



SWARNANDHRA

College of Engineering and Technology

(Autonomous)

Seetharampuram, Narsapur, Andhra Pradesh 534280



MECHAZINE

BI - ANUAL MAGAZINE

DEPARTMENT OF
MECHANICAL ENGINEERING

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

ABOUT THE DEPARTMENT

"EMPOWERING MINDS, BUILDING FUTURES"



The Department of Mechanical Engineering was established in the academic year 2004. The Department presently offers Under-graduate study program leading to the degree of Bachelor of Mechanical Engineering and Post Graduate program M.Tech CAD/CAM. The initial intake of the department is 60 in UG Programme. Then the Department got approval for additional intake of 30 in 2008 another 30 in 2009, latter 60 more seats were added in 2015 with approval from AICTE for UG Programme. PG Programme - M.Tech. (CAD/CAM) is started in 2009 with an intake of 18. The present intake is 120 in UG and 18 in PG Programmes.

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 31 faculty members, 2 research scholars and 16 supporting staff. The department is having highly qualified and experienced faculty in all streams of Mechanical Engineering. 5 faculty members have doctoral degrees and 2 members are pursuing their Ph.D's. The faculty has been active in offering consultancy services to industries and conduct courses regularly to facilitate the continuing education of practicing engineers. About 80 research papers have been published in various International and National Journals/Conferences.

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. Experimental and computational facilities are being continuously upgraded. The Department has Association of Mechanical Engineering 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

Institution

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

Department

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

Mission

Institution

- To provide quality education with knowledge and skills for rural and urban students.
- To collaborate the industries with academia for empowering the students to meet global standards
- To induce highly ethical entrepreneurship in young minds with good leadership quality for the society
- To enhance the institution in Research and Development by human intellectual capability.

Department

- To lay a strong foundation of technical knowledge by concentrating on fundamental concepts of Mechanical engineering.
- To develop creative thinking and innovative methods for solving complex engineering problems.
- To develop team spirit, leadership and professional qualities.
- To strengthen research abilities in collaboration with industry.

PRINCIPAL DESK

However, let us never forget the importance of human connection in our digital age. Our college is more than just a place of learning; it is a community—a family. Let us cultivate a culture of empathy, respect, and inclusivity where every voice is heard and every individual is valued.



Dr. S. Suresh Kumar

BE,MS, M.Tech, Ph.D

PRINCIPAL

As we embark on this academic year, let us remember the words of Nelson Mandela, who said, "Education is the most powerful weapon which you can use to change the world." Together, let us harness the power of education to create a brighter, more equitable future for all. In closing, I want to express my heartfelt gratitude to each and every one of you for your dedication, passion, and unwavering commitment to our college. Together, there is no limit to what we can achieve.

“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 DESK

The field of Mechanical Engineering is one that is constantly evolving, driven by rapid advancements in technology and changes in the global landscape.



Dr. A Gopichand

B.TECH, M.Tech, Ph.D

PROFESSOR, HOD-ME

However, our department is more than just a place of learning—it is a community—a family. It is a place where ideas are born, nurtured, and brought to fruition.

It is a place where lifelong friendships are forged, and where mentorship flourishes. Let us cherish and celebrate the diversity of perspectives, experiences, and backgrounds that enrich our departmental community.

I want to express my heartfelt gratitude to each and every one of you—faculty, staff, and students—for your dedication, passion, and unwavering commitment to our department.

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.

FACULTY DEVELOPMENT PROGRAMS

OBJECTIVE

The primary aim of a Faculty Development Program is to enhance the professional capabilities of educators, equipping them with the knowledge, skills, and strategies necessary to excel in their roles as teachers, mentors, and leaders. Through a diverse array of workshops, seminars, and interactive sessions, we have explored innovative teaching methodologies, pedagogical best practices, and the latest trends in education.

S. No	Name of the Faculty	Program Description	Organized by
1	Dr. M. Francis Luther King	Research insights in materials and Manufacturing (RIMM21)	Vemula Engineering College Chennai
2	Mr. B Srinivas	Teaching and Learning Through Case Studies	GITE University
3	Mr. P Satya Narayana Raju.	Teaching and Learning Through Case Studies	GITE University
4	Dr. M. Francis Luther King	Advances in Strength of Materials and Manufacturing Engineering	AMET
5	Mr. B Mahesh Krishna	Machine Learning Using Python	APSSDC
6	Mr. B Mahesh Krishna	Architecture Modeling Using Revit	APSSDC
7	Mr. G Veerendra Kumar	"Industry 4.o expectations from next generation engineers	Presidency University
8	Mr. L Ravi Kishore	"Industry 4.o expectations from next generation engineers	Presidency University
9	Mr. V Ram Babu	"Industry 4.o expectations from next generation engineers	Presidency University
10	Mr. N Bulli Raju	"Industry 4.o expectations from next generation engineers	Presidency University
11	Mr. J Naresh Babu	"Industry 4.o expectations from next generation engineers	Presidency University
12	Dr. M. Francis Luther King	Funding Agency for supporting IPR and Entrepreneurship	Mahendra Institute of Technology
13	Dr. M. Francis Luther King	Modern Industrial Technology in Mechanical Engineering	Aditya Engineering College

NEW TRENDS IN TECHNOLOGY

IoT: Internet of Things



✓ WHAT IS IoT?

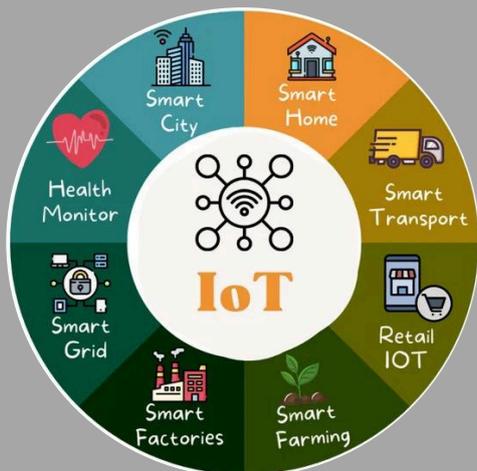
THE INTERNET OF THINGS (IoT) IS A TRANSFORMATIVE TECHNOLOGICAL PARADIGM THAT HAS REVOLUTIONIZED THE WAY WE INTERACT WITH THE WORLD AROUND US. AT ITS CORE, IoT REFERS TO THE NETWORK OF INTERCONNECTED DEVICES AND OBJECTS EMBEDDED WITH SENSORS, SOFTWARE, AND OTHER TECHNOLOGIES THAT ENABLE THEM TO COLLECT AND EXCHANGE DATA.

✓ EXPLAIN INTERNET OF THINGS

IN THE REALM OF HEALTHCARE, IoT DEVICES CAN MONITOR PATIENTS' VITAL SIGNS IN REAL-TIME, ALLOWING HEALTHCARE PROFESSIONALS TO DELIVER MORE PERSONALIZED AND TIMELY CARE. IN AGRICULTURE, IoT SENSORS CAN GATHER DATA ON SOIL MOISTURE LEVELS, TEMPERATURE, AND OTHER ENVIRONMENTAL FACTORS, ENABLING FARMERS TO OPTIMIZE CROP YIELDS AND CONSERVE RESOURCES MORE EFFICIENTLY.

IN THE URBAN ENVIRONMENT, IoT TECHNOLOGY CAN BE USED TO CREATE SMART CITIES WHERE INTERCONNECTED SENSORS AND DEVICES MONITOR TRAFFIC PATTERNS, MANAGE ENERGY CONSUMPTION, AND ENHANCE PUBLIC SAFETY. IN THE MANUFACTURING SECTOR, IoT-ENABLED SYSTEMS CAN IMPROVE EFFICIENCY, REDUCE DOWNTIME, AND ENABLE PREDICTIVE MAINTENANCE BY PROVIDING INSIGHTS INTO EQUIPMENT PERFORMANCE AND HEALTH.

BY HARNESSING THE POWER OF IoT TECHNOLOGY, WE CAN UNLOCK NEW OPPORTUNITIES FOR INNOVATION, PRODUCTIVITY, AND SUSTAINABILITY, ULTIMATELY SHAPING A FUTURE WHERE THE POSSIBILITIES ARE LIMITED ONLY BY OUR IMAGINATION.

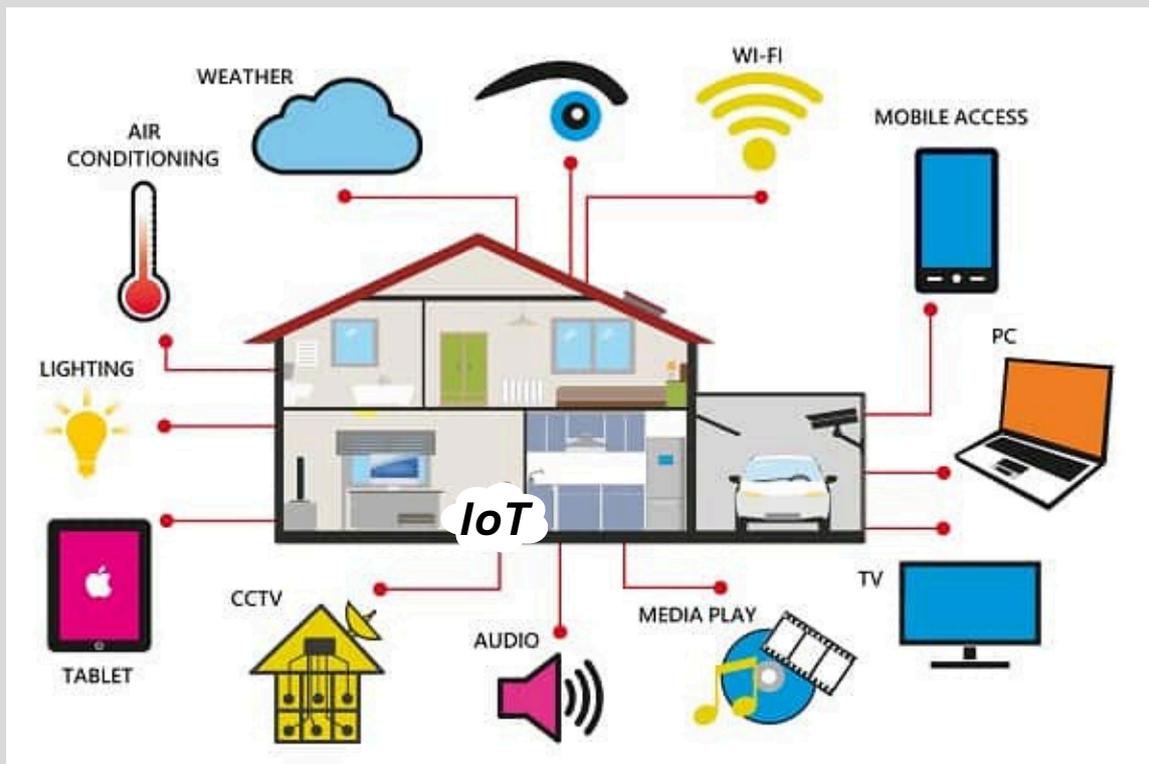


NEW TRENDS IN TECHNOLOGY

IoT: Internet of Things

✓ How does the Internet of Things work?

IOT DEVICES CONTAIN SENSORS AND MINI-COMPUTER PROCESSORS THAT GATHER AND COLLECT DATA VIA MACHINE LEARNING. THESE DATA ARE COLLECTED THROUGH A WI-FI OR SECURE LAN CONNECTION. PICTURE A SMART VACUUM THAT CAN CLEAN ON ITS OWN AND CAN BE CONTROLLED REMOTELY THROUGH YOUR PHONE. OR A DOOR WITH A BUILT-IN SMART CAMERA THAT ALERTS YOU WHEN SOMEONE TRIES TO GET IN YOUR HOME.

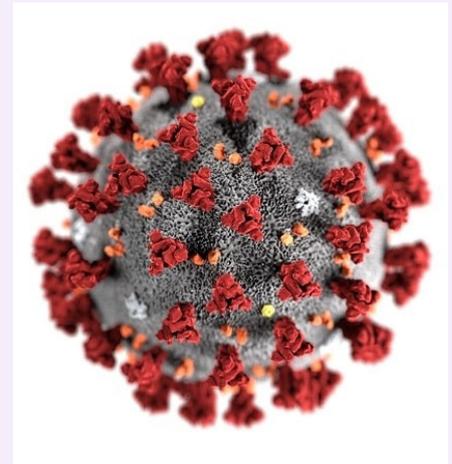


✓ What are some examples of IoT devices?

- THERE ARE HOME DEVICES LIKE LIGHT BULBS, ELECTRIC PLUGS, COFFEE MACHINES, TOILETS, BATHROOMS, TV, WASHING MACHINES THAT CAN BE CONNECTED TO YOUR HOME WI-FI SO YOU CAN CONTROL THEM REMOTELY USING YOUR PHONE.
- THERE ARE ALSO SMART CITY IOT SOLUTIONS SUCH AS ENVIRONMENTAL MONITORING (WEATHER, AIR QUALITY, FLOOD, AND POLLUTION), TRAFFIC MONITORING, CONNECTED PUBLIC TRANSPORT, AND SMART LIGHTING.
- IN THE URBAN ENVIRONMENT, IOT TECHNOLOGY CAN BE USED TO CREATE SMART CITIES WHERE INTERCONNECTED SENSORS AND DEVICES MONITOR TRAFFIC PATTERNS, MANAGE ENERGY CONSUMPTION, AND ENHANCE PUBLIC SAFETY. IN THE MANUFACTURING SECTOR, IOT-ENABLED SYSTEMS CAN IMPROVE EFFICIENCY, REDUCE DOWNTIME, AND ENABLE PREDICTIVE MAINTENANCE BY PROVIDING INSIGHTS INTO EQUIPMENT PERFORMANCE AND HEALTH.
- BY HARNESSING THE POWER OF IOT TECHNOLOGY, WE CAN UNLOCK NEW OPPORTUNITIES FOR INNOVATION, PRODUCTIVITY, AND SUSTAINABILITY, ULTIMATELY SHAPING A FUTURE WHERE THE POSSIBILITIES ARE LIMITED ONLY BY OUR IMAGINATION.

ARTICLE ON COVID-19

COVID-19 or Coronavirus is a term the world has been uttering for almost one year . The coronavirus disease is an infectious disease caused by SARS-CoV-2 virus. Since the birth of the pandemic, the world has shifted to a new normal where masks are the new accessory and sanitisers are used like sunscreens. There is a lot of information out there about the pandemic, but when you are asked to write an article on COVID-19, do not just pick information at random; instead, try to gather details that would explain the dawn of the virus, the harmful effects and the precautionary measures to be taken to keep one safe and secure.



COVID-19 – Symptoms and Precautions

The effects of the virus are different from person to person. For most people, it starts with a common cold and fever that develops into serious respiratory problems, fatigue, soreness and loss of taste and smell. The virus has developed into a lot of variants, and each one becomes even more severe with the onset of a new variant.

The spread of the virus takes place when an individual comes into contact with an infected person. It spreads from the person's nose or mouth when they sneeze, yawn, cough, breathe, speak or sing. We have been taught respiratory etiquette, covering our mouth and nose when coughing or sneezing and isolating ourselves when we are unwell. These are the same rules that apply to keep ourselves and others from being infected by the virus.

Symptoms

People affected by coronavirus show a range of symptoms from mild to severe conditions. The symptoms include cold, cough, fever, soreness, fatigue, difficulty in breathing, loss of taste and smell. These symptoms start appearing from 2-14 days after the individual has been exposed to the virus. Make sure that you get yourself tested the moment you witness any of these symptoms to prevent it from getting any worse.

Know the symptoms of COVID-19

1



Cough, shortness of breath, or difficulty breathing

2



Fever or chills

3



Muscle or body aches

4



New loss of taste or smell

ARTICLE ON COVID-19

Precautions

To keep yourself from being affected by coronavirus, see to that you

- Wear your masks covering your nose and mouth every time you step out of your house
- Wash your hands thoroughly
- Sanitise yourself
- Avoid eating or drinking anything cold
- Eat nutritious food to build immunity
- Maintain a physical distance when you are in contact with a group of people
- Avoid all sorts of direct physical contact

Precautions For Coronavirus

-  Stay at home.
-  Wash your hands frequently with soap and clean, potable water.
-  In the absence of a tissue/handkerchief, cough or sneeze into your elbow.
-  Avoid touching your face.
-  Clean and disinfect surfaces regularly.
-  Practice social distancing.
-  Wear a mask.
-  Eat healthy.

Together we can fight C^oVID-19!

#SwasthaBharat #HealthForAll #HelpUsToHelpYou

Taking care of yourself means taking care of others too. If each one is conscious about the complications this disease can bring into their lives, it would be a lot easier to curb the spread of the virus. Be cautious. Create awareness. Stay safe.



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



ARUN RAJ NELAPUDI
2015-19 BATCH
SOFTWARE ENGINEER

My Experience

I thank department of Mechanical Engineering, SCET for developing and nurturing my skills by helping me to win against stage fear of mine . They had Encouraged technically by allowing me to explore various seminars , workshops and also non technical side like photography, stage arts , cultural in college to get groomed in those personality development sessions . I'm very thankful for motivating me for not giving up on the title Campus ambassador in 2016 and appreciation for all round performance in my final year B. Tech 2019. I always treasure those moments. I'm sure that our Mechanical department will continue to bring that talent and will stood first in appreciation. All the best for the future generation!

Student's Voice



KATTA GANESH
19A25A0321
FINAL YEAR STUDENT

College is a journey of self-discovery—a time to explore new horizons, push boundaries, and uncover hidden talents and passions. It's about stepping out of your comfort zone, embracing new experiences, and daring to dream big. It's about finding your voice, standing up for what you believe in, and making a difference in the world, no matter how small.

GALLERY



Mechathons 2K21 , Winners



Robo Soccer



Celebration of World Creativity & Innovation day

Art Exhibition



Center of Excellence in Maritime & Shipbuilding (CEMS) Training Program