also encouraged to participate in various events such as design and fabrication of parallel hybrid electric race car, Solar vehicle championship conduct by ISIE every year.

# VISION

1. **Academic Excellence:** To strive and attain a premier position in providing Quality Higher Education integrated with Research and Scholarly activities in the emerging areas and diversify in the emerging fields of Mechanical Engineering, thus serving to the needs of the society.
2. **Inventory of Skill Development:** To make our graduates to be adept in handling real life complex problems through Modern Tools and Techniques and while doing so making them to imbibe ethical practices and confident enough to assume leadership position.

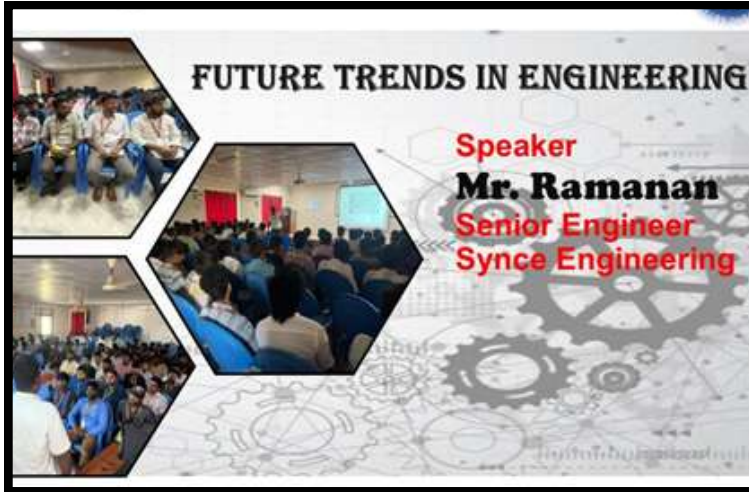
# MISSION

1. **Conducive Environment:** To provide conducive atmosphere for effective teaching-learning by disseminating the knowledge in breadth and depth.
2. **Centre of Excellence:** To practice modern tools and techniques so as to make our department a Centre of Excellence and sustainable in their growth.
3. **Critical and Clinical Thinking:** To transform our students to be open minded with critical thinking in their approach to real-life problem-solving situations keeping in mind the Professional, Ethical, Environmental and Societal aspects
4. **Active Involvement in R&D:** To provide a perfect platform for our faculty and students to undertake research activities.
5. **Collaboration and Integration:** To collaborate with the industries, premier Institutions in taking up consultancy projects, internship so that our students will acquire experience hands-on in current industrial practices and ethical standards.
6. **Implementation of Students Quality Circle:** To make our students imbibe leadership qualities by fostering in them a good amount of soft skills, personality traits and by way of active participation in extra-curricular and co-curricular activities.

# PROGRAMME EDUCATIONAL OBJECTIVES

1. **Technical and Professional Excellence:** Graduates will demonstrate technical competence in solving real life Mechanical Engineering problems using Engineering principles and modern tools while engaging in continuous professional development to stay updated of the industry trends.
2. **Leadership and Communication:** Graduates will exhibit strong leadership qualities enabling them to manage projects, work in inter disciplinary teams and communicate complex technical information using contemporary tools in a global environment.
3. **Ethical and Social Responsibility:** Graduates will demonstrate a commitment to professional ethics, understand the broader impacts of engineering solutions on society and the environment and apply their engineering skills to address global challenges in sustainability, health, and safety
4. **Lifelong Learning:** Graduates will successfully establish themselves in professional engineering roles in various industries by engaging in lifelong learning or by participation in professional organizations to continuously improve their knowledge and skills.

## GUEST LECTURE



On 26.02.2024, The department of Mechanical Engineering has organized the Guest Lecture on “Future Trends in Engineering” for 4th year students by inviting the chief guest Mr.N.Ramanan, Senior Engineer, synce Engineering Pvt Ltd, Chennai.

On 14.03.2024, The department of Mechanical Engineering has organized the Guest Lecture on “Generative shape design using CATIA ” for 3rd year students by inviting the chief guest Mr.Suresh, Senior Design Engineer, Ashok Leyland, Chennai.



On 15.03.202, The department of Mechanical Engineering has organized the Guest Lecture on “Emerging trends in FEA” by inviting the chief guest Mr.Rajendra Prasad Nallur, Head - Business Support, Cloud Campus.



On 15.04.2024, The department of Mechanical Engineering has organized the Guest Lecture on “How to plan for start-up and Legal and Ethical Steps” for 2nd year students by inviting the chief guest Mr.K.Selvi Professor, Department of MBA, S.A.E.C

## LECTURE



On 23.02.2024, The department of Mechanical Engineering has organized a Lecture on “Smart Interactive display for Innovative Teaching Methodology” for Mechanical staffs by Mr.N.Manimaran Assistant Professor S.A.E.C.

## WORKSHOP



On 23.02.2024, The department of Mechanical Engineering and Computer Science Engineering has organized 2 days workshop on “Technology behind extraction of coir and converting them into useful products for SC students” which has sponsored by the Department of Science and Technology(DST), Govt. of India.



On 13.03.2024, The department of Mechanical Engineering has organized 2 days workshop on “Employees oppurtunities in coir Technology and coir products for SC students” by inviting the chief guest Dr.R.Kannan, Chief Executive Officer(CEO), TANCOIR-Tamil Nadu Coir Business Development Corporation Coimbatore.

On 07.05.2024, The department of Mechanical Engineering has organized workshop on “Model based Design approach for Mechanical and civil engineering” for 2nd year students by inviting the chief guest Mr.Gowtham and Mr.Afsal, Sr. Application Engineer-MATLAB, ARK Infosolutions Pvt Ltd.



## VALUE ADDED COURSE



The CADD School Avadi conducted a course on SOLID WORKS for the Mechanical students of Third Year . The course lasted ten days, from 18.03.2024 to 22.03.2024, 25.03.2024, and 08.04.2024 to 13.04.2024.



The Heat Ventilation & Air Conditioning Dynamic Cad course was conducted for the Mechanical department 2nd year students.. The course lasted six days, from 01.04.2024 to 06.04.2024.

## STUDENTS TRAINING PROGRAM



The Department of Mechanical Engineering organized Vertical Milling Centre(VMC) one-day training program which has been conducted for 3rd-year Mechanical students on 08.04.2024.

The Department of Mechanical Engineering organized one-day Higher Education awareness program which has been conducted for S.A.Polytechnic college students on 06.04.2024.



Tiruvallur, Tamil Nadu, India  
Block-2, S.A polytechnic college, Tamil Nadu 600077, India  
Lat 13.085008°  
Long 80.112231°

## INDUSTRIAL VISIT



On 12th February 2024 the department of Mechanical Engineering organized a Industrial visit to Sakthi Engineering Industry, Thiruvallur for the 2nd year students

On 03rd May 2024 The department of Mechanical Engineering organized a Industrial visit to North Chennai Thermal Power Station Ennore, for the 3rd year students.



On 13th March 2024 the department of Mechanical Engineering organized a Industrial visit to U.R.Rao Satellite Centre, ,Bengalore for the 4th year students

## CLUB ACTIVITIES



On 06.03.2024, The department of Mechanical Engineering has conducted Robotics club activity 2 on “Hands on Session in Pick and Place Robot ” for the club students.

On 03.04.2024, The department of Mechanical Engineering has conducted Robotics club activity 3 on “Dobotlab Hands on Training” for the club students.



The Department of Mechanical Engineering’s faculty and students participated in the untouchable pledge on 30 January 2024, at the Mechanical Engineering block.

## FACULTY TRAINING PROGRAM



The ACE MICROMATIC Chennai Tech Centre organized Industrial training on “Working and operation of Vertical Milling Centre(VMC) for Mechanical department staffs from 21/03/24 to 23/03/24.

## STUDENTS ACHIVEMENTS



The 3rd year students of Mechanical department participated in International project Expo VISAI and secured 2nd place in Vel Tech University. The participants are Mr.S.Pragadeesh, M.G.Y.Hari Vignesh, and S.Sarvanan.

The 3rd year students of Mechanical department participated in International project Expo VISAI and secured 2nd place in Vel Tech University. The participants are Mr.Srikanth and his team .





The 3rd year students of Mechanical department participated in Project Expo and secured 1st place in Vel Tech High Tech Engineering college .The participants are Mr.S.Pragadeesh, M.G.Y.Hari Vignesh, A.S.Jagadeeshwar and S.Sarvanan.

The Mechanical department 2024 batch has been placed in various reputed organizations.



The 4th year students of Mechanical department participated in International Conference and project Expo and secured 1st place in SSN Engineering College.The participants are Mr. Agilash and his team



The 3rd year students of Mechanical department participated in International Conference and project Expo and secured 2nd place in SSN Engineering College. The participants are M.G.Y Hari Vignesh and A.S.Jagadeeshwar.

## FACULTY PATENTS GRANTED

S.No.	Name of the Applicant	Application No	Title of the Patent	Status
1.	Dr.P.Sevvel	397156-001	3D Printer	19/02/2024
2.	Mr.A.Sivaramakrishnan Mr.J.Vasanthe Roy Dr.P.Sevvel Mr.B.Pradap Mr.S.Aravind Mr.S.Jayabaskar Mr.K.Shree visshnu	400588-001	Solar Water Distillation System	15/03/2024

## FACULTY RESEARCH PROPOSALS SUBMITTED

S.No	Name of the Investigators	Title of Project Proposal	Date of Submission	Name of the Funding Organization	Total Cost Proposal
1.	Dr.P.Sevel Dr.K.Dinakaran	AI based Gaming Application for improving cognitive skills of children with autism spectrum disorders	03 – 05 – 2024	Cognitive Science Research Initiative (CSRI), Department of Science and Technology (DST), Technology Bhavan, New Delhi–110016	Rs. 52,29,816
2.	Dr.P.Sevel Mr.C.Dhanesh	ATAL FDP Workshop on “Recent trends in AI empowered 3D Bio Printing technologies towards fabrication of smarter Bio medical implants”	13 – 5 – 2024	All India Council For Technical Education (AICTE), Nelson Mandela Marg, Vasant Kunj, New Delhi-110070	Rs. 5,00,000
3.	Dr.P.Sevel Dr.K.Dinakaran	Experimental optimization of parameters using AI techniques for enhancing mechanical properties of friction stir welded Copper flat plates	06 – 06 – 2024	Department of Atomic Energy, OYC Building, C.S.M. Marg, Mumbai 400 001	Rs. 27,85,700
4.	Dr.P.Sevel Dr.K.Dinakaran	Artificial Intelligence based optimization of the printability during selective laser melting of Ti6Al4V ELI flat plates	24 – 06 – 2024	Aeronautics Research & Development Board - DRDO, Indore, Khandwa Road, Simrol, Indore 453552, INDIA	Rs. 29,12,345

## Ph.D. DEGREE COMPLETED FACULTY

S.No	Name of the Research Scholar	Name of the Guide	Branch	University	Status
1.	I. John Solomon	Dr.P.Sevvel	Mech	Anna University	Viva Voce Completed on 21/02/2024
2.	J.Gunasekaran	Dr.P.Sevvel	Mech	Anna University	Viva Voce Completed on 25/04/2024

## FACULTY PUBLICATION

S. NO	NAME OF THE FACULTY	Title of the paper	Name of the Journal/Conference with vol no, issue no, page no and impact factor.	DOI and Annexure details(refer Annexure details of Anna University, Chennai)
1.	Srinivasan D, Sevvel P, Dhanesh Babu SD, Vasanthe Roy, V	Optimization of parameters and formulation of numerical model employing GRA-PCA and RSM approach for friction stir welded Ti-6Al-4V alloy joints	Materials Research Express, 2024, Vol. 11, No. 5, 056511	SCI <a href="https://doi.org/10.1088/2053-1591/ad48e3">https://doi.org/10.1088/2053-1591/ad48e3</a>
2.	Srinivasan D, Sevvel P, Gunasekaran J	Impact of process parameters on transitions in the microstructural characteristics and mechanical attributes of Ti-6Al-4V alloy joints during FSW	Practical Metallography, 2024, Vol. 61, No. 1, pp. 28-58	SCI <a href="https://doi.org/10.1515/pm-2023-1039">https://doi.org/10.1515/pm-2023-1039</a>
3.	[3] John Solomon I, Sevvel P, Gunasekaran J and Vasanthe Roy J	Parametric based optimization of friction stir welded wrought AZ80A Mg alloy employing response surface methodology	Materials Research Express, 2024, Vol. 10, No.11, 116514	SCI <a href="https://doi.org/10.1088/2053-1591/ad0ac4">https://doi.org/10.1088/2053-1591/ad0ac4</a>

## STUDENTS INTERNSHIP

SL. NO.	NAME OF THE STUDENT	YEAR/ SEM	NAME OF THE INSTITUTION
1.	L. RAVICHANDRAN	III/VI	BONFIGLIOLI

2.	R. THANGA SARAVANAN	III/VI	BONFIGLIOLI
3.	S. VIGNESH	III/VI	BONFIGLIOLI
4.	S. PRASANTH	III/VI	BONFIGLIOLI
5.	SARAVANAN S	III/VI	THOMSON ELEVATORS
6.	NITHISH K	III/VI	THOMSON ELEVATORS
7.	BHARATH SARAVANAN B	III/VI	MACRO CALIBERATION SERVICES
8.	BABU R	III/VI	MACRO CALIBERATION SERVICES
9.	DASARATH G	III/VI	HYUNDAI MOTORS
10	RUBESH KANNA P J	III/VI	PERUMAL ENGINEERING
11.	VISHWA K	III/VI	PERUMAL ENGINEERING
12.	MITHUN M	III/VI	UNITED INDIA ENGINEERING
13.	K SANTHOSH KUMAR	III/VI	UNITED INDIA ENGINEERING
14.	A JAGADEESAN	III/VI	UNITED INDIA ENGINEERING
15.	A S JAGADEESHWAR	III/VI	UNITED INDIA ENGINEERING
16	DANDAYUTHAMOORTHY V	III/VI	PRECI COM CNC
17	DINESH KUMAR R	III/VI	PRECI COM CNC
18.	KISHOREKUMAR R	III/VI	PRECI COM CNC
19.	MUKESH S	III/VI	PRECI COM CNC
20.	NAVEENKUMAR S	III/VI	PRECI COM CNC
21.	HEMACHANDRAN J	III/VI	PRECI COM CNC
22.	YOGESHWARAJ G	III/VI	N S ENGINEERING ENTERPRISE
23.	R VENKATESH	III/VI	N S ENGINEERING ENTERPRISE
24.	N SENTHAMILSELVAN	III/VI	N S ENGINEERING ENTERPRISE
25.	SANTHOSHKUMAR T	III/VI	ALPHA SPRINGS COMPANY
26.	KARTHIKEYAN K	III/VI	ALPHA SPRINGS COMPANY
27.	SANJAY S	III/VI	ALPHA SPRINGS COMPANY
28.	AMSHAVARTHAN N	III/VI	ALPHA SPRINGS COMPANY
29.	SANJAY D	III/VI	ALPHA SPRINGS COMPANY
30.	PRAGADEESH S	III/VI	V M ENGINEERING SOLUTION
31.	DINESH R M	III/VI	V M ENGINEERING SOLUTION
32.	VINOTH KUMAR S	III/VI	EXCEL DIE CASTINGS
33.	ABINESH S	III/VI	EXCEL DIE CASTINGS
34.	HARI VIGNESH M G Y	III/VI	NIFCO Pvt. Ltd.
35	NARENDRA KUMAR V	III/VI	NIFCO Pvt. Ltd.



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