



INSTITUTION'S
INNOVATION
COUNCIL
(Ministry of HRD Initiative)



1ST PLACE
FOR BEST INNOVATION
& BUSINESS IDEA

**PRO
KARTING
CHAMPIONSHIP
2024!**



MECHANOVATE

DRIVING INNOVATION BEYOND THE BLUEPRINT

DEPARTMENT OF MECHANICAL ENGINEERING

A.Y:2023-24

Newsletter Volume V



CHAIRMAN

Sri K. Venu Gopal

It's my pleasure to invite you to this campus, which is abundantly endowed by nature and sufficiently enriched with our abiding commitment to quality and values. I am sure it will be a pleasant and enlightening experience for you to explore the treasures for yourself.



SECRETARY

Sri K. Sai Rohith

we from RCE thrive every day in providing the highest quality education, placements and skill sets for our students, which go in parallel with a fastmoving enironment



PRINCIPAL

Dr. V.Srinivasa Rao

It is my pleasure to express about your study for a career at RCE. A unique place with state-of-the-art infrastructure and equipment on cutting-edge technologies with knowledge transfer by experienced faculty and technical staff. Having chosen to study at RCE, It will make you competent in advanced technologies along with scheduled training programs throughout the course. The present era of technical careers focuses on multi-disciplinary activities which makes the identity of one's career. So, I promise the above are fulfilled at RCE. I welcome you all, to this distinguished campus to transform your lives.

INSTITUTE VISION

To emerge as a “Centre of excellence” offering high quality Technical Education and Research Opportunities to learners and also develop complete personality of graduates with good communication, discipline, lifelong learning, leadership qualities, ethics and global standards there by making them professionally deft and intellectually adept to contribute for the advancement of environment and society.

INSTITUTE MISSION

- To impart high quality technical education by providing the state-of-the art infrastructure, core instruction and well experienced and qualified faculty.
- To develop highly motivated engineering professionals with good knowledge, communication skills, human and ethical values, requisite skills and competence.
- To produce highly successful graduates who can contribute to the profession to resolve the societal and environmental issues in the society.

DEPARTMENT VISION

To become a centre of excellence in the field of Mechanical Engineering by providing quality technical education and research to learners and solve social and environmental problems by developing innovative and creative skills in them and make the graduates employable along with lifelong learning, leadership and entrepreneurial skills.

DEPARTMENT MISSION

To provide a platform to the aspiring mechanical engineers to attain quality education by utilizing the state of art Infrastructure, Innovative teaching methods and eminent faculty. To empower students with innovative and research skills to attain opportunities in Mechanical Engineering field and be solution providers with a lifelong learning attitude. To equip the learners with a sense of ethical and professional responsibilities towards society and environment along with leadership and entrepreneurial skills.

DEPARTMENT OF MECHANICAL ENGINEERING

DEPARTMENT PEO'S

- PEO-1: Gain the knowledge of principles in applied and basic engineering sciences which are necessary to formulate and solve problems related to Mechanical Engineering.
- PEO-2: Apply analysis, design, optimization and implementation skills in order to formulate and solve Mechanical Engineering problems.
- PEO-3: Develop the latest skills in cutting edge technologies and modern tools to simulate the real time problems without experimentation.
- PEO-4: Develop their managerial and Entrepreneur skills, Ethical and Professional skills and Art of multi-disciplinary approach and team work to solve the problems of industry and society.
- PEO-5: Recognize the needs of the future world of science & technology especially Mechanical Engineering and engage themselves in lifelong learning and research.

DEPARTMENT PSO'S

U.G PSOs

- PSO-1: An ability to analyze, design and evaluate mechanical components and systems using state-of-the-art software tools needed for Mechanical Engineers as demanded by the industries from time to time.
- PSO-2: An ability to work in operation and Maintenance plants of manufacturing and other sectors
- PSO-3: Imbibing confidence to design, redesign, produce and reproduce the Mechanical Engineering components at any scale

P.G PSOs

- PSO 1 : Prepare process sheets and working drawings to manufacture a machine element.
- PSO 2 : Model, simulate, analyze and optimize mechanical systems / processes through application of software.

DEPARTMENT PO'S

PO NO

PROGRAM OUTCOME

- PO-1 Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and Engineering specializations to the solution of complex engineering problems.
- PO-2 Problem Analysis: Identify, Formulate, review research literature and analyze complex engineering problems to arrive at substantiated conclusions using first principles of mathematics, natural and engineering sciences.
- PO-3 Design/Development of Solutions: Design solutions for complex engineering problems and design system components, processes to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO-4 Conduct Investigations of Complex Problems: Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO-5 Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with and understanding of the limitations.
- PO-6 The Engineer and Society: Apply Reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
- PO-7 Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development
- PO-8 Ethics: Apply Ethical Principles and commit to professional ethics and responsibilities and norms of the engineering practice
- PO-9 Individual and Team Work: Function effectively as an individual and as a member or leader in teams and in multidisciplinary Settings
- PO-10 Communication: Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.
- PO-11 Project Management and Finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.
- PO-12 Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



Welcome to the Department of Mechanical Engineering at RCEE. We began our voyage in the time of 2011 with the intake of 60 seats and it has enhanced to 120 seats in the year 2012. In the year 2014, the department expanded its horizon with a PG course in Machine Design with 24 seats intake. Over this period, we have developed our mastery of educating and research.

The Department pursues expertise based designing educational program surrounded by JNTUK and essential focal point of the educational program is to grant specialized ability to understudies with hands-on preparing in the research centers, advance their critical thinking aptitudes and development of new innovations. Department is giving chances to both the faculty and understudies to embrace new logical and innovative improvements. The Department keeps up dynamic research by urging workforce and understudies to completing synergistic and interdisciplinary research. We have cutting edge look into offices to help our scholarly projects and research. Subsidizing from different Government/Non Government bodies help us to keep up and modernize our exploration foundation. The Department has an eminent record in both instructing and research. We have a group of exceptionally qualified, experienced, developed and devoted employees who are resolved to cut a name in the top spots of the scholastic and expert world. A few employees serve on the publication sheets of national, worldwide diaries, survey specialized articles for diaries all the time and got global and national honours' in perfection in instruction and research. Our goal isn't to simply deliver experts proficient to serve their very own needs yet attempt to serve the general public with incredible worry for human qualities. I wish accomplishment to all understudies in your undertaking to go along with us on the voyage of value instruction and to have an incredible learning knowledge with my superb, cherishing and minding group. Our Department anticipates contribute in tackling the mechanical difficulties of the general public with dynamic support from all segments of the general public. I urge you to investigate our site for further subtleties like scholarly projects offered, lab and research facilities, profiles of employees, inquire about exercises, and subtleties of understudy exercises.

DEPARTMENT OF MECHANICAL ENGINEERING FACULTY

MEMBERS

NAME	DESIGNATION
1. Dr. V. Srinivasa Rao [M.Tech,Ph.d]	Principal & Professor
2. Dr. Bazani Shaik [M.Tech,Ph.d]	HOD& professor
3.Dr. M. Muralidhara Rao	Professor
4.Mr.B.Sudhakara Rao [M.Tech,(Ph.d)]	Associate professor
5.Dr. Raffi Mohammed [M.Tech,Ph.d]	Professor
6.Dr.K.Anand Babu [M.Tech,Ph.d]	professor
7.Mr.KPVSr Vinay Kumar [M.Tech]	Assistant professor
8. Mr. G. Chitti Babu [M.Tech,(Ph.d)]	Assistant professor
9.Mr. A. Rahul Kumar [M.Tech,(Ph.d)]	Assistant professor
10. Mr. J. Srikanth [M.Tech,(Ph.d)]	Assistant professor
11.Mr. K. Bhavanarayana [M.Tech,(Ph.d)]	Assistant professor
12. Mrs. P. Lakshmi kala [M.Tech]	Assistant professor
13. Mr. Y. Hemanth [M.Tech]	Assistant professor
14. Mr. G.V. Phani Babu [M.Tech]	Assistant professor
15. Mrs. P. Naga Sravani [M.Tech]	Assistant professor
16. Mr. S. Suneel Kumar [M.Tech]	Assistant professor
17.Mr. P. Bhargava Kumar [M.Tech]	Assistant professor
18. Mrs. B. Devi Priyanka [M.Tech]	Assistant professor
19. Mr. R. Sai Ram [M.Tech]	Assistant professor
20. Mr. SK. Meeravali [M.Tech]	Assistant professor
21. Mrs. O. Pavitra [M.Tech]	Assistant professor
22. Mrs. K. Ravindranath [M.Tech]	Assistant professor



FACULTY ACHIEVEMENTS

Ref. No. ToT005/004,2023



Certificate of Completion

It is certified that

Mr J Srikanth

SAM 3DP - Ramachandra College of Engineering, Eluru

has successfully completed the Training of Trainer Program on

3D PRINTING & ADDITIVE MANUFACTURING

under 'FutureSkills PRIME' programme

held from **07th August 2023 to 21st August 2023**

Signature Not Verified
Digitally Signed by Sasidharan P T
Date: 2024.01.23 16:39:06 IST
Chief Investigator
Lead RC

Signature Not Verified
Digitally Signed by Pratap Kumar S
Date: 2024.01.24 10:27:35 IST
Director
Centre Head

The Department of Mechanical Engineering is pleased to announce that three of its faculty members have successfully completed the "Training of Trainers (ToT) Course on 3D Printing/Additive Manufacturing" offered by NIELIT Calicut in association with FutureSkills Prime, an initiative by MeitY (Ministry of Electronics & Information Technology), Government of India.

📌 Course Highlights:

- Hands-on training in Additive Manufacturing technologies
- Applications of 3D printing in engineering design, prototyping, and production
- Exposure to CAD modeling, slicing software, and various 3D printing techniques such as FDM, SLA, and SLS
- Focus on industry 4.0 skills and digital manufacturing competencies

This specialized training equips faculty members with the skills required to integrate 3D printing into the curriculum, mentor student projects, and support innovation-driven learning within the department.

The department congratulates the trained faculty members for their initiative in upgrading their technical skills and contributing to the advancement of future-ready education.

FACULTY ACHIEVEMENTS IN RESEARCH PUBLICATIONS

The Department of Mechanical Engineering at Ramachandra College of Engineering is proud to announce that its faculty members have collectively published 12 research papers in reputed journals indexed in Scopus, Web of Science, and UGC CARE list. These publications reflect the department's commitment to advancing knowledge in emerging areas of mechanical engineering and contributing to global research. The achievement highlights the consistent efforts of the faculty towards innovation, quality research, and academic excellence, further strengthening the department's reputation in the field of engineering education and research.

S.No	Faculty Name	Article Title	Listed In
1	Dr. Raffi Mohammed	Experimental Investigation on Mechanical Characterization of Epoxy-E-Glass Fiber-Particulate Reinforced Hybrid Composites	SCIE, Q1-SCOPUS& UGC CARE
2	Dr. Raffi Mohammed	Development of a Theoretical Model to Estimate the Erosion Wear Rate of Polymer Composites	UGC-CARE & SCOPUS
3	Dr. Bazani Shaik & Dr. V. Srinivasa Rao	Investigations on Medical Alcohol Detection on Vehicle Locking Ignition System	UGC
4	Mr. B. Sudhakara Rao & Dr. Bazani Shaik	DESIGN AND FABRICATION OF FRONT WHEEL GUIDED STEERING SYSTEM FOR FOUR WHEEL VEHICLE	UGC
5	Dr. Bazani Shaik	FIRE AND ANTI COLLISION ACCIDENT PREVENTION SYSTEM FOR COMPACT VEHICLE	UGC
6	G. Chitti Babu & Dr. Bazani Shaik	DRY, WET AND METAL WASTE DETECTING SMART BIN FOR WASTE MANAGEMENT SYSTEM	UGC
7	Mr. P. Bhargava Kumar & Dr. Bazani Shaik	DEVELOPMENT OF REGENERATIVE BRAKING SYSTEM IN ELECTRICAL VEHICLE	UGC

8	Jujjuvarapu Srikanth & Dr. Bazani Shaik	PERFORMANCE AND EMISSION CHARACTERSTICS OF IC ENGINE BY USING BLENDED BIODIESEL WITH AN ADDITIVES	UGC
9	Mrs. P. Laksmi Kala & Mr.B.Sudhakara Rao	EVALUATION OF MECHANICAL PROPERTIES ON AI7075 REINFORCED WITH HYBRID NANO COMPOSITES	UGC
10	Mr. V. Santha Kumar	Design and Fabrication of Pipe Inspection Robot Using Smart Phone controlling	UGC
11	Dr. Bazani Shaik & B. Sudhakara Rao	DESIGN AND STRUCTURAL ANALYSIS TO ENHANCE PROFROMANCE OF COMPACT VECHCLE	UGC
12	Mr. R.Sai Ram, Dr. Bazani Shaik,Dr. Mohammed Raffi & K. Bhavanarayana	DESIGN AND MANUFACTURING OF SOLAR POWERED SEED SOWING MACHINE	UGC

These publications have appeared in SCI/Scopus-indexed journals, peer-reviewed national/international conferences, and edited volumes published by reputed publishers. The department encourages continuous faculty engagement in high-quality research and interdisciplinary collaborations.

The Management and Principal of Ramachandra College of Engineering congratulate the faculty members for their dedication to academic excellence and for significantly contributing to the institution's research ecosystem.

The Department of Mechanical Engineering has shown a strong academic and research footprint during the academic year 2023–24, with faculty members actively contributing to national and international research platforms through publications, books, and academic collaborations.

FACULTY BOOKS & BOOK CHAPTER PUBLICATIONS ON RECENT TRENDS IN MECHANICAL ENGINEERING

The faculty members of the Department of Mechanical Engineering at Ramachandra College of Engineering have contributed significantly to academic research through the publication of book chapters in reputed volumes focusing on recent trends in mechanical engineering.

Faculty Name	Book Chapter Name
Dr. Bazani Shaik	Design and development of walking robot on the bases of four bar and weight balance mechanism.
Dr. Bazani Shaik	Experimental Investigations on Advancements of Aluminum Alloys with Friction Stir Process
Dr. Bazani Shaik	Effective Study Techniques
Dr. RAFFI MOHAMMED	Mastering Learning Skills: A Comprehensive Text Book” as Editor
B. Sudhakara Rao	Introduction to Learning Skills
Dr. V Srinivasa Rao	Test-Taking Strategies
A. Rahul Kumar	Information Retrieval and Research Skills
G. Chitti Babu	Lifelong Learning and Adaptability
Dr. Bazani Shaik	Metalurgical Investigations for Novel Materials for Intelligence Aerospace Applications
Dr. Bazani Shaik	Exporing four bar structures and weight control in walking robot engineering
Dr. Bazani Shaik	Investigation of structural materials with tribological behaviour of reinforced matrix composites

FACULTY INNOVATION THROUGH PATENT PUBLICATIONS

The Department of Mechanical Engineering continues to foster a strong culture of innovation and intellectual property creation. In the academic year 2023–24, the faculty members of the department have demonstrated their commitment to applied research and technological development through the successful publication of multiple patents in emerging areas of engineering and innovation.

The initiatives taken by the faculty underline the department's focus on developing indigenous technologies aligned with national missions like “Make in India”, “Atmanirbhar Bharat”, and “Digital India”. These patents not only enhance the academic and research stature of the institution but also serve as a source of inspiration for students, motivating them to explore innovation-driven projects and product development.

S.no	Inventor's Name	Patent Application Number	Title of the Patent
1	Dr. V.Srinivasa Rao	6355117	A Remote-Controlled Robot for Eco-Friendly Water Cleanup with Water Hyacinth and Plastic removing Technology
2	Dr. Raffi Mohammed	202441008139	MANUFACTURING OF RAIL END POST(I-SECTION) USING EPOXY BASED GLASS FIBER REINFORCED HYBRID COMPOSITES
3	Dr. Raffi Mohammed	6334778	An Equipment for Producing Polymer based Composites or Aluminium based Composites
4	Dr. V. Srinivasa Rao & Dr. Bazani Shaik	400412-001	Floating type Screw Conveyor for Drainage Management System
5	Mr. Bhavanarayana.K	202341077459 A	SEA WEED AS ENHANCED POWER SOURCE USING IOT
6	Dr. Bazani Shaik	400398-001	INSTRUMENT USED FOR DETECTION OF DIABETIC NEUROPATHY
7	Dr. Bazani Shaik	400876-001	INTELLIGENT CYBER SECURITY DETECTING

FACULTY PARTICIPATION IN FDPS ON RECENT TRENDS IN MECHANICAL ENGINEERING

The faculty members of the Department of Mechanical Engineering at Ramachandra College of Engineering have actively participated in various Faculty Development Programs (FDPs) focused on recent trends and advancements in mechanical engineering. These FDPs covered a wide range of contemporary topics such as Additive Manufacturing, Robotics and Automation, Renewable Energy Systems, Artificial Intelligence in Mechanical Design, and Industry 4.0 Applications. Through these programs, the faculty gained valuable insights into emerging technologies, modern teaching methodologies, and innovative research practices. Their active engagement in continuous learning reflects the department's commitment to academic excellence, faculty development, and delivering industry-relevant education to students.

S.no	Name of the Faculty	Attended FDP's
1	Dr. M. Muralidhara Rao	Generative AI Models and Applications of Machine Learning
2	Dr. BazaniShaik	Technological Based Entrepreneur
3	Dr. BazaniShaik	Latest trends and techniques in software Engineering : an Industry Perspective
4	Dr. BazaniShaik	Advanced material Process sing and Characterization methods
5	Dr. BazaniShaik	3D printing and Additive Manufacturing insights
6	Dr. BazaniShaik	Navigating the Future: Emerging Trends in Business and Global Dynamics
7	Dr. BazaniShaik	Hands on Training Workshop on Additive Manufacturing Technologies
8	Mr. G. Chitti Babu	SPSS in Research

8	Dr. BazaniShaik	Master class on Generative AI
9	Dr. BazaniShaik	Advances in Materials and Manufacturing
10	Dr. Raffi Mohammed	Institutions innovation council MoE's innovation cell
11	Dr. Raffi Mohammed	SPSS in Research
12	Dr. K. Anand Babu	Generative AI Models and Applications of Machine Learning
15	Mr. B. Sudhakara Rao	SPSS in Research
16	Mr. KPVSR Vinay Kumar	SPSS in Research
18	Mr. G. Chitti Babu	Innovation-Driven Entrepreneurship :From AI Enabled to Research to Startup Launch
19	Mr. A. Rahul Kumar	SPSS in Research
21	Mr. J. Srikanth	Recent Advances in Mechanical Engineering Research and Development
22	Mr. J. Srikanth	3D Printing and Additive Manufacturing
23	Mr. K. Bhavanarayana	Rocketry Workshop

STUDENT ACHIEVEMENTS



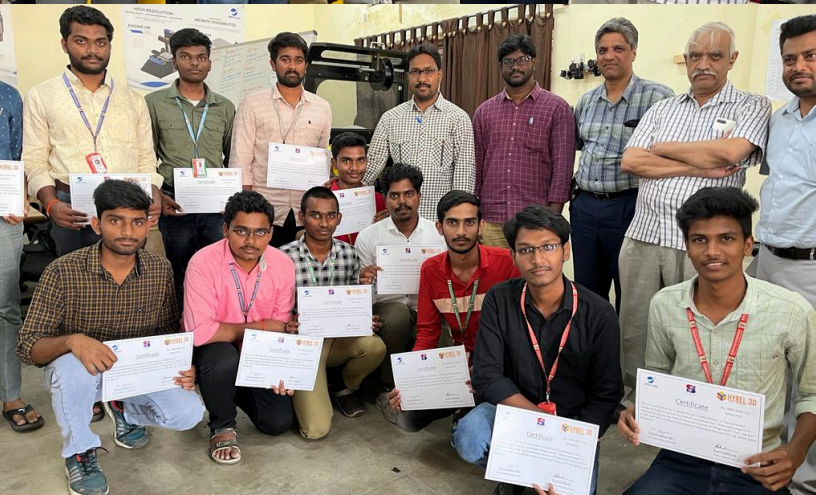
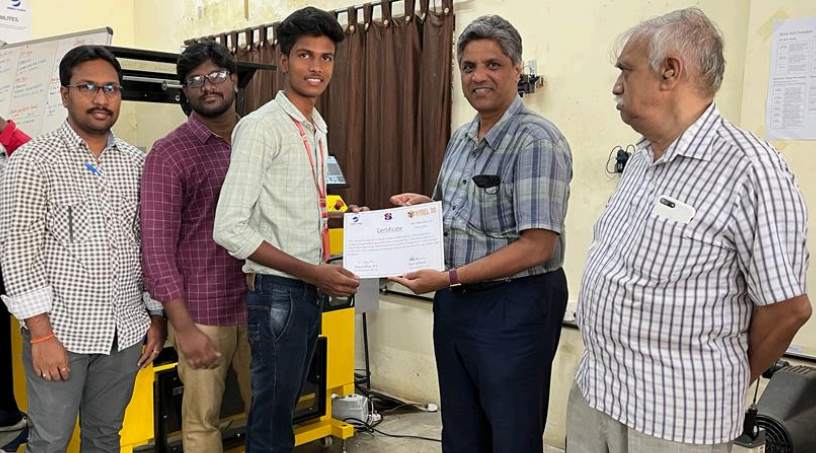
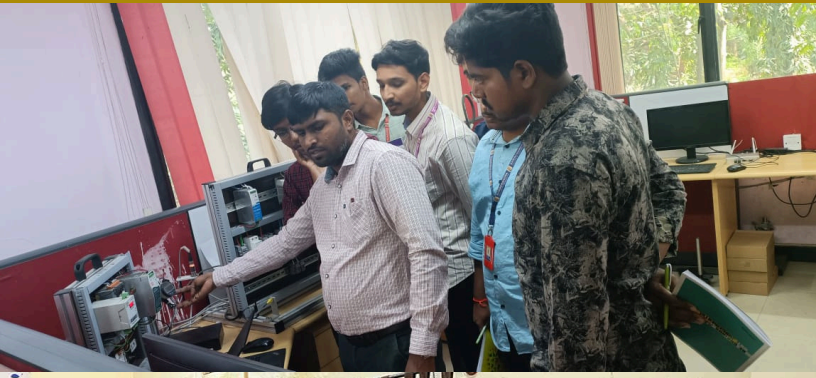
MECHANICAL ENGINEERING STUDENTS SHINE AT ADITYA PRO KARTING ENDURANCE CHAMPIONSHIP 2024

We are thrilled to announce that our very own Mechanical Engineering department students demonstrated exceptional camaraderie and sportsmanship at the recently concluded Aditya Pro Karting Endurance Championship 2024, hosted at Aditya Engineering Collage, Surampalem. The championship, now in its highly anticipated 4th season, was an arena of intense racing, fierce competition, and adrenaline-pumping experiences, showcasing the skills, precision, and endurance of participating teams.

Amidst the high-speed overtakes and strategic battles, our team from Ramachandra College of Engineering proudly secured the "Best Innovation and Business Award". This prestigious recognition is a testament to the dedication, collaboration, and positive attitude displayed by our students throughout the championship. Their ability to work cohesively under pressure and support each other truly embodies the spirit of engineering and teamwork.

We extend our heartfelt congratulations to all the students involved for their hard work, perseverance, and for representing our department with such distinction. This achievement not only highlights their technical prowess but also their outstanding character.

AMS TRAINING PROGRAM



In the academic year 2023–24, five students from the Department of Mechanical Engineering successfully underwent specialized training in Advanced Manufacturing Systems at a reputed training center in Bangalore.

The training program focused on state-of-the-art manufacturing technologies, including CNC machining, additive manufacturing (3D printing), Industry 4.0 practices, CAD/CAM integration, automation in production systems, and smart factory concepts.

This intensive hands-on training enhanced the students' technical knowledge, practical skills, and industry exposure, preparing them for future careers in high-tech manufacturing sectors. The program also emphasized real-time industrial problem-solving, lean manufacturing techniques, and digital manufacturing tools, bridging the gap between academic learning and industrial expectations. The department congratulates the students for their active participation and initiative in upgrading their skills, and remains committed to providing similar industry-oriented learning opportunities in the future.

During the program, students received extensive hands-on training in Computer Numerical Control (CNC) machining, Additive Manufacturing (3D Printing), Reverse Engineering, Robotics in Manufacturing, and Industry 4.0 Concepts including smart sensors, automation, and real-time data monitoring. The course also included training in advanced CAD/CAM software, tool path simulation, laser cutting, metal 3D printing, and production planning using digital tools.

Students had the opportunity to interact with industry experts and work on mini-industrial case studies, gaining insights into current trends such as zero-defect manufacturing, automated quality control, and green manufacturing practices.

This training not only sharpened their technical skills but also improved their confidence, problem-solving abilities, and understanding of industrial workflows.

The department applauds the students for proactively engaging in this valuable learning experience and thanks the training institute for providing a high-quality, industry-aligned curriculum.

PROJECT EXPO UNDER MECHANIZERS

The Department of Mechanical Engineering at Ramachandra College of Engineering successfully conducted a Project Review Session as part of the initiatives taken by its active student association, MECHANIZERS. The session served as a dynamic platform for final-year students to present their project models based on cutting-edge trends and technologies in Mechanical Engineering. A total of 18 innovative projects were displayed and reviewed during the session, covering domains such as:

- Advanced Manufacturing Systems
- 3D Printing and Rapid Prototyping
- Electric Vehicles and Hybrid Drive Systems
- Robotics and Automation
- Smart Materials and Structures
- Thermal Energy Storage
- Solar Refrigeration and Green Energy Systems
- CNC and Mechatronics Applications
- AI-integrated Predictive Maintenance Systems

Each project reflected the students' ability to apply theoretical knowledge to practical problems, offering creative and feasible engineering solutions. The event was graced by industry professionals and alumni entrepreneurs, who acted as evaluators and shared their insights on current industrial needs and technological advancements. The review session not only encouraged technical excellence and teamwork, but also promoted a culture of innovation and research among the students.

The department extends its appreciation to all faculty coordinators, project guides, and student volunteers who contributed to the successful execution of the event. This initiative strengthens the department's vision of nurturing next-generation mechanical engineers who are ready to meet real-world challenges with skill, knowledge, and creativity.



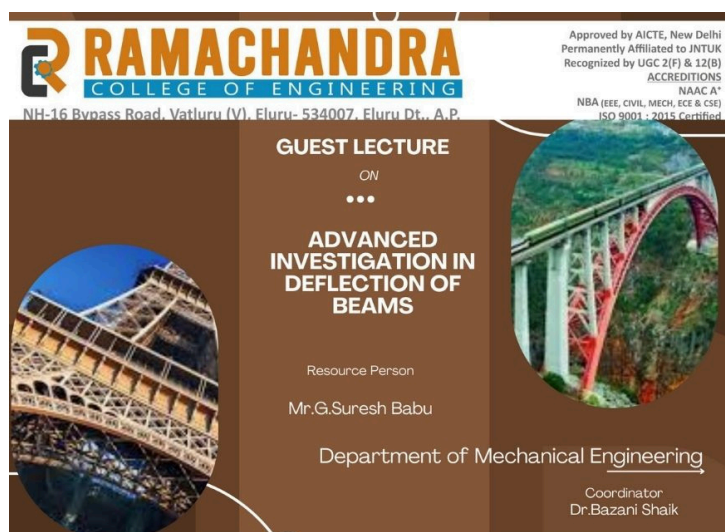
Guest Lectures Organized to Enrich Student Knowledge

The Department of Mechanical Engineering at Ramachandra College of Engineering organized two insightful Guest Lectures aimed at enhancing the academic and industry awareness of students. These sessions were part of the department's continuous efforts to bridge the gap between classroom learning and practical engineering applications.

The first guest lecture was conducted on the topic “Deflection of Beams”, a core subject in Mechanics of Solids. The session was delivered by an experienced academician from a reputed engineering institution. The lecture covered fundamental principles, analytical methods such as double integration and Macaulay's method, and real-world case studies demonstrating the relevance of beam deflection in structural design and mechanical components. Students gained a deep understanding of how material properties and cross-sectional geometry influence structural behavior under various loading conditions.

The second lecture focused on “Recent Trends in Mechanical Engineering”, providing an overview of emerging technologies and innovations that are shaping the future of the mechanical industry. The speaker, an industry expert with extensive experience in R&D, highlighted trends such as Industry 4.0, Automation and Robotics, Artificial Intelligence in Manufacturing, Sustainable Materials, Electric Mobility, Smart Systems, and 3D Printing. The session inspired students to align their learning and projects with current and future industry needs.

Both sessions witnessed enthusiastic participation from second, third, and final-year students, who actively interacted with the speakers through Q&A sessions. The department expresses gratitude to the resource persons for sharing their valuable knowledge and to the faculty coordinators for their efforts in organizing these impactful academic events. These lectures contributed significantly to the academic enrichment and professional awareness of the budding mechanical engineers.



STUDENT MAJOR PROJECT HIGHLIGHTS

- 1. Fire And Anti-Collision Accident Prevention System for Compact Vehicle.**
- 2. Design Structural Analysis and Development of Four-Wheeler Chassis.**
- 3. Design And Fabrication of Front Wheel Guided Steering System For Four-Wheel Vehicle.**
- 4. Development And Mechanical Characterisation of Epoxy-Based Hybrid Composites Reinforced With E-Glass Fibre and Filled with Crab Shell Ash.**
- 5. Dry, Wet, And Metal Waste Detecting Smart Bin For Waste Management System.**
- 6. Fabrication Of High-Capacity Disinfectant Electro-Mechanical Spraying Machine for Large Public Spaces.**
- 7. PV Grid-Based Solar Track System.**
- 8. Performance And Emission Characteristics of an Engine Using Blended Bio Diesel with Additives.**
- 9. Evaluation Of Mechanical Properties on Al7075 Reinforced with Hybrid Nano Composites.**
- 10. Design And Fabrication of Pipe Inspection Robot Using Smartphone Controlling.**
- 11. Design And Manufacturing Of Solar-Powered Seed Sowing Machine.**
- 12. Fabrication And Mechanical Behaviour of Al7075 Reinforced with Hybrid Nano Composites.**
- 13. Development Of Regenerative Braking System in Electrical Vehicles.**

In the academic year 2023–24, the students of the Department of Mechanical Engineering at Ramachandra College of Engineering (Autonomous), Eluru actively engaged in innovation and hands-on learning by successfully completing 13 academic projects based on advanced trends in mechanical engineering. These projects focused on cutting-edge domains such as 3D printing and additive manufacturing, automation and robotics, hybrid vehicles, renewable energy systems, smart materials, IoT-based condition monitoring, CNC automation, thermal energy storage, and composite materials. Each project was guided by faculty mentors and aligned with current industry demands and future technologies, encouraging students to apply theoretical knowledge to practical problem-solving.

The project work not only enhanced the technical skills and research mindset of the students but also fostered creativity, teamwork, and critical thinking. These innovations serve as a platform for participation in technical expos, patent filings, and startup incubation. The department takes pride in nurturing a project-based learning culture, empowering students to become future-ready engineers with strong problem-solving abilities and industry relevance.

Promoting Sustainability – Department Contributes to Organic Farming Initiative

In alignment with its commitment to sustainability and green practices, Ramachandra College of Engineering has actively promoted organic farming within the college campus. Contributing significantly to this eco-friendly initiative, students from the Department of Mechanical Engineering, along with Mr. G. Chitti Babu, Assistant Professor, participated wholeheartedly in the cultivation and maintenance of organic vegetable gardens.

Under the guidance of Mr. G. Chitti Babu, the student team effectively implemented organic farming techniques such as compost preparation, natural pest control, and drip irrigation systems, resulting in the successful growth of a variety of vegetables including tomatoes, brinjals, green chilies, and spinach. This initiative not only created awareness about the importance of sustainable agricultural practices but also gave students practical exposure to environmental responsibility and teamwork.

The department takes pride in being a part of this meaningful project and appreciates the efforts of all participants. Such green initiatives reinforce the institution's vision of developing socially responsible engineers who contribute positively to both technology and the environment.



NSS Initiatives – Blood Donation & Air Pollution Awareness Programs

As part of its commitment to social responsibility and community welfare, the Department of Mechanical Engineering actively participated in NSS activities during the academic year. The department successfully organized a Blood Donation Camp in collaboration with a local government hospital, where a large number of students and faculty members voluntarily donated blood, supporting emergency medical needs and promoting the spirit of humanity.

In addition, the department conducted an impactful Air Pollution Awareness Program, aimed at educating students and the local community about the harmful effects of air pollution and the importance of sustainable practices. As part of this initiative, awareness rallies, poster presentations, and interactive sessions were held, focusing on topics such as vehicular emissions, industrial pollution, use of green energy, and tree plantation.

These NSS activities not only fostered social consciousness and civic responsibility among students but also strengthened the department's role in promoting public health and environmental sustainability.



AIR POLLUTION AWARENESS & SERVICE PROGRAM



ACADEMIC TOPERS LIST

2022-23 EVEN SEM

I YEAR II SEM

I TOPPER	22ME1A0322	MUDILI SANDEEP	7.62 SGPA
II TOPPER	22ME1A0332	S.L.L.S. MANIKANTA	7.23 SGPA
III TOPPER	22ME1A0335	T.V.V.B.S.D.S VAMSI	7.15 SGPA
III TOPPER	22ME1A0313	KESA BHARGAV	7.15 SGPA

II YEAR II SEM

I TOPPER	21ME1A0318	P. VIJAY BABU	8.26 SGPA
II TOPPER	22ME5A0313	P.G.S.PRASANTH	8.19 SGPA
III TOPPER	22ME5A0308	KARRI SIVA	7.91 SGPA

III YEAR II SEM

I TOPPER	20ME1A0344	SK.IMRAN BASHA	8.19 SGPA
II TOPPER	20ME1A0332	N.SAI CHARAN	7.77 SGPA
III TOPPER	20ME1A0327	M.G.V.PHANINDRA SAI	7.07 SGPA

IV YEAR II SEM

I TOPPER	19ME1A0301	A.JAGADEESH	8.8 SGPA
II TOPPER	19ME1A0359	N.ANANTH KUMAR	8.65 SGPA
III TOPPER	19ME1A0377	T.NAVEEN KUMAR	8.5 SGPA

ACADEMIC TOPERS LIST

2023-24 ODD SEM

I YEAR I SEM

I TOPPER	23ME1A0321	K.N.RAMASWAMY	8.07 SGPA
II TOPPER	23ME1A0327	N.PAVAN SAI	7.93 SGPA
III TOPPER	23ME1A0322	L.RAJA BABU	7.71 SGPA

II YEAR I SEM

I TOPPER	22ME1A0330	PUJARI MANOHA	7.89 SGPA
II TOPPER	23ME5A0312	A.RAM CHANDU	7.79 SGPA
III TOPPER	22ME1A0315	K.SATISH BABU	7.74 SGPA

III YEAR I SEM

I TOPPER	21ME1A0304	B. DHANUSH	7.25 SGPA
II TOPPER	21ME1A0318	P. VIJAY BABU	6.98 SGPA
III TOPPER	22ME5A0315	S. RAVI TEJA	6.63 SGPA

IV YEAR I SEM

I TOPPER	20ME1A0333	N.V.S.D.S.KARTHIK	7.52 SGPA
II TOPPER	20ME1A0336	PALANGI RAJESH	7.26 SGPA
III TOPPER	20ME1A0345	SHAIK SHAFFI	7.13 SGPA

2023-24 PLACEMENT DETAILS

S.No	Industry Name	No.of Students Selected
1.	RAAM GROUP	06
2.	LEVIVAAN SOLUTIONS PVT LTD	10
3.	LAKSHMI HYUNDA PVT LMTD	06
4.	KAPSTON PVT LMTD	05
5.	LOKESH MACHINE TOOLS	06
6.	WOOSU PVT LMTD	02
5.	COCO COLA PVT LMTD	01

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Faculty Members



Dr. Bazani Shaik
Professor
Editor In Chlef



Mr. B. Sudhakara Rao
Associate Professor
Editor



Dr. Raffi Mohammad
Professor
Editor

Student Members



Mr. N. Sai Charan
20ME1A0332
Final Year



Mr. SK. Imran Basha
20ME1A0344
Final Year



Mr. Mohammed Shafi
22ME5A0312
Third Year



Mr. P. Vijay Babu
21ME1A0318
Third Year



Mr. K. Satish Babu
22ME1A0315
Second Year



Mr. B. Gnaneswar
22ME1A0304
Second Year



Mr. G. Rajesh
24ME5A0304
First Year



Mr. B. H. Vardhan
23ME1A0331
First Year