



Sri Eshwar
College of Engineering
An Autonomous Institution
Affiliated to Anna University, Chennai



Department of Mechanical Engineering



MAGAZINE

for the year 2020 - 21

VOLUME I • ISSUE I

DEPARTMENT OF MECHANICAL ENGINEERING

Principal's Message:

Change and evolution are rule of the nature. It takes its own course and time. The change that we have observed since 2020 was unexpected and unprecedented. All on a sudden college switched on to an alternative method of communication – internet, to minimize the academic loss. Not all were trained for this new system, but all tired to cope with the situation and did their best. Department of Mechanical Engineering has once again proved even they are capable of providing the students continuously learning through various online webinar & workshop. Here it is the annual magazine of Mechanical Engineering department. The magazine gives the detailed events conducted by Mechanical Engineering in academic year 20 - 21. I would like to congratulate all the students, teachers, alumni and everyone involved in bringing out the Department of Mechanical Engineering Annual Magazine for the academic year 2020 - 21

Dr. S. Sudha Mohanram

HOD's Message:

First of all, I thank lord almighty for saving us from the pandemic all the way. Bringing out an annual magazine for all the online activities held academic 20–21 was a challenging task but the editorial team Mechanical Engineering has successfully brought the annual magazine with in & out information of the activities conducted throughout the year. I congratulate editorial members and I take pride that I was also one of the editorial members contributing for development of the annual magazine 20-21. I always believe in encouraging students to dream big and take up the challenges in life with confidence. We believe that every student has innate potential. We, as mentors are always on the lookout for ways in which we can bring this potential to limelight. The uniqueness of Mechanical Engineering is to inspire the students to innovate and convert the innovation into successful products. We are extremely happy to state that our students have won several high-level competitions in the preceding year with such innovations and brought laurels to the college as well as to the department. We will uphold this tradition and assure them all a happy learning environment in Mechanical Engineering Department at Sri Eshwar College of Engineering.

Dr.R.Suresh kumar

About the Department:

Department of Mechanical Engineering was started in the year 2009 and is dynamically headed by Dr.R. Suresh Kumar, Head of the Department along with 18 members of faculty. The Department consists of 4 Ph.D. holder's, 4 are pursuing Ph.D. and remaining faculties are in process of choosing their respective area of interest for Ph.D. The department has also been very progressive in bridging the gap between the curriculum and the industrial requirement by conducting Board of Studies Meeting with Industrial experts. The department of Mechanical Engineering has been conducting Guest lecture and visiting faculty lecture inviting the Industrial Resource people to make the students to have deep insight about industry revolution 4.0. All students in the department are given Training Creo Modelling and Manufacturing which is provided to the student as Value Added Course. Throughout the academic year the department has performed number of activities for the development of students and also to the development of the Mechanical Engineering Students.

Members of the Editorial Board:

Dr.R.Suresh Kumar	- Professor and Head
Mr.A.R.Palanivelrajan	- Asst .Professor

Student Members:

C.Jeeva	- III Mech-A
S.K.RAKESH	- III Mech-B

Department's vision & mission as per NBA-SAR

Vision:

To groom students into problem solvers and globally competent Mechanical Engineering professionals.

Mission:

We will achieve our Vision by:

- Developing core mechanical engineering competency, Soft skills, ethical values and social responsibility among students.
- Facilitating faculty to provide best-in-class teaching
- Nurturing research mindset and supporting students on entrepreneurial ventures
- Helping students to acquire knowledge beyond curriculum through Centers of Excellence and self – learning
- Effectively collaborating with industry to ensure industry readiness of students

Details of FDP's/Workshops/Guest Lecture/Seminars/Conferences/projects/other events organized by the Department in the year

Details of Guest lecture:

Sl. No.	Date of Event	Title of the Event	Details of the Resource Person(s)	No. of Beneficiaries
1.	02/02/2021	Internships and Its Impact on Placements	Mr. P. Charles Godwin HR Leader, ZOHO	380
2.	04/02/2021	Awareness on Road Safety	Dr.Kavidasan, Director of Roots Industries	300
3.	06/02/2021	Motivational Session	Mr.N.Lakshminarasimhan	200
4.	12/02/2021	PRODUCTION PART APPROVAL PROCESS	Mr.T.Suresh Lead Trainer Triangle Engineers	75

Details of Webinar/Seminar:

Sl. No.	Date of Event	Title of the Event	Details of the Resource Person(s)	No. of Beneficiaries
5.	1/7/2020	Quality, Reliability and Safety - An Overview	Mr.Suryanarayanan Nandula Former Director Quality-DRDO	1654
6.	3/7/2020	CAE in Product Design - An Insight	Mr.Gowtham K.K, Advance Consultant, Altran	1667
7.	7/7/20	Automotive Seating & Its Validation	Mr.Ashok R Pillai Head of Department-CAE AaP Engineering	1724
8.	10/7/2020	Product Lifecycle Management	Mr.Mohamed Jahir Hussain Senior Consultant aLTRan	1700
9.	15/7/2020	Automotive Infotainment System - An Overview	Mr.Meenakshy Sundaresan Engineer-Vehicle Infotainment System Integration, Audi, Germany	1422
10.	29/7/2020	Digital Transformation	Mr.Girirajan Murugan, Chief Executive Officer, Funds India	1685
11.	6/8/2020	An Insight into Lean Methodology	Mr.Santoshkumar Patil, Vice President-DG & RC, Barclays Bank, London	1340
12.	12/8/2020	Future Trends in Automotive Industry	Anand Gurupatham, DGM, PWT-CAE Department Head, Renault Nisan Technology Business Center, India	1354
13.	18/8/2020	Introduction to Polymers	Mr.Zakkir Hussain, Specialist-Polymers, aLTRan	1258
14.	19/8/20	Essentials of Electric Vehicles	Mr.Ragavendra, Senior Manager-Development, Lucas TVS	1148

Staff achievements

a) Papers published in journals

S.No	Name of the staff	Journal Name	Title of the Paper	Publication Year/Date
1	Ganeshkumar S	International Journal of Scientific Research and Engineering Development	A Review in Design and Fabrication of Water	2020/Jun

			Electrolyser	
2	Ganeshkumar S, Sureshkumar R, Gokul S Gowtham S	GIS Science Journal	Design of Intensive care unit ventilator for treatment of COVID – 19 patients using Assist control – CPAP system	2020/Aug
3	Ganeshkumar S	International Journal of Scientific Research and Engineering Development	A Review on Unconventional Bladeless vortex induced Wind turbines	2020/Apr
4	S Ganeshkumar S,Sureshkumar R, Sureshbabu Y Balasubramani	GIS Science Journal	Review on cutting tool measurement in turning tools by cloud computing systems in Industry 4.0 and IOT	2020/Jul
5	Ganesh Kumar S	International Journal of Scientific Research and Engineering Development	A Review Article in Brake Pad wear sensor	2020/Jun
6	Dharanikumar S Sureshkumar sundaram	Mechanics based design of structures and machines	Experimental Ballistic performance determination of friction stirwelded magnesium AZ31B targets	2020/May
7	V Naveenprabhu, M Suresh	Numerical Heat Transfer	Performance enhancement studies on evaporative cooling using volumetric heat and mass transfer coefficients	2020/july

8	S. Sendhil Kumar, S. Dharani Kumar	Kovove Materialy	Investigation of mechanical and wear behaviour of graphene reinforced aluminium alloy 6061 metal matrix composite	2020/Sep
9	S. Dharani Kumar	Journal of Mechanical and Energy Engineering	BALLISTIC STUDIES OF LIGHTWEIGHT MATERIALS – A REVIEW	2020/Mar
10	S. Dharani Kumar, S. Suresh Kumar	Emerging Materials Research	Numerical and Experimental Ballistic Performance of Welded Magnesium (AZ31B) Plates	2020/Oct
11	S. Dharani Kumar, S. Suresh kumar	Transaction of Nonferrous Metals Society of China	Effect of heat treatment conditions on ballistic behaviour of various zones of friction stir welded magnesium alloy joints	2020/Sep
12	S. Venkatesh S. Ganeshkumar	Powder Technology	Experimental and Numerical investigation in the series arrangement square cyclone seperator	2021/Jan
13	R.Vivek	International Journal of Research in Engineering, Science and Management	Three Wheeled drive Forklift	2020/Mar
14	S. Gokul	International Journal of Research in Engineering, Science and Management	Design and Fabrication of Automatic Vegetable Cutting	2020/Mar

			Machine	
15	S. Gokul	International Journal of Research in Engineering, Science and Management	Design and Fabrication of Mini Hydro Turbine	2020/Mar
16	S. Gokul	International Journal of Research in Engineering, Science and Management	Plant Irrigation Water Sprinkler Robot	2020/Mar
17	R.Sureshkumar	International Journal of Engineering Applied Sciences and Technology	A Review on purification of flue gases by using both venturi scrubber and cyclone separator	2020/Mar
18	R.Sureshkumar	International Journal of Engineering Applied Sciences and Technology	A Review on purification of flue gases by using both venturi scrubber and cyclone separator	2020/Mar
19	S. Vignesh	International Journal of Research in Engineering, Science and Management	Review Paper on Design and Fabrication of Trash Boat	2020/Apr
20	S. Vignesh	International Journal of Research in Engineering, Science and Management	Review Paper on Compressor Less Refrigerator	2020/Apr
21	S. Vignesh	International Journal of Research in Engineering, Science and Management	Review Paper on Dissimilar Friction Stir Welding Of Aluminium Alloys	2020/Apr
22	S. Vignesh	International Journal for Scientific Research & Development	Review Paper on Solar Operated Agriculture Three in one Machine	2020/Apr

Workshops/ FDPs/ Training attended by staff members

Details of FDP:

S.No	Name	Program Participated	Organised by	Duration	Date	
					From	To
1.	Dr.T.Ramakrishnan	AICTE ATAL Faculty Development Program on "Internet of Things"	NITTTR, Chandigarh	6 Days	15/04/20	19/04/20
2.	Dr.S.Balasubramani	AICTE ATAL Faculty Development Program on "Internet of Things"	NITTTR, Chandigarh	6 Days	15/04/20	19/04/20
3.	Mr.A.R.Palanivelirajan	AICTE ATAL Faculty Development Program on "Internet of Things"	NITTTR, Chandigarh	6 Days	15/04/20	19/04/20
4.	Mr.S. Dharanikumar	AICTE ATAL Faculty Development Program on "Internet of Things"	NITTTR, Chandigarh	6 Days	15/04/20	19/04/20
5.	Mr.S.Vignesh	Online FDP on Robotics Process Automation-	Jeppiaar Institute of Technology	3 days	04/05/20	06/05/20
6.	Mr.V.Naveenprabhu	Online FDP on Robotics Process Automation-	Jeppiaar Institute of Technology	3 days	04/05/20	06/05/20
7.	Mr.A.Vimal	Online FDP on Robotics Process Automation-	Jeppiaar Institute of Technology	3 days	04/05/20	06/05/20
8.	Mr.R.Vivek	Online FDP on Robotics Process Automation-	Jeppiaar Institute of Technology	3 days	04/05/20	06/05/20
9.	Mr.K.Sathish	Real Time Modeling Simulation, Verification and Validation of Engineering Problems using	Ramco Institute of Technology	5 days	11/06/20	15/06/20

		CAE				
10.	Mr.S.Dharanikumar	Real Time Modeling Simulation, Verification and Validation of Engineering Problems using CAE	Ramco Institute of Technology	5 days	11/06/20	15/06/20
11.	Mr.R.Vivek	AICTE ATAL Faculty Development Program on "Robotics"	K. RAMAKRISHNAN COLLEGE OF ENGINEERING	5 days	18/01/21	22/01/21
12.	Mr.A.R.Palanivelrajan	AICTE ATAL Faculty Development Program on "Electric Vehicle"	KPR Institute of Engineering and Technology	5 days	08/02/21	12/02/21
13.	Mr.A.R.Palanivelrajan	AICTE ATAL Faculty Development Program on " 3D Printing & Design "	INDIAN INSTITUTE OF INFORMATION TECHNOLOGY TIRUCHIRAPPALLI	5 days	01/02/21	05/2/2021

Students' achievements

a) Papers published in journals

S.No	Name of the student/year	Journal Name	Title of the Paper	Publication Year/Date
1	Guru Ragaventhira L / IV Mech A Harish B / IV Mech A Joshua P / IV Mech A Gurushankar S / IV Mech A	International Journal of Scientific Research and Engineering Development	A Review in Design and Fabrication of Water Electrolyser	2020/Jun

2	Navin kumar R / IV Mech B Rakesh V / IV Mech B Sujith kumar R / IV Mech B Ramkumar G / IV Mech B	International Journal of Scientific Research and Engineering Development	A Review on Unconventional Bladeless vortex induced Wind turbines	2020/Apr
3	Nitishkumar BV/ IV Mech B Nishantkumar T/ IV Mech B Md Ashik A/ IV Mech B	International Journal of Scientific Research and Engineering Development	A Review Article in Brake Pad wear sensor	2020/Jun
4	S. Balaji/IV Mech A K. Chandra Moorthy/IV Mech A M. Mohamed Javeed/IV Mech A D. Dharanidharan/IV Mech A	Journal of Mechanical and Energy Engineering	Ballistic Studies of Lightweight Materials – A Review	2020/Mar
5	Md riyaz/IV Mech A Dhanya priyadharshan/IV Mech A Gokulalakshmanan M/IV Mech A Ibrahim Ameerdeen/IV Mech A	International Journal of Research in Engineering, Science and Management	Three Wheeled drive Forklift	2020/Mar
6	R. Ajith Velayudham/ IV Mech A P. Deepak/ IV Mech A W. Fredric Prem/ IV Mech A	International Journal of Research in Engineering, Science and Management	Design and Fabrication of Automatic Vegetable Cutting Machine	2020/Mar
7	S.K.Gokulnath/IV Mech A K.Hariharan/IV Mech A S.Harshit/IV Mech A P.Mathanguru/ IV Mech A	International Journal of Research in Engineering, Science and Management	Design and Fabrication of Mini Hydro Turbine	2020/Mar

8	Y. Mohamed Yasar Arabath/ T. Pavithran/ D. Ravi Shankar/ S. V. Roshan/	International Journal of Research in Engineering, Science and Management	Plant Irrigation Water Sprinkler Robot	2020/Mar
9	Raakesh M/ IV Mech B Shanketh S/ IV Mech B Thaaranidevi CK/ IV Mech B Udhayakuamr/ IV Mech B	International Journal of Engineering Applied Sciences and Technology	A Review on purification of flue gases by using both venturi scrubber and cyclone separator	2020/Mar
10	Gowtham K V/IV Mech A Ajeeth R/IV Mech A Blessvin Bruso P/IV Mech A Dhanushkrishna T /IV Mech A	International Journal of Engineering Applied Sciences and Technology,	A Review on exhaust system using cyclone separator	2020/Mar
11	T. Ruthresh/ IV Mech B S. Sajeev/ IV Mech B S. Sanjay/ IV Mech B P. Vivin Richard/ IV Mech B	International Journal of Research in Engineering, Science and Management	Review Paper on Design and Fabrication of Trash Boat	2020/Apr
12	S. Karthiban/IV Mech A S. Karthikean/IV Mech A R. Kishore/IV Mech A S. Manikandamoorthi	International Journal of Research in Engineering, Science and Management	Review Paper on Compressor Less Refrigerator	2020/Apr
13	Akshaya /IV Mech A K, Bhavadharani B/IV Mech A Divya Dharsini C/IV Mech A	International Journal of Research in Engineering, Science and Management	Review Paper on Dissimilar Friction Stir Welding Of Aluminium Alloys	2020/Apr
14	Murali Krishnan.S/ IV Mech B	International Journal for Scientific Research & Development	Review Paper on Solar Operated Agriculture Three	2020/Apr

Saran.G/ IV Mech B		in one Machine	
Somesh.R/ IV Mech B			
Vignesh.P/ IV Mech B			

Event participation (curricular & extracurricular)

S.No	Name of The Student	Event name and date	Status (Prize won)	Venue	Date
1.	Udhayakumar. S	Smart India Hackathon (MSME, Govt. of India)	Participation in Final round	IIT Delhi	08/07/2019-12/07/2019
	Thaaranidevi.C. K				
	Santhana Prabhu.K				
	Shanketh. S				
2.	Jayaseelan.T	KSB Annual Day Project Expo	First prize	SNR Auditorium , Coimbatore	4/08/2019
	Kavin Prabhu.L				
	Lalith Mohan.S				
	Naveen Kumar.V				
3.	Venkatesh.R	KSB Annual Day Project Expo	Second prize	SNR Auditorium , Coimbatore	4/08/2019
	Jagasirpiyan.K				
	Vignesh.A				
	Naveen Prasanth.K				
4.	Mohan Aravind.K	Gokart challenge	First prize in Fuel Economy and Endurance	(ISNEE motosports Ltd)	10/02/2020-14/02/2020
	Fredic Prem.W				
	Kavibharathi.K				
	Mohamed Javeed.M				
	Deepak chakkaravathy.R				
	Aswath Kumar.S				
	Kavin .K.R				

	Hariharan.K				
	Dharsan.S				
	Sajeev.S				
	Lalluraja.M				
	Kevin Raj.M				
	Logeshwaran.K				
	Balaji.R				
	Sanjay.V.C				
5.	Harish.B	EFFI-CYCLE 2019	Participatio n in Final round	SAE	01/10/2019- 5/10/2019
	Giriprasanth.D				
	Kamesh kumar.A				
	Manikandan.R				
	Kishore.M				
	Bhavadharani.B				
	Akshaya.K				
	Madhan.M				
	Blessvin bruso.P				
	Karthikeyan.M				
	Ajeeth.R				
	Karthik.B				
	Harish kumar.M				
6.	Deepak chakkaravathy.R	EUREKA 2020	First price with Cash price of Rs.2000/-	PSG Tech	22-10-2020
	Jayant.V				
	Balaji.K				
	Mohan Jeet .M				
7.	Kevinraj .M	Astra Zeneca BioMedTec h Innovation	Participatio n in Final round	IIT madras	13-03-2020
	Allwyn Joseph S.J				
	Udith Vishnu .U				

		Challenge			
8.	Ramesh Krishnaa .S. L	Future-Proof Hackathon 2020	Participation in Final round	German – India collaboration	30-05-2020
	Yadav Prashanth.M				
	Ragu .M				

Infrastructure/ Facilities created like additional lab/ IPL etc., along with its cost

Sl.No	Name of the Company	Date	Validity	
			From	To
1	G R Industries	06/03/2020	06/03/2020	05/03/2023
2	Aqua Group	04/02/2017	04/02/2017	03/02/2020
3	Roots Industries	14/05/2014	14/05/2014	Till date
4	Sysnautix	16/05/2019	16/05/2019	15/05/2021
5	SIMTEX	14/05/2014	14/05/2014	Till date
7	DYSMECH Consultancy services Ltd.	27/05/2016	27/05/2016	27/05/2021

Events conducted in the department with photos – with a brief description (name of the event, name of the chief guest, venue& date)

The Department of Mechanical Engineering has been very active through Academic Year 2020 – 2021 with various initiative such as

1. New Product Development
2. Mock NEET Preparatory Examination
3. Webinar on
 - a. Emerging Trends on Industry Automation
 - b. Future Scope of Electric Vehicle
 - c. Women in Engineering

1. New Product Development:



“Self-Priming Mono Block Pump” developed by Dr.G.Gokilakrishnan and Mr.R.Thirupathi with the help of the Department lab assistant’s.

“Smart Thermal Hand Sanitizer” developed by Dr.R.Suresh kumar, Mr.K.Sathish and Mr.A.R.Palanivelrajan in association with T - PEP



2. Mock NEET Preparatory Examination:

Mechanical Engineering, in spite of being one of the core engineering branches still department decided to conduct Mock NEET Preparatory Examination for the benefit of poor students who can’t afford to go for a Training center



Mock NEET Preparatory Examination was conducted by Mr.A.R.Palanivelrajan, Mr.S.Gokul & Mr.Thirupathi in association with Dream Academy. Totally Six Mock Test has been conducted

3. Webinar:

The first webinar in the college was conducted by Department of Mechanical Engineering, so far there is 2 webinars has been conducted.



Webinar on Emerging Trends in industry Automation

Date: 1st May, 2020

Name of Resource Person:

Mr.S.Thirumurugan, Technical Director,T-PEP

Mr.K.Sathish, AP/Mech, Sece

Mr.S.Dharani Kumar, Ap/Mech, Sece

Webinar on Future Scope of Electric Vehicles

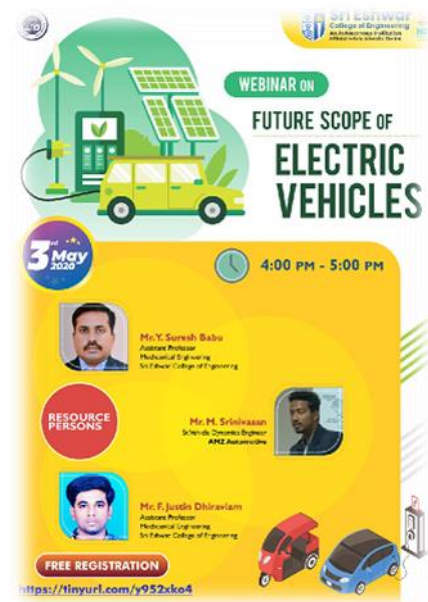
Date: 5th May, 2020

Name of Resource Person:

Mr.M.Srinivasan, Sr.Vehicle Dynamic ,AMZ Automotion

Mr.Y.Suresh babu, AP/Mech, Sece

Mr.F.Justin Dhiraviam, Ap/Mech, Sece





Webinar on Women in Engineering

Date: 21st, June, 2020

Name of the resource person:

Dr.R.Gayathri

Deputy Manager

Talent Manager, HR

KONE

University Results of the Department (ODD and Even Sem) & class toppers with photos

University Results of the Department

S. No.	Semester	Section	Pass Percentage
1	2019 -20 (ODD)	IV Mech A	97.96
		IV Mech B	84.06
2	2019-20 (Even)	IV Mech A	100
		IV Mech B	100


Class toppers with photos



ODD Semester – IV Mech A

S. No	Name of the Student	Year / Class / Branch	SGPA	Photos
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1	GOWTHAM K V	IV / A / Mech	8.652	
2	AJITH VELAYUDHAM R	IV / A / Mech	8.609	
3	BALAJI K	IV / A / Mech	8.565	


ODD Semester – IV Mech B

S. No	Name of the Student	Year / Class / Branch	SGPA	Photos
1	DINESH A	IV / B / Mech	8.913	

2	AKSHAYA K	IV / B / Mech	8.826	
3	JAYASEELAN T	IV / B / Mech	8.609	

Even Semester – IV Mech A

S. No	Name of the Student	Year / Class / Branch	SGPA	Photos
1	AJITH VELAYUDHAM R	IV / A / Mech	9.400	
2	BALA HARI NAGENDRAN S	IV / A / Mech	9.400	

3	BALAJI K	IV / A / Mech	9.400	
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Even Semester – IV Mech B

S. No	Name of the Student	Year / Class / Branch	SGPA	Photos
1	NAVEEN S	IV / B / Mech	9.400	
2	BALAJI S	IV / B / Mech	9.200	
3	MOHAMED JAVEED M	IV / B / Mech	9.200	

Anna University Rank holders with their CGPA and photos

S. No	Name of the Student	Year / Class / Branch	CGPA	Rank	Photos
1	MOHAN ARVIND K	IV / A / Mech	8.56	1	
2	NAVEEN S	IV / B / Mech	8.29	2	
3	DINESH KUMARAN K	IV / A / Mech	8.25	3	
4	AJITH VELAYUDHAM R	IV / A / Mech	8.20	4	
5	SHANKETH S	IV / B / Mech	8.15	5	

Industrial collaboration (MOUs)

Academic Year 2020-21

Sl.No	Name of the	Date	Validity	Cost
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	Company		From	To	Involved
1	G R Industries	06/03/2020	06/03/2020	05/03/2023	-
2	Aqua Group	31/12/2020	31/12/2020	31/12/2023	1,30,000
3	Roots Industries	14/05/2014	14/05/2014	Till date	1,55,991
4	Sysnautix	16/05/2019	16/05/2019	15/05/2021	4,00,000
5	SIMTEK	14/05/2014	14/05/2014	Till date	7,35,000
6	DYSMECH Consultancy services Ltd.	27/05/2016	27/05/2016	27/05/2021	40,00,000

Details of faculty on On-Board of Companies, industrial collaboration

On Board Companies 2020- 2021

SI No.	Name of Company	No of faculty	Membership	Date of Commencement	Validity
1	Coimbatore productivity Council	01	Special Invitee	07/07/2017	Life time
2	TPEP	02	Advisory board member	02/02/2017	3 Years
3	Mastro lee	02	Advisory board member	26/01/2017	5 year
4	Mastro Engineering	02	Advisory board member	24/01/2017	3 Years
5	G R Industries	02	Advisory board member	15/07/2016	5 year
6	ESL foundry	01	Advisory board member	04/03/2017	3 year

6. Value added courses conducted and number of students benefited (for all years)

Innovative projects done and participation in contests with details of prizes won.

Name of The Student	Guide name	Project title	Event name and date	Organized by	Achievements
Udhayakumar. S	Mrs.S.Divya	Fabrication of Cyclone Separator for Dust Collector	Smart India Hackathon (MSME, Govt. of India) & (08/07/2019-12/07/2019)	Govt of India	Participation in Final round
Thaaranidevi .C.K					
Santhana Prabhu.K					
Shanketh .S					
Jayaseelan.T	Mr.Y.Suresh babu	Smart Faucet	KSB Annual Day Project Expo (4/08/2019)	KSB Pump	First prize
Kavin Prabhu.L					
Lalith Mohan.S					
Naveen Kumar.V					
Venkatesh.R	Mr.S.Dharani Kumar	Solar Tracking System using Refrigerant	KSB Annual Day Project Expo (04/08/2019)	KSB Pump	Second prize
Jagasirpiyan.K					
Vignesh.A					
Naveen Prasanth.K					
Mohan Aravind.K	Mr.V.Naveen Prabu	Gokart	Gokart challenge & (10/02/2020-14/02/2020)	(ISNEE motosports Ltd)	First prize in Fuel Economy and Endurance
Fredic Prem.W					
Kavibharathi.K					
Mohamed Javeed.M					

Deepak chakkaravathy.R					
Aswath Kumar.S					
Kavin .K.R					
Hariharan.K					
Dharsan.S					
Sajeev.S					
Lalluraja.M					
Kevin Raj.M					
Logeshwaran.K					
Balaji.R					
Sanjay.V.C					
Harish.B	Mr.S.Gokul	EFFI-CYCLE	EFFI-CYCLE 2019 (01/10/2019-5/10/2019)	SAE	Participation in Final round
Giriprasanth.D					
Kamesh kumar.A					
Manikandan.R					
Kishore.M					
Bhavadharani.B					
Akshaya.K					
Madhan.M					
Blessvin bruso.P					
Karthikeyan.M					
Ajeeth.R					
Karthik.B					
Harish kumar.M					
Deepak chakkaravathy.R	Dr.G.Gokilakrishan	Cotton to cloth machin	EUREKA 2020 (22-10-	PSG Tech	First price with Cash price of Rs.2000/-
Jayant.V					

Balaji.K		e	2020)		
Mohan Jeet .M					
Kevinraj .M	Mr.S.Dharani Kumar	Power controlled self - transferring aiding device	Astra Zeneca BioMedTech Innovation Challenge (13-03-2020)	IIT madras	Participation in Final round
Allwyn Joseph S.J					
Udith Vishnu .U					
Ramesh Krishnaa .S. L	Mr.S.Dharani Kumar	Driving Ariser	Future-Proof Hackathon 2020 (30-05-2020)	German – India collaboration	Participation in Final round
Yadav Prashanth.M					
Ragu .M					

No of Patents filed: 1

Dr.R.Suresh Kumar, **S.Dharani Kumar**, M.Kevinraj , U.Udith Vishnu and S.J.Allwyn Joseph, "Power Controlled Self Transferring Aiding Device". **(Provisional Patent No. 202041033202) (DATE:3/08/2020)**

No.of students Graduated (details in % also)

AY 2019-2020	GRADUATED	APPEARED	%
Graduate Pass Percentage	96	119	80.67%

No.of students became entrepreneurs, went for higher studies, passed competitive exams etc.,

Student Entrepreneurs

Sl. No.	Name of the Student	Department	Year of Passi	Name of the Company with Address	Date of Establishment	Nature of Company
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1	S.Vignesh Kavin	Mechanical Engineering	2018- 2019	160/4, Vellavan Nagar, Perumpalayam, Poomalur, Tiruppur, Tamil Nadu 641663	26.07.2020	MPS Hollow blocks
2	S.Arunkum ar	Mechanical Engineering	2019- 2020	No.24, Rajendra Road, Near CM towers, Udumalpet - 642126	08.02.2020	Crew360
3	M.Praveen Kumar	Mechanical Engineering	2019- 2020	2/207, Divansapudur, Pollachi, Coimbatore - 642 103 Email - castlegreenexports@g mail.com Webpage: www.castlegreenexpor ts.com	05.11.2020	Castle Green Exports

Students Joined Higher Studies

Sl. No.	Batch	Name of the Student	Department	Year of Passing	Professional Exam Attended	Name of program admitted to	Name of the Institution with Address	Status
1	2020- 2021	Kavya.L	Mech	2019	-	ME- Engineering Design	Amrita Vishwa Vidyapeetha m University- Coimbatore	Doing 1 st year
2		Balaji.S	Mech	2020	-	MS-Metallic Material Technology	Technische universitat Bergakadem ie Freiberg Academiestr abe 6 09596 Freiberg- Germany	Enrolled


3		Somesh . S. R	Mech	2020	-	MBA	(Mittal Business School, Lovely Professional University, Phagwara- Punjab	Doing 1 st year
4		Depak Chakkar avarthy. R	Mech	2020	TANCET	M.E Engineering Design	GCT Coimbatore	Doing 1 st year
5		Sibi Mayura n K	Mech	2020	-	MBA	Dr GRD College - Coimbatore	Doing 1 st year

Placement details.

S.No	Name of the student	Company Name	Salary per annum	No. of offers
1	ADARSH N K	Lakshmi Electricals & Control systems	1.44 LPA	1
2	AKASH S	Autoprints	1.62 LPA	1
3	ANIESH K	Verzeo	5 LPA	1
4	ARUN MARI A	Verzeo	5 LPA	1
5	DINESH KUMAR P	Lakshmi Electricals & Control systems	1.44 LPA	1
6	GOKULA KRISHNAN P	Lakshmi Electricals & Control systems	1.44 LPA	1
7	GUNASEKARAN K	FACE- Prep	3 LPA	1
8	HARIHARAN K	Autoprints	1.62 LPA	1
9	HARISH K	Verzeo	5 LPA	1
10	KARTHIBAN S	Lakshmi Electricals & Control systems	1.44 LPA	1
11	KEERTHIVASAN S	Verzeo	5 LPA	1
12	MANIKANDAN V	Milekal	2.4 LPA	1

13	MOGANA SUNDAR V P	Chainsys	2.8 LPA	1
14	ABHILASH S	Milekal	6 LPA	1
15	MURUGANANTHAN S	Lakshmi Electricals & Control systems	1.44 LPA	1
16	NAVJODH P G	Milekal/Higher studies	6 LPA	1
17	NITHYANANDHAN N	CTS	4 LPA	1
18	NITISH KUMAR B V	KTK Transport	1.6 LPA	1
19	PAVISH M	KTK Transport	1.6 LPA	1
20	PRAKASH S	Verzeo	5 LPA	1
21	PRANESH S	Jaro	6.6 LPA	1
22	RAJ KUMAR B	Lakshmi Electricals & Control systems	1.44 LPA	1
23	RAMANAN C.U	BYJUs	10 LPA	1
24	RAMKUMAR K	Jamna Auto Industries	1.5 LPA	1
25	RUTHREESH T	KTK Transport/Milekal	1.6 LPA / 6 LPA	1
26	SARAN RAJ G	Lakshmi Electricals & Control systems	1.44 LPA	1
27	SHANMUGANATHAN N	Lakshmi Electricals & Control systems	1.44 LPA	1
28	SRI RAM K	Lakshmi Electricals & Control systems	1.44 LPA	1
29	SURYA PRAKASH M	Lakshmi Electricals & Control systems	1.44 LPA	1
30	VIGNESHWARAN A	Milekal	6 LPA	1
31	VIKASH KUMAR V S	Suryabala JCB	1.2 LPA	1
32	YASHWANTH E	Capgemini	4 LPA	1
33	PRAKASH M	Lakshmi Precision & Tooling	1.44 lpa	1

Any awards won by the Department/Faculty member:

S.No	Name of the award	Name of awardee	Name of awarding body	
1.	Best Senior Faculty Award	Dr.R.Suresh Kumar	Novel Research Academy	

SESSWA Activities

S. No	Department	Name of the activity	Organising agency	collaborating agency	Year of the activity	Number of students participated in the activity	Number of faculty's participated in the activity
1.	Mechanical	Blood donation to a pregnant lady by a student	SESSWA	Pollachi Blood Bank	2020-2021	1	0
2.	Mechanical	Blood donation to SECE Sweeper by faculties	SESSWA	Pollachi Blood Bank	2020-2021	0	2

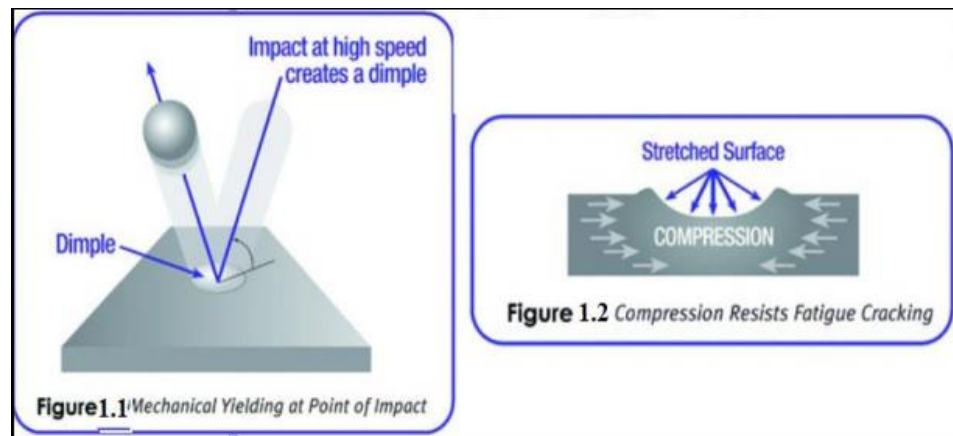
Technical article –Staff & Student

What is Shot Peening and Why is Important?

WHAT IS SHOT PEENING?

Shot peening is the cold working process in which a surface of a part is bombarded with small spherical media called shot. Each piece of shot striking a metal act as the tiny peening hammer, imparting the small indentation or dimple on a surface. In order for a dimple to be created, a surface layer of the metal must yield in tension (Figure 1).

Below a surface, the compressed grains try to restore the surface to its original shape, producing the hemisphere of cold-worked metal highly stressed in compression (Figure 1). Overlapping Dimples develop the uniform layer of residual compressive stress



WHY SHOT PEEN?

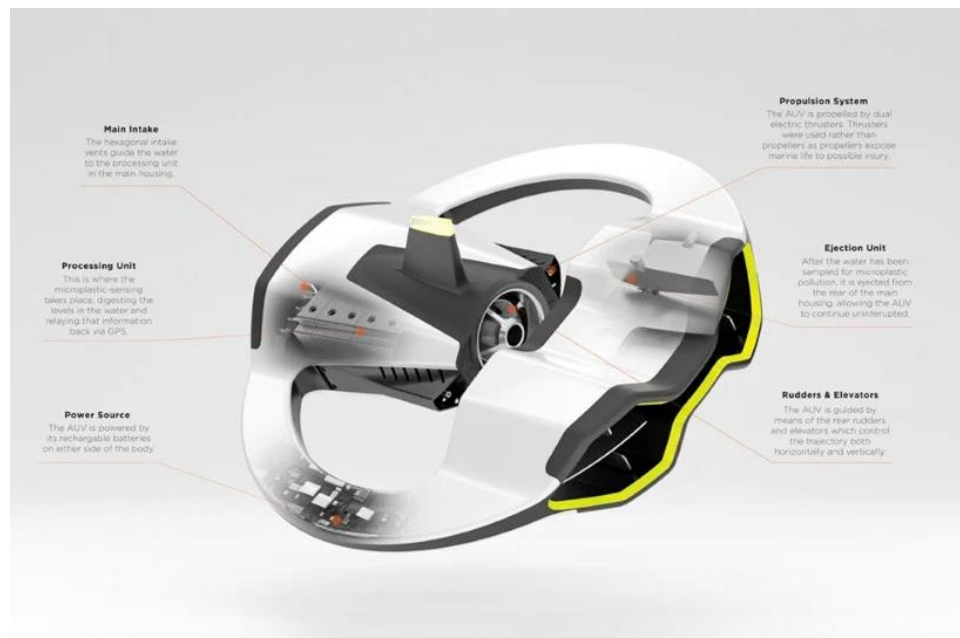
Atoms in a surface of a piece of manufactured metal will be under (mostly) tensile stresses left over from grinding, welds, heat treatments and other stressful production operation. Cracks promulgate easily in areas of tensile stress because a tensile stress is already working to pull a atom of the metal apart. By shot peening a material you introduce a layer of compressive stress by compacting a material. As a shot peening are performed, a atom on a surface of a metal become crowded and try to restore a metal's original shape by pushing outward. An atom deeper into a metal is pulled toward a surface by their bonds with an atom in a compressive layer. These deeper atoms resist the outward pull creating internal tensile stress that keep the part in equilibrium with the compressive stress on a surface.

Mr.S.Dharani Kumar
Assistant Professor
Department of Mechanical
Sri Eshwar College of Engineering

underwater draper drone

American not-for-profit research and development organization draper has teamed up with sprout studios to combat microplastic contaminations. together with the united states environmental protection agency (EPA), they have developed the autonomous draper underwater drone, a microplastic sensing drone that can detect and analyze invisible microplastics in oceans, coastal regions, and rivers.

“draper’s aim is to use this drone to help scientists understand where microplastics originate from and therefore enable them to try and prevent them from contaminating our waters. when the automated underwater vehicles (AUV) is deployed, it skims the top nine meters of the water where most microplastics are located, scanning for microplastics, testing for specific types, and ultimately relaying GPS coordinates into a heat map”.



Mr.Jeeva
III Mechanical A
Sri Eshwar College of Engineering

Online Activities

S.No	Name	Course Title	Online Course	Online Platform	Duration
	Dr.T.Ramakrishnan	Design-Introductory level Design & Innovation course	Online Course	OpenLearn, UK	28 hrs
		Accessibility of eLearning -Advanced level Education Careers course	Online Course	OpenLearn, UK	15 hrs
		Cyber Security in Manufacturing	Online Course	Coursera	24 hrs
		Creativity, community and ICT	Online Course	OpenLearn, UK	20 hrs
		Advanced Manufacturing Enterprise	Online Course	Coursera	24 hrs
		Computers and computer systems (Creativity, community and ICT)	Online Course	OpenLearn, UK	20 hrs
		Programming for Everybody (Getting Started with Python)	Online Course	Coursera	30 hrs
		Learn Python Programming Masterclass 2020	Online Course	OpenLearn, UK	59 hrs
		An introduction to data and information- (Introductory level Computing & ICT course)	Online Course	OpenLearn, UK	20 hrs
	Dr.S.Ganeshkumar	Machine learning: regression	Online Course	Coursera	6 Weeks
	Dr.S.Balasubramani	3D Model Creation with Autodesk Fusion 360	Online Course	Coursera	13 hrs
		Accessibility of eLearning	Online Course	Openlearn	15 hrs
		Design	Online Course	Openlearn	28 hrs
		Cyber Security in Manufacturing	Online Course	Coursera	13 hrs
		Introduction to Polymers	Online Course	Openlearn	20 hrs
		Manufacturing	Online Course	Openlearn	20 hrs
		Computers and computer systems	Online Course	Openlearn	20 hrs

		Learn Python Programming Masterclass	Online Course	Udemy	59 hrs
		An introduction to data and information	Online Course	Openlearn	20 hrs
	Mr.G.Gokilakrishnan	Six sigma and the organization	Online Course	Coursera	2 Weeks
		Python programming	Online Course	Coursera	4 Weeks
		IOT marketing and security	Online Course	Coursera	4 Weeks
	Mr.Y.Sureshababu	Machine learning for all	Online Course	Coursera	4 weeks
	Mr.S.Divya	Statical Molecular Thermodynamics	Online Course	Coursera	9 Weeks
		3-D Printing Application	Online Course	Coursera	4 Weeks
		3-D Printing Revolution	Online Course	Coursera	2 Weeks
		Machine Learning for ALL	Online Course	Coursera	5 Weeks
		Design Thinking for Innovation	Online Course	Coursera	5 Week
	Mr.A.Vimal	Online Certification Course cum FDP On Foundation of Computational Fluid Dynamics	Online Course	NPTEL	8 weeks
		Solar Energy Basics	Online Course	Coursera	10 hours
		Internet of Things and embedded system	Online Course	Coursera	15 hours
		Natural Gas	Online Course	Coursera	9 hours
		Fundamentals of Fluid Power course	Online Course	Coursera	16 hours
		Introduction to Thermodynamics	Online Course	Coursera	16 hours
		Statistical Molecular Thermodynamics	Online Course	Coursera	19 hours
		Introduction to Indoor air quality	Online Course	Coursera	10 hours
		Introduction to Machine Learning	Online Course	Coursera	25 hours
		Business Analytics and Digital Media	Online Course	Coursera	7 hours
	Mr.P.Arunachalam	Ferrous Technology I	Online course	Coursera	3 weeks
		Ferrous Technology II	Online course	Coursera	3 weeks

		Initiating and Planning Projects	Online course	Coursera	4 weeks
		Six Sigma Principles	Online course	Coursera	4 weeks
		Building Arduino Robots and Devices	Online course	Coursera	4 weeks
	Mr.A.R.Palanivelrajan	Collaborative Robot Safety: Design & Deployment	Online Course	Coursera	2 weeks
		Simulation Analysis for Mechanical Engineers with Autodesk Fusion 360	Online Course	Coursera	4 weeks
		Mechanics of Materials I: Fundamentals of Stress & Strain and Axial Loading	Online Course	Coursera	5 weeks
		Intelligent Machining	Online Course	Coursera	2 weeks
	Mr.S.Vignesh	Online Certification Course cum FDP On Foundation of Computational Fluid Dynamics	Online Course	NPTEL	8 weeks
		Wind Energy	Online Course	Coursera	3 Weeks
		Safety in the utility Industry	Online Course	Coursera	2 Weeks
		Natural Gas	Online Course	Coursera	3 Weeks
		Introduction to Thermodynamics	Online Course	Coursera	4 Weeks
		Energy: The Enterprise	Online Course	Coursera	2 weeks
		Electric Power Systems	Online Course	Coursera	2 weeks
		Advanced Manufacturing Process Analysis	Online Course	Coursera	3 Weeks
		Advanced Manufacturing Enterprise	Online Course	Coursera	3 Weeks
		Book Writing	Online Course	Coursera	2 Days
		Fundamentals of manuscript preparation	Online Course	Coursera	5 Days
		Technical writing skills	Online Course	Coursera	5 Days
		Writing skills	Online Course	Coursera	5 Days

Mr.R.Vivek	CAM and Design Manufacturing for Mechanical Engineers with Autodesk Fusion 360	Online Course	Coursera	4 weeks
	Simulation Analysis for Mechanical Engineers with Autodesk Fusion 360	Online Course	Coursera	4 weeks
	Modeling and Design for Mechanical Engineers with Autodesk Fusion 360	Online Course	Coursera	4 weeks
	Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360	Online Course	Coursera	4 weeks
	How Things Work: An Introduction to Physics	Online Course	Coursera	3days
	Generative Design for Additive Manufacturing	Online Course	Coursera	4 weeks
	Industrial IoT Markets and Security	Online Course	Coursera	4 weeks
	Programming for Everybody (Getting Started with Python)	Online Course	Coursera	4 weeks

CLOSURE:

All the events conducted by the department during the academic year **2020-21** were very successful and valuable to the student's community. This would not be possible without the driving force of our principal's, support from management and guidance from the head of the department and student volunteers are being thanked for their sincere efforts in making all the efforts into a success.

SRI ESHWAR COLLEGE OF ENGINEERING

Kondampatti (Po), Vadasithur (Via), Coimbatore - 641202 • www.sece.ac.in