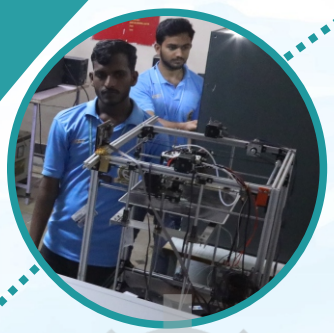
SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)

RVS Knowledge District, Chittoor-517127, A.P

40 Years of Excellence



ISSUE 05 | VOLUME 01 | MAY 2025

SYNERGY

ACHIEVEMENTS IN PROJECTS, PLACEMENTS, RESEARCH AND EDUCATION

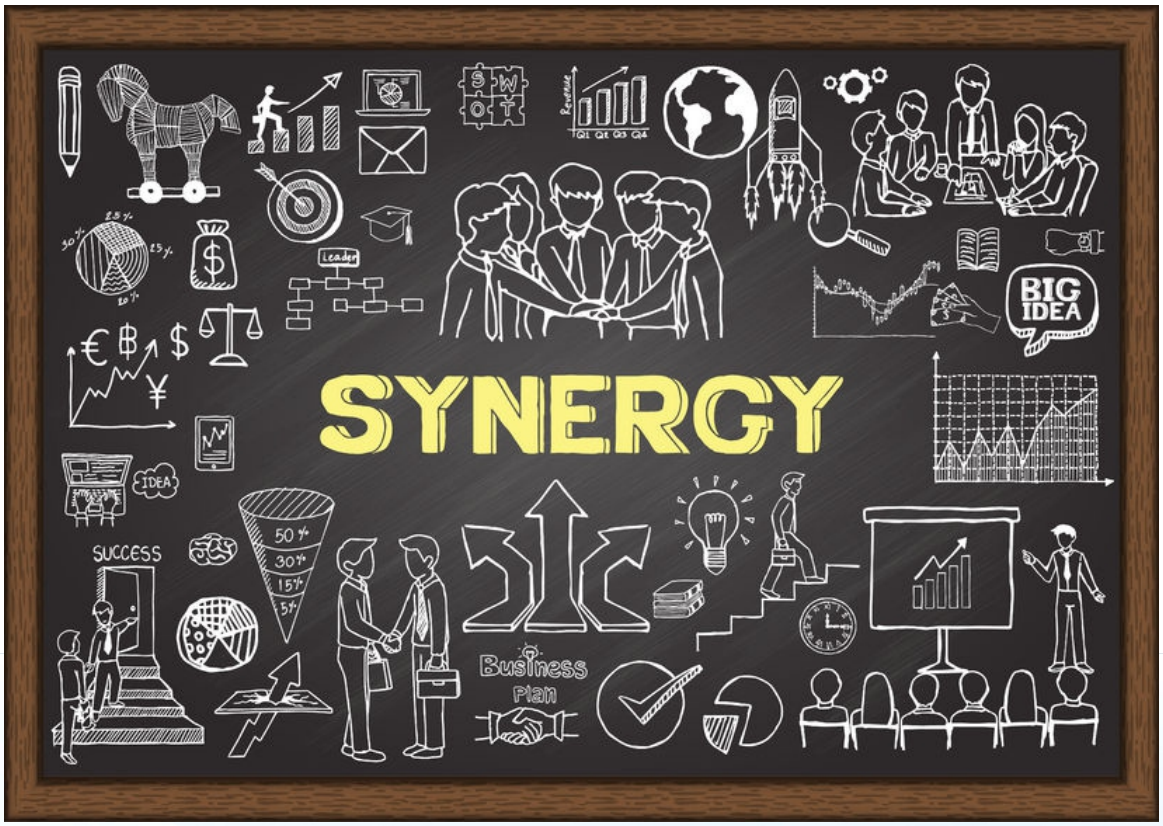
DEPARTMENT OF MECHANICAL ENGINEERING

SYNERGY MAGAZINE

Synergy – The Essence of Collaboration and InnovationThe name Synergy embodies the spirit of teamwork and collective growth, where the combined efforts of individuals create results far greater than what can be achieved alone. In the realm of Mechanical Engineering, synergy represents the seamless integration of knowledge, innovation, and technical expertise to drive progress. This department magazine serves as a platform to unite students, faculty, and industry professionals, fostering a culture of learning, creativity, and collaboration.

The primary aim of Synergy is to showcase the achievements, research contributions, and technical advancements of students and faculty. It provides insights into emerging trends, industry developments, and real-world engineering applications, bridging the gap between academia and industry. Through expert articles, project highlights, and alumni interactions, the magazine encourages knowledge sharing and intellectual growth.

The outcome of Synergy is a vibrant community of aspiring engineers who are well-informed, inspired, and equipped with the necessary skills to excel in the field. It not only enhances technical knowledge but also promotes innovation, effective communication, and professional networking. By recognizing talent and providing a platform for expression, Synergy strengthens the identity of the Mechanical Engineering department and serves as a beacon of excellence for future generations.



Message from the Chairman.....

Bharat Jyoti

Dr.Ravuri Venkata swamy Garu

Founder Chairman,
SV Group of Educational Institutions.

Education Is The Foundation Of Progress, And I Have Always Believed That Quality Education Can Transform Lives And Communities. With A Vision To Uplift The Backward Rayalaseema Region, I Established Srinivasa Educational Academy In 1998 With Like-minded Philanthropists And Educationists. Since Then, We Have Expanded Our Institutions To Provide Excellence In Nursing, Law, Engineering, And Medical Education.

Sri Venkateswara College of Engineering & Technology (Autonomous) stands as a testament to our commitment to technical education, consistently achieving outstanding results and national recognition. Our mission is not just to impart knowledge but to empower students with skills that lead to self-reliance and success

Beyond education, we have taken steps to serve society through RVS Hospitals and the proposed RVS Institute of Medical Sciences, ensuring accessible healthcare for the people of Chittoor and neighboring districts.

It is my firm belief that education, when combined with values and innovation, paves the way for a brighter future. I invite students to bepart of this journey and strive for excellence in their chosen fields.

Message from the Vice Chairman.....

Sri. Ravuri .V. Srinivas Garu

Vice Chairman,
SV Group of Educational Institutions.

At Sri Venkateswara College of Engineering & Technology (Autonomous), our mission is to provide world-class education while fostering innovation, leadership, and social responsibility. Under the banner of Srinivasa Educational Academy, we have been committed to excellence, ensuring that our students receive not just academic knowledge but also the skills and values necessary for success in a rapidly evolving world.

With a strong foundation in engineering and management education, we have created an ecosystem where students from across the globe, including countries like Malaysia, Sudan, UAE, and Bhutan, come to pursue their dreams. Our relentless pursuit of quality has earned our institutions national recognition, NBA and NAAC accreditations, and a reputation as a preferred destination for top recruiters.

Beyond academics, our commitment to social responsibility remains unwavering. Through initiatives like Smt. Haarika Memorial Literary and Cultural Association and Helping Hands, we continue to support education, healthcare, and community welfare programs. It is our belief that education should not only empower individuals but also contribute to the betterment of society.

I welcome students to join our journey of excellence, innovation, and service to society. Together, we can build a brighter future.

Message from the Principal.....

Dr. Matam Mohan Babu, Ph.D.,MISTE, MISH

Principal,
Sri Venkateswara College of Engineering & Technology
(Autonomous)

We are committed to transforming our campus into a center of engineering excellence, where research, innovative pedagogy, and strong values come together to meet the demands of today's world. Our goal is to ensure that our students emerge as technologically skilled and ethically responsible leaders who can contribute meaningfully to the global community

I encourage each of you to embrace this journey with passion and dedication. May you soar high, explore new horizons, and make a lasting impact—both through your profession and the power of education

Message from the Head of the Department
Mechanical Engineering

At The Department Of Mechanical Engineering, Sri Venkateswara College Of Engineering & Technology (autonomous), We Are Committed To Nurturing Innovative Thinkers, Problem Solvers, And Industry-ready Professionals. Mechanical Engineering Is The Foundation Of Technological Advancements, And Our Curriculum Is Designed To Blend Theoretical Knowledge With Practical Applications, Research, And Industry Exposure.

Dr.S. Arunsaco
Associate Professor
Head of the Department – Mechanical Engineering
Sri Venkateswara College of Engineering & Technology
(Autonomous)

Vision

To be recognized as a center for quality education in Mechanical Engineering and allied areas and to train young students to solve the problems of tomorrow.

Mission

M1 : Provide excellent foundation through Teaching-Learning and train the students based on research to help them progress for Higher education.

M2 : Fostering student development with special focus on domain and soft skills for a prospective career placement.

M3 : Developing students with skills in entrepreneurship contributing to job creation and societal development.

M4 : Creating an ecosystem for continuous development of faculty and students by providing relevant infrastructure and resources.

We emphasize hands-on learning, interdisciplinary research, and skill development to equip our students with the ability to tackle real-world engineering challenges. Our well-equipped laboratories, dedicated faculty, and strong industry collaborations ensure that students gain a competitive edge in the ever-evolving engineering landscape.

I encourage our students to think critically, innovate fearlessly, and uphold ethical values in their professional journey. With determination and dedication, I am confident that each of you will contribute significantly to the field of mechanical engineering and make a meaningful impact on society.

Wishing you all a rewarding and successful journey ahead!

Recent Development in Mechanical Engineering: 3D Printing of High-Performance Alloys for Aerospace and Automotive Applications

Additive Manufacturing (AM), commonly known as 3D printing, continues to revolutionize the field of mechanical engineering. A significant recent advancement is the successful 3D printing of high-performance metal alloys such as **nickel-based superalloys and titanium aluminides**, which are traditionally difficult to process due to their high melting points and sensitivity to cracking.

Researchers at MIT and Oak Ridge National Laboratory (ORNL) have developed a **new laser powder bed fusion (LPBF)** process that allows precise control of temperature gradients and cooling rates, enabling the fabrication of **crack-free components** from these advanced materials. This breakthrough is particularly transformative for the aerospace and automotive industries, where reducing weight while maintaining strength is critical for improving fuel efficiency and reducing emissions.

Moreover, the ability to manufacture complex geometries without the need for extensive machining opens the door to **mass customization and on-demand manufacturing** of lightweight structural components. This not only reduces material waste but also leads to faster prototyping and shorter product development cycles.

The integration of **machine learning algorithms** to predict and control microstructural evolution during the printing process further enhances the mechanical properties of the final parts, making them comparable—or even superior—to conventionally manufactured components.

This development represents a major leap forward, pushing the boundaries of what's possible in mechanical design and manufacturing.

Citation:

DebRoy, T., Zhang, W., Turner, J., Babu, S.S. (2022). Additive Manufacturing of Metallic Components – Process, Structure and Properties. *Progress in Materials Science*, 92, 112-224. doi:10.1016/j.pmatsci.2022.100942

Faculty Development Highlights

Mr. N. Sakthivelan Enhances Skills in CAEG

Mr. N. Sakthivelan, a dedicated faculty member, participated in the faculty development program on "Advanced Techniques in Computer Assisted Engineering Graphics," organized by Sreenivasa Institute of Technology and Management Studies.

Program Details:

Program Name: Advanced Techniques in Computer Assisted Engineering Graphics
Event Type: Faculty Development Program
Organized by: Sreenivasa Institute of Technology and Management Studies
Participant: Mr. N. Sakthivelan

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&
FACULTY DEVELOPMENT CENTRE
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
ANANTHAPURAMU-515 002, Andhra Pradesh, India

CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr./Mrs./Ms. N. Sakthivelan from Sri Venkateswara College of Engineering and Technology, Chittoor. has participated in the Five Day Faculty Development Programme on "Advanced Techniques in Computer Assisted Engineering Graphics", jointly organized by the Department of Mechanical Engineering, Sreenivasa Institute of Technology and Management Studies (Autonomous) and the Faculty Development Centre, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu, Andhra Pradesh, held from 28.04.2025 to 02.05.2025.

Dr. N. SATHISH KUMAR
Programme Co-ordinator,
Assistant Professor & HOD,
Sreenivasa Institute of Technology and Management Studies, (Autonomous),
Chittoor, A.P., India

Dr.N.VENKATACHALAPATHI
Convenor & Principal,
Sreenivasa Institute of Technology and Management Studies, (Autonomous),
Chittoor, A.P., India

Prof. G. PRASANTHI
Director,
Faculty Development Centre,
JNT University Anantapur,
Ananthapuramu, A.P., India

Expert Insights

Mr. N. Sakthivelan Shares Expertise in CAEG

Mr. N. Sakthivelan served as a Resource Person for the program "Advanced Techniques in Computer Assisted Engineering Graphics," organized by Sreenivasa Institute of Technology and Management Studies.

Program Details:

Program Name: Advanced Techniques in Computer Assisted Engineering Graphics

Role: Resource Person

Organized by: Sreenivasa Institute of Technology and Management Studies

Resource Person: Mr. N. Sakthivelan

Mr. Sakthivelan's expertise enhanced participants' understanding of CAEG techniques.

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(UGC - AUTONOMOUS INSTITUTION & ACCREDITED BY NBA for CSE, ECE, EEE & MCA)

(Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu)

Prof. Dr. N.Venkatachalapathi, M.T.ech., Ph.D
PRINCIPAL

Department of Mechanical Engineering

Letter of Appreciation to ...

Mr. N.Sakthivelan
Asso. Professor
Sri Venkateswara College of Engineering and Technology
(AUTONOMOUS), Chittoor.

Dear Resource person,

As a Mechanical Engineering Professional, your contribution to our "Advanced Techniques in Computer Assisted Engineering Graphics", jointly organized by the Sreenivasa Institute of Technology and Management Studies, Chittoor and Jawaharlal Nehru Technological University Anantapur on 2nd May 2025 is highly commendable and your valuable inputs are well received by the participants.

We acknowledge and appreciate the value addition from your side to the faculty development program. Thank you I looking forward to your future association with us on some other platforms of knowledge sharing.

Dr.N.Satish Kumar
Co-ordinator & HOD

Dr.N.Venkatachalapathi
PRINCIPAL

r. D.K. Audikesavulu Marg (Bangalore - Tirupathi Bye-Pass Road), Murukambattu Post, Chittoor - 517 127 A.P.
Tel No. : 08572 - 246298, 246299, Website : www.sitams.ac.in, Email : principal@sitams.ac.in

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&
FACULTY DEVELOPMENT CENTRE
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
ANANTHAPURAMU-515 002, Andhra Pradesh, India

CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr./Mrs./Ms. Vikas Reddy Gongati from Sri Venkateswara College of Engineering and Technology, Chittoor has participated in the Five Day Faculty Development Programme on "Advanced Techniques in Computer Assisted Engineering Graphics" jointly organized by the Department of Mechanical Engineering, Sreenivasa Institute of Technology and Management Studies (Autonomous) and the Faculty Development Centre, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu, Andhra Pradesh, held from 28.04.2025 to 02.05.2025.

Dr. N. SATHISH KUMAR
Programme Co-ordinator,
Assistant Professor & HOD,
Sreenivasa Institute of Technology and Management Studies, (Autonomous),
Chittoor, A.P., India

Dr.N.VENKATACHALAPATHI
Convenor & Principal,
Sreenivasa Institute of Technology and Management Studies, (Autonomous),
Chittoor, A.P., India

Prof. G. PRASANTHI
Director,
Faculty Development Centre,
JNT University Anantapur,
Ananthapuramu, A.P., India

Vikas Reddy Gongati Enhances Skills in CAEG

Vikas Reddy Gongati, a faculty member, participated in the faculty development program on "Advanced Techniques in Computer Assisted Engineering Graphics," organized by Sreenivasa Institute of Technology and Management Studies.

Program Details:

Program Name: Advanced Techniques in Computer Assisted Engineering Graphics

Event Type: Faculty Development Program

Organized by: **Sreenivasa Institute of Technology and Management Studies**

Participant: **Vikas Reddy Gongati**

Intenship Offers

No. of Student	Company Name	Stipend Package Per Month
21	Delphi - TVS Technologies	14,000 /-
07	ABI-SHOWATECH	15,800 /-
01	ELEATION	10,000 /-
01	GATEMAAN	10,000 /-
01	RAAM GROUP	07,000 /-

Placement offers

No. of Student	Company Name	Salary Package Per Month
01	RINEX REST ABOVE THE BEST	83,000 /-
01	RAAM GROUP	45,000 /-
01	Spiders	45,000 /-
01	ELEATION	25,000 /-
01	GATEMAAN	25,000 /-
07	ABI-SHOWATECH	19,200 /-

Top Company Recruiters

HYUNDAI, GATEMAAN, TCS TATA CONSULTANCY SERVICES, LARSEN & TOUBRO, SDF Farming Technology. Since 1927.

ELEATION, Delphi - TVS Technologies, accenture, LiuGong, NISSAN

1% Better Everyday

Improving by 1% isn't particularly notable- sometimes it isn't even noticeable- but it can be far more meaningful, especially in the long run. It doesn't matter how unsuccessful or successful you are now. What matters is whether your habits are putting you on the path toward success.

If you want better results, then forget about setting your goals. Focus on your system instead. Fix the inputs and the outputs will fix themselves.

I am K. Sai Mani Sharan from Visakhapatnam. I graduated in the year 2023 as a Mechanical Engineer from our Sri Venkateswara college of Engineering and Technology. At first, I found it difficult to adjust to the spices but got used to it later. Entire journey of 3 years gave me goods friends to be remembered and good experiences. I still wonder to see the aerial view of my college as most of my classmates gossiped that the entire building was structured as RVS. Hope you guys watched it.

As for my personal experience, I had gained knowledge not only in studies but also why it is so important to study. Faculty members provided good support on Journals, Projects and Patent. Apart from 9am - 5pm college, the Conference meetings and Internships gave a wide range of options to explore.

I strongly suggest all my fellow graduates do as many internships as possible. Nothing waits for you, just grab a paper and start structuring your career. This precious time will never hit you again ever. Smart and faster work makes you unique.

Control Your "7m" : Mind, Moves, Morning, Meal, Money, Mood and Mouth. You can conquer the rest.

Remember,

CLOCK'S TICKING

Academic Insights

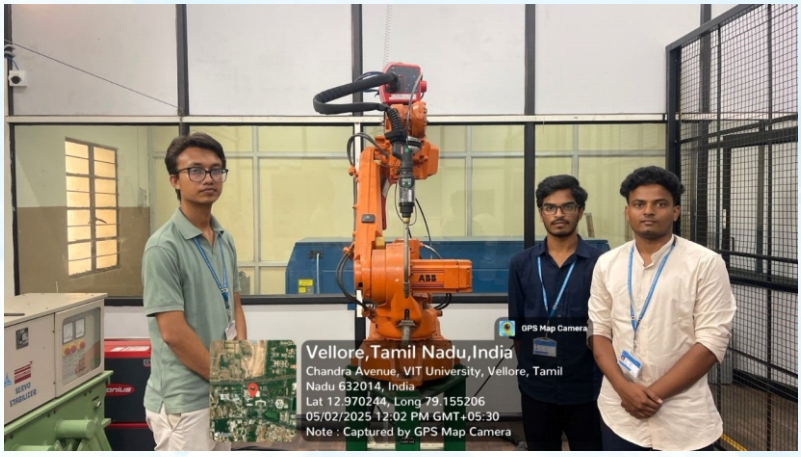
Faculty Members Explore Recent Trends at VIT Vellore

Three Students members, Prashun Gopali (23781A0306), Bhuvan Chandran (24785A0307), and K. Hajimallang (24785A0314), participated in "Advances in Recent Trends," a program featuring an advanced lab facility visit at VIT Vellore campus, organized by Vellore Institute of Technology.

Program Details:

Program Name: Advanced Lab Facility Visit
Event Name: Advances in Recent Trends
Organized by: Vellore Institute of Technology
Participants:
Prashun Gopali (23781A0306)
Bhuvan Chandran (24785A0307)
K. Hajimallang (24785A0314)

This program updated their knowledge on latest trends and technologies.



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23785A0313
Student

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