



SWARNANDHRA

College of Engineering and Technology
(Autonomous)

Seetharampuram, Narsapur, Andhra Pradesh 534280



MECHAZINE

BI - ANUAL MAGAZINE

DEPARTMENT OF MECHANICAL ENGINEERING

Editorial Members

1. Dr. A Gopichand, HOD-ME
2. Dr. R. Lalitha Narayana, Assoc. Prof - ME

Student Coordinators:

1. P S S S Prasad (20A21A0354)
2. D Niranjan (21A21A0321)

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Volume 4 - Issue 1

To educate and enrich effective and responsible Mechanical Engineers to fulfill the needs of industry and society.

ABOUT MECHANICAL DEPARTMENT

"EMPOWERING MINDS, BUILDING FUTURES"



The Department of Mechanical Engineering was established in the year 2004. The department offers B.Tech from the academic year 2004-2005 (Mechanical Engineering), M.Tech (CAD/CAM) from the academic year 2008 – 2009 and M.Tech (Thermal Engineering) from the academic year 2021 – 2022. Our vision is to educate and enrich effective and responsible Mechanical Engineers to fulfil the needs of industry and society, where teaching, learning and research synergize to deliver technical education and scientific research for public good. Our mission is to create efficient mechanical engineers who can compete at the global level. The projects and hands-on activities are designed to foster a spirit of entrepreneurship among students and to enable a few to launch their own ventures.

The department was accredited by National Board of Accreditation (NBA) in 2013 and was recognized as research centre by Jawaharlal Nehru Technological University Kakinada (JNTUK) in 2016. The department has six Ph.D. doctorates and experienced faculty members in all streams of Mechanical Engineering and skilled supporting staff. The faculty members have published around 130 research papers in various International and National Journals/Conferences and actively engaged in research and consultancy works. The department regularly organizes technical workshops/Seminars/FDPs for the student and faculty members to expose them to emerging areas. The department has state-of-the art facilities for laboratories, department library and classrooms to support e-learning (Smart and Interactive boards). The department has a well-equipped centralized workshop facility which caters to the needs of various departments. Guest lectures and industrial visits are periodically arranged for the students to supplement their curriculum. We strive for all round excellence in students, encouraging them in all extracurricular and club activities.



The department is very well equipped with computational facilities and resources both in terms of hardware and software. Department has more than 180 computing systems and workstations loaded with wide range of software products covering all areas of Mechanical Engineering. The department having DASSAULT System Lab associated with APSSDC. The Department has Association of Mechanical Engineering (IEI, ASME & ISTE) which is a forum for students to develop their professional skills. Students are also encouraged to take part in awareness campaigns that have social relevance. Alumni of the department have occupied very high positions at National and International level.

VISION AND MISSION



Vision: A statement outlining the desired future state or long-term goals of an organization.

Mission: A concise statement defining the purpose, core values, and primary objectives.

Institution Vision

V

"To produce global competent, ethical and dynamic professionals by creating Centre of Excellence in Technical Education for societal empowerment."

Institution Mission

M1

To provide quality education with knowledge and skills for rural and urban students.

M2

To collaborate the industries with academia for empowering the students to meet global standards.

M3

To induce highly ethical entrepreneurship in young minds with good leadership quality for the society.

M4

To enhance the institution in Research and Development by human intellectual capability.

Department Vision

V

To educate and enrich effective and responsible Mechanical Engineers to fulfill the needs of industry and society.

Department Mission

M1

To lay a strong foundation of technical knowledge by concentrating on fundamental concepts of Mechanical engineering.

M2

To develop creative thinking and innovative methods for solving complex engineering problems.

M3

To develop team spirit, leadership and professional qualities.

M4

To strengthen research abilities in collaboration with industry.



PRINCIPAL'S DESK:



Dr. S. Suresh Kumar

BE,MS, M.Tech, Ph.D

PRINCIPAL

Welcome to another exciting academic year! As your principal, I am thrilled to embark on this journey of learning and growth with each and every one of you.

This year, let's embrace the challenges ahead with enthusiasm and resilience. Let's support one another, celebrate our successes, and learn from our setbacks. Together, we can create an environment where every student feels valued, empowered, and inspired to reach for the stars.

I encourage you to take advantage of all the resources available to you—from our dedicated teachers to our extensive library to our extracurricular programs. Seize every opportunity to grow academically, socially, and personally.

"AS YOUR PRINCIPAL, I AM HERE TO SUPPORT YOU EVERY STEP OF THE WAY. WHETHER YOU NEED GUIDANCE, ENCOURAGEMENT, OR SIMPLY SOMEONE TO LISTEN, MY DOOR IS ALWAYS OPEN.."

Let's work together to make this academic year one filled with achievement, joy, and unforgettable memories

HOD'S DESK:



Dr. A Gopichand

B.TECH, M.Tech, Ph.D

VICE PRINCIPAL, HOD-ME

Remember that your education is not only about absorbing information but also about developing critical thinking skills, problem-solving abilities, and a deep understanding of your chosen field. Take advantage of the resources available to you, including our experienced faculty, state-of-the-art facilities, and opportunities for research and practical application.

Remember the importance of collaboration and teamwork. Your peers can be invaluable sources of support and inspiration, so don't hesitate to work together, share ideas, and learn from one another.

AS YOUR HEAD OF DEPARTMENT, I AM COMMITTED TO PROVIDING YOU WITH THE SUPPORT AND GUIDANCE YOU NEED TO SUCCEED. I LOOK FORWARD TO WORKING WITH EACH OF YOU AND WITNESSING THE INCREDIBLE PROGRESS WE WILL MAKE TOGETHER.

Wishing you all the best for a successful and rewarding year ahead.



OBJECTIVE

Publishing a research paper can have many advantages for researchers, including: Career advancement, professional recognition, opportunities for collaboration, increased visibility, impact on society, credibility and trust, professional development, inspiration for future research, and contribution to the field.

S. No	Name of the Faculty	Journals Detail	Paper Title	ISSN / Published year
1	1. Dr. Allaka Gopichand 2. Mr. P Satya Narayana Raju	Computer Integrated Manufacturing Systems	Strength and corrosion characteristics of sandwich pipes for deep water applications	ISSN 1006-5911, 2022
2	1. Dr. M. Francis Luther King 2. Dr. G. Robert Singh	Materials Today: Proceedings	An experimental study on friction stir processing of aluminium alloy (AA-2024) and boron nitride (BNp) surface composite	ISSN 2214-7853, 2023
3	1. Dr. R. Sanjeev Kumar	Engineering Research Express	Influences of various natural fibers on the mechanical and drilling characteristics of coir-fiber-based hybrid epoxy composites	ISSN 26318695, 2023
4	1. Mr.. John Bunyan 2. Dr. M. Francis Luther King 3. Dr. A. Gopichand 4. Dr. D. Bhanu Prakash	Journal of Fundamental & Comparative Research	Computational Fluid Dynamic Analysis on Rocket Nozzle Using Ansys	ISSN: 2277-7067
5	1. Dr. R. Sanjeev Kumar 2. Dr. A. Gopichand. 3. Mr. P Satya Narayana Raju. 4. Mr. B Mahesh Krishna	Journal of Fundamental & Comparative Research	Design and Printing of Foldable Helmet Using 3D PRINTER	ISSN: 2277-7067
6	1. Mr. B Mahesh Krishna 2. Dr. Allaka Gopichand 3. Dr. R. L. Narayana 4. Mr. Ch Harish Kumar	Journal of Fundamental & Comparative Research	Design of Solar Electric Scooter Using Fusion 360	ISSN: 2277-7067
7	1. Dr. R. Lalitha Narayana 2. Dr. A Gopichand 3. D. Bhanu Prakash 4. Dr. G. Robert Singh 5. P Satya Narayana Raju 6. Dr. R. Sanjeev Kumar	Journal of Fundamental & Comparative Research	Experimental Investigation of Passive Solar Still with Coated Copper Fins	ISSN: 2277-7067

IMPORTANT EVENTS IN THE DEPARTMENT



S. No	EVENT	DATE	ORGANISED BY / RESOURCE PERSON
1	BUSINESS IDEAS Innovation & Design	16-12-2022	Dr. Francis Luther King M, Department of Mechanical Engineering, SCET
2	Expert talk on Process of Innovation Development	21-12-2022	Mr. P. Pawan Kumar, a Research Scholar at IIT Roorkee
3	Outreach on Innovation & development	31-01-2023	Dr. Francis Luther King M, Department of Mechanical Engineering, SCET
4	Guest lecture	9-3-2023	Swati Chauhan Asst prof, AE PARUL University
5	workshop on 'Designing Solar PV	28-02-2023	Department of Mechanical Engineering, SCET
6	Workshop	09,10-2-2023	Mr. Kranthi Kumar P from ICT Academy, Chennai
7	Workshop	27,28 -02-2023	Mr Purushotham chary From Greenvion
8	Industrial visit	4 & 5 -4-2023	MSME,Vishakhapatnam
9	Seminar Presentation by Student's	15-04-2023	Department of Mechanical Engineering, SCET
10	Innovation day	21-4-2023	Dr S Suresh Kumar
11	Student chapter	25-4-2023	Mr D Satish kumar Superrintecndent engineer,ONGC
12	Webinar	26-04-2023	Mr Rajat Malhotra Patent attorney

STUDENT ACHIEVEMENTS



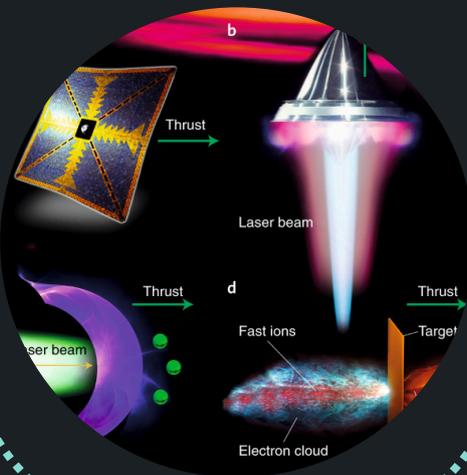
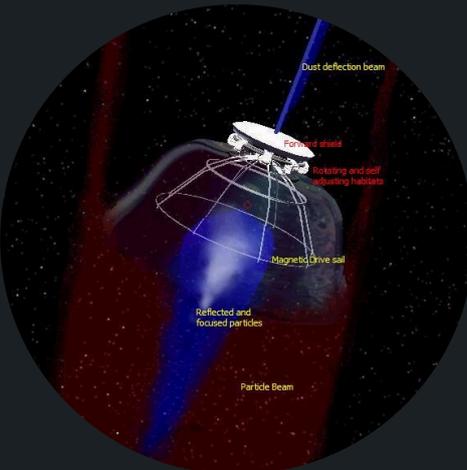
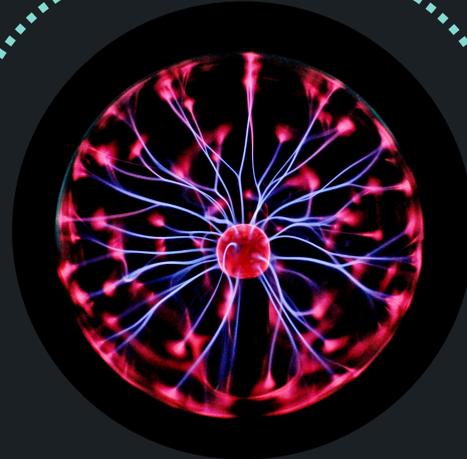
S. No	Name of the Student	Title	Name of the Institute/Organised by	Award
1	PENTAKOTI DHANJAY VENKATA SIVA SAI	Robo Race	SRKR Engineering College (Autonomous), Bhimavaram	2nd Place
2	GARAGA KUMAR DATTA, & BASAVA VENKATA SAI SATISH	India design Challenge, Fusion-360	India design Challenges, Chennai	finalist
3	SURAVARAPU VAMSIKRISHNA	Tree climbing Robot, (Project Expo)	SRKR Engineering College (Autonomous), Bhimavaram	1st Place
4	BADETI SAI KRISHNA SUBRAHMANYAM	Project Expo	Vishnu Institute of Technology, Bhimavaram	3rd Place
5	VANKA RAKESH	Robo Race	K L E Institute Of Technology, Karnataka	2nd Place
6	Garaga Kumar Datta	Poster Presentation	Parichay, A National Level Cultural - Tech Fest, Kadapa	Poster Presentation

- PEDAPATI RAVI (20A25B0315) QUALIFIED IN GATE EXAM -2023
- A SRAVANI, G YUGALA WON 1ST PRIZE IN 'BADMINTON DOUBLES' IN VIDYOUTH 2023
- B. PRATHYUSHA, I. NAGA JYOTHI, R. ANASUYA, S. DHANA LAKSHMI, A. SRAVANI, PRESENTED A PAPER TITLED, "MODELLING DESIGN AND ANALYSIS OF E-KART CHASSIS CROSS SECTION USING ANSYS" " IN INTERNATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN ENGINEERING, TECHNOLOGY, AND MANAGEMEN



NEW TRENDS IN TECHNOLOGY

Beamed-Energy Propulsion



WHAT IS BEAMED ENERGY?

IN THE BEAMED ENERGY CONCEPT, THE HEAT EXCHANGER IS POWERED BY AN ELECTROMAGNETIC BEAM PRODUCED ON THE GROUND AND PROPAGATED THROUGH THE ATMOSPHERE – THE POWER SOURCE AND ITS ACCOMPANYING WEIGHT IS LEFT ON THE GROUND.



EXPLAIN BEAM ENERGY PROPULSION

BEAMED-ENERGY PROPULSION IS A METHOD OF PROPULSION THAT USES A REMOTE ENERGY SOURCE, SUCH AS A GROUND- OR SPACE-BASED LASER OR MICROWAVE TRANSMITTER, TO SEND POWER TO A SPACE VEHICLE VIA A BEAM OF ELECTROMAGNETIC RADIATION. IF THE ENERGY TO PROPEL A SPACECRAFT DOES NOT HAVE TO BE CARRIED ON BOARD THE VEHICLE, SIGNIFICANT WEIGHT REDUCTIONS AND PERFORMANCE IMPROVEMENTS CAN BE ACHIEVED. PRESENTLY, BEAMED-ENERGY IS ONE OF THE MOST PROMISING TECHNOLOGIES TO LOWER DRAMATICALLY THE COST OF SPACE TRANSPORTATION. ONE FORM OF BEAMED-ENERGY PROPULSION IS LASER PROPULSION



ADVANTAGES

THE MAJOR THEORETICAL ADVANTAGES OF THIS CONCEPT ARE HIGH ISP, HIGH THRUST TO WEIGHT RATIOS, AND THE ACCOMPANYING PAYLOAD FRACTION AND STRUCTURAL MARGIN INCREASES



REFERENCES

1. Breakthrough (2018-05-29), Progress in beamed energy propulsion, Kevin Parkin, retrieved 2018
2. "Archived copy". Archived from the original on 2011-09-28. Retrieved 2009-08-31.
3. <http://surl.li/rruin>

ACADEMIC TOPPERS

“WHAT WE LEARN WITH PLEASURE, WE NEVER FORGET.”

– ALFRED MERCIER.



FOURTH YEAR TOPPER



NAME: VEGIREDDY NAGA SUBRAHMANYAM

H.T NO: 20A25A0362

SGPA: 9.80

CGPA: 9.15

THIRD YEAR TOPPER



NAME: AINAPUDI SURENDRA

H.T NO: 21A25A0301

SGPA: 9.27

CGPA: 9.16

SECOND YEAR TOPPER



NAME: DUNNA SANATH KUMAR

H.T NO: 22A25A0315

SGPA: 9.32

CGPA: 9.30

Congratulations

Congratulations

is wheelchair accessible.

VOICE OF STUDENTS



IT REFERS TO THE EXPRESSION OF VALUES, OPINIONS, BELIEFS, AND PERSPECTIVES OF INDIVIDUALS AND GROUPS OF STUDENTS IN A SCHOOL AND TO INSTRUCTIONAL APPROACHES AND TECHNIQUES THAT ARE BASED ON STUDENT CHOICES, INTERESTS, PASSIONS, AND AMBITIONS.

Alumni's Voice



RAJASEKHAR BANDARU

15A21A0349

ASST MANAGER, TATA SIKORSKY AEROSPACE LTD.

My Experience

I am very glad to tell that my knowledge has been enriched due to my association with our department of ME, my technical skills are improved by attending industrial visits and workshops conducted during our study, I am great full to entire faculty for guiding me in all aspects

Student's Voice



VANKA RAKESH

4TH YEAR STUDENT

20A21A0371

As college students, we're frequently informed that college is a adventure of self-discovery and private boom. It's a place wherein we no longer handiest acquire expertise but additionally study existence talents that shape us into well-rounded individuals. This could not be greater correct as I mirror on my own reports and the super opportunities that college has provided.

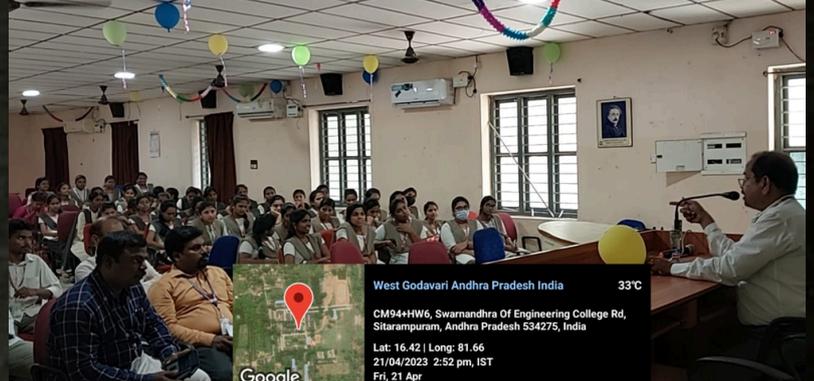
Whether it's the steerage of our devoted professors, the aid of our friends, or the numerous extracurricular activities to be had, every component of university life contributes to our development.

GALLERY

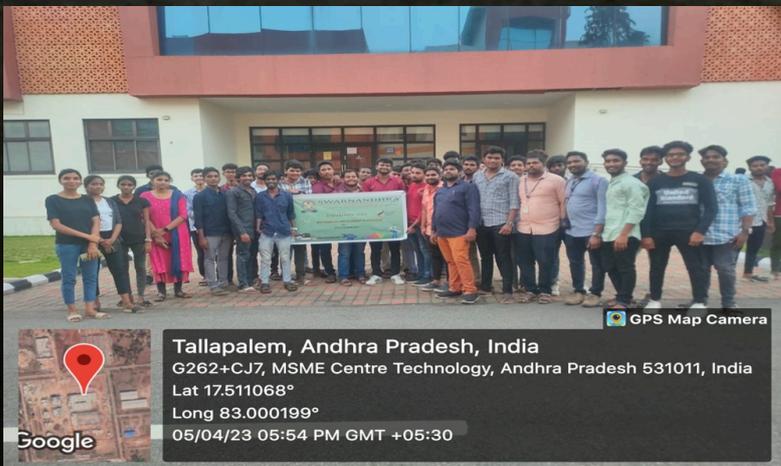


Out Reach Program

Business Ideas



Celebration of World Creativity & Innovation day

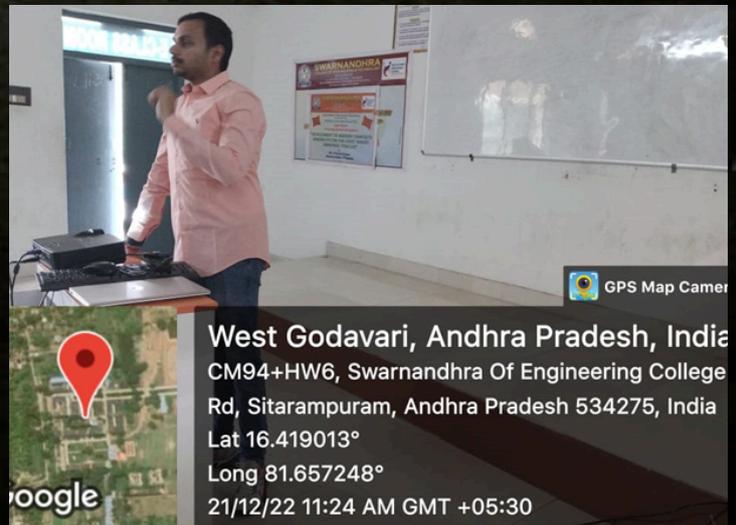


Industrial (Field) Visit –MSME Vishakhapatnam

GALLERY



Self Driven Activity



Expert talk on Process of Innovation Development



Student Chapter Certificates