K.S.R. COLLEGE OF ENGINEERING

An Autonomous Institution

(Approved by AICTE, Affiliated to Anna University, Accredited by NAAC A++)

K.S.R. Kalvi Nagar, Tiruchengode - 637 215, Namakkal District, Tamil Nadu



SAFETY SPARKS NEWS LETTER

Volume 05, Issue 1

July - December 2024

K.S.R. COLLEGE OF ENGINEERING

An Autonomous Institution

Chairman Message



Thiru. R. Srinivasan, BBM., MISTE., Chairman, KSR Educational Institutions

As we stand on the brink of new beginnings and boundless possibilities, I am filled with an immense sense of pride and optimism about what we can achieve together at KSR Educational Institutions. Our founder, Dr. K S Rangasamy, laid a strong foundation rooted in the belief that education is the most powerful tool to transform lives. Carrying forward his legacy, we remain committed to not just educating but empowering young minds to make a meaningful impact in the world.

In today's fast-paced, technology-driven society, the challenges are as dynamic as the opportunities are great. It is imperative for education to transcend traditional learning and encompass the development of holistic, innovative, and critical thinking skills. At KSR, we strive to equip you, our students, with the capabilities to not only adapt to changes but to drive them. We are dedicated to nurturing a generation of leaders, innovators, and thinkers who are ready to take on global challenges with local sensibilities.

Making an Impact is not just a phrase—it's our mission. It's about inspiring each one of you to pursue your passions with determination and a sense of responsibility towards the betterment of society. We encourage you to dream big, push boundaries, and question the status quo. Our campus is a melting pot of ideas where your creativity and ambitions are nurtured, allowing you to flourish in ways you never imagined.

With best wishes, Thiru. R. Srinivasan, Chairman, KSR Educational Institutions.

K.S.R. COLLEGE OF ENGINEERING

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Vice Chairman's Message



Mr. K. S. Sachin, Vice Chairman, KSR Educational Institutions

At KSREI, we stand at the intersection of tradition and transformation, committed to shaping a future driven by knowledge, innovation, and values. While our roots are firmly grounded in a legacy of academic excellence, our vision extends beyond boundaries, preparing students to excel in an ever-evolving global landscape.

Our goal is to create a dynamic learning ecosystem that fosters critical thinking, technological prowess, and ethical leadership. We envision KSREI as a hub of intellectual growth, where students are empowered with 21st-century skills while embracing the timeless virtues of integrity, perseverance, and service.

Looking ahead, we aim to integrate cutting-edge advancements in education, strengthen industry collaborations, and expand global opportunities for our students. With a deep commitment to holistic development, we continue to nurture future leaders who will shape society with wisdom and purpose. Together, we build the future—rooted in values, driven by vision.

With best wishes,
Mr. K. S. Sachin,
Vice Chairman,
KSR Educational Institutions.

K.S.R. COLLEGE OF ENGINEERING

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Principal Message



Dr. M. Venkatesan, Principal, KSRCE

Education is the manifestation of love and my most cherished possession. It dispels ignorance and, through enlightenment, guides individuals toward righteous thought and action. Education empowers women and men alike, broadens the horizons of the mind, energizes society, and enables individuals to live with dignity and purpose. We firmly believe that education is a powerful medium for social transformation, and we are committed to making continuous efforts toward the advancement of the academic landscape in India. We draw inspiration from the bright and successful careers of our thousands of students whose achievements bring pride to our institution and contribute meaningfully to society.

With best wishes,
Dr. M. Venkatesan
Principal, KSR College of Engineering.

K.S.R. COLLEGE OF ENGINEERING

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Head of the Department Message



Dr. M.Prabu, Professor and Head

Department of Safety and fire Engineering

Welcome to the Department of Safety and Fire Engineering! As HOD, I'm proud to lead a department dedicated to a paramount field. Our mission is to cultivate experts who champion safety and mitigate risks across all sectors. We offer a robust curriculum, covering fire dynamics, industrial safety, risk management, and emergency preparedness. Our programs are designed to equip you with both theoretical knowledge and crucial practical skills.

We emphasize hands-on learning, ensuring you're ready for real-world challenges. Our dedicated faculties, with vast industry experience, are committed to your success. You'll gain the expertise to safeguard lives, protect property, and ensure operational continuity. The global demand for skilled safety and fire engineers is continuously expanding, opening diverse and impactful career paths. Join us in making a tangible difference in the world. We actively pursue cutting-edge research to advance safety science. Your time here will empower you to become a responsible, proactive safety professional. Let's collaborate to build a safer, more resilient future for everyone.

With best wishes,
Dr. M.Prabu
Professor and Head
Department of Safety and fire Engineering
K.S.R. College of Engineering
Tiruchengode – 637215.

EDITORIAL BOARD

The Editorial Board is a permanent committee of the college responsible for publishing the college newsletter on a biannual basis. The newsletter serves as a regular channel of communication and information-sharing among the faculty and students of the institution. Its primary objective is to present, in an accessible format, updates on the college's growth, achievements of staff and students, events conducted or attended, competitions won, and emerging trends in technology. Moreover, it aims to offer a creative platform for both faculty and students to showcase their literary and intellectual talents through technical or philosophical articles, poetry, short stories with moral lessons, and other academically significant content thereby promoting diverse perspectives and voices.

CHIEF PATRON:

Thiru R.Srinivasan

Chairman

PATRONS:

Shri K.S.Sachin

Vice Chairman

Dr.M.Venkatesan

Principal

CHIEF EDITOR:

Dr.M.PRABU

Head of the Department

EDITOR:

Mr.R.Ashok Kumar

Assistant Professor

K.S.R. COLLEGE OF ENGINEERING

DEPARTMENT OF SAFETY & FIRE ENGINEERING

The Department of Safety and Fire Engineering was established in the year 2020 with an intake of 60 students. The Department of Safety and Fire Engineering was formed with the primary objective of providing world class education in the field of Safety and Fire Engineering, while addressing the problems of today and tomorrow. Right from its inception, the department has been offering excellent infrastructural facilities with various sectors like oil and gas, aerospace, chemical, assembly & manufacturing and construction of safety platforms for aspiring professional students to meet the growing demands of the safety-related concerns in the various industries by proper application of engineering methods for a safe work environment.

The department imparts world class training, research and provides state of the safety equipment's facilities to the students. The department offers the students with constant motivation and support to bring out their talents in curricular, co-curricular, and extracurricular perspectives, thus, uplifting them into dynamic professionals. Our faculty and staff are our biggest strength, with industrial experience and exposure, specialized in engineering disciplines such as Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering and Safety, and Fire Engineering.

Vision of the Institution

We envision to achieve status as an Excellent Educational Institution in the global knowledge hub, making self- learners, experts, ethical and responsible engineers, technologists, scientists, managers, administrators and entrepreneurs who will significantly contribute to research and environment friendly sustainable growth of the nation and the world.

Mission of the Institution

• To inculcate in the students self-learning abilities that enable them to become competitive and considerate engineers, technologists, scientists, managers, administrators and entrepreneurs by diligently imparting the best of education, nurturing environmental and social needs.

• To foster and maintain mutually beneficial partnership with global industries and Institutions through knowledge sharing, collaborative research and innovation.

Vision of the Department

 To emerge as a centre of excellence in Safety and Fire Engineering using the framework of quality education through advanced industry, research, entrepreneurship and society.

Mission of the Department

- To provide quality education and to prepare nationally and internationally competitive students for a successful career in safety, occupational health, environmental management and fire protection engineering.
- To inculcate the need for sustainable development in research and innovations.

Program Educational Objectives (PEOs)

- Have a sound knowledge in Safety and Fire Engineering aspects to provide solutions for Potential hazards.
- Expertise in the area of Thermal, Chemical Reactions, Structural Stability and Environmental Impacts.
- Practice their Profession through evaluation, communication, ethics and social responsibility.

	Program Outcomes (POs)				
PO1	Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.				
PO2	Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1to WK4)				
PO3	Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)				
PO4	Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).				
PO5	Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6).				
PO6	The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).				
PO7	Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)				
PO8	Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.				
PO9	Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.				
PO10	Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.				
PO11	Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)				
Program	Program Specific Outcomes (PSOs)				
PSO1	Design a safety and fire system for industries, building and other area thereby saving the loss due to a fire and accidents.				
PSO2	Analyze hazards in a work place and to rectify it by suitable safety and fire engineering solutions.				

DEPARTMENT ACTIVITIES

MoU's Signed

Company Name: SAKTHI AUTO COMPONENTS DATE: 18.07.2024

On 18th July 2024, the Department of Safety & Fire Engineering, K.S.R. College of Engineering (KSRCE) signed a Memorandum of Understanding (MoU) with SAKTHI AUTO COMPONENTS to foster academic-industry collaboration, enhance student skill development, and promote industrial exposure in the field of Safety Engineering.



Company Name: Aero spark Industries, Hosur

DATE: 02.09.2024

On 2nd September 2024, the Department of Safety & Fire Engineering, K.S.R. College of Engineering (KSRCE) signed a Memorandum of Understanding (MoU) with Aero Spark Industries, Hosur, to strengthen industry-academia collaboration, facilitate hands-on training, and promote research and development activities in the field of Safety & Fire Engineering.





<u>SEMINAR ON STARTUP ENTREPRENEURSHIPS</u>

Date: 27.07.2024

RESOURCE PERSON: Mrs. S.B. Thamaraiselvi, AP/CSE, Ms. B.Janani AP/CSE



On 27th July 2024, the Department of Safety & Fire Engineering, K.S.R. College of Engineering (KSRCE) conducted a Seminar on "Startup Entrepreneurships". The session was handled by Mrs. S.B. Thamaraiselvi, Assistant Professor/CSE, and Ms. B. Janani, Assistant Professor/CSE from K.S.R. College of Technology (KSRCT). The seminar focused on nurturing entrepreneurial mindset among students, exploring startup opportunities, and understanding the challenges and strategies involved in launching successful ventures.

Guest Lecture on Role of safety officer in industry

Date: 10.08.2024

RESOURCE PERSON: <u>Dr.M.PRABU Professor & Head</u>





On 10th August 2024, the Department of Safety & Fire Engineering K.S.R. College of Engineering (KSRCE) organized a Guest Lecture on the topic "Role of Safety Officer in Industry". The session was delivered by Dr. M. Prabu, Professor & Head, who provided valuable insights into industrial safety practices, responsibilities of safety officers, and the importance of implementing safety protocols in engineering environments.

Guest lecture on Exploring Innovative Applications of 3D Printing Date: 10.08.2024

RESOURCE PERSON: Dr.M.Kathirselvam Associate Professor (KSRCT)





The Guest Lecture on Exploring Innovative Applications of 3D Printing was designed to provide participants with a comprehensive understanding of the evolving role of 3D printing across various industries. The session focused on innovative applications, the benefits of adopting 3D printing technologies, and the potential future trends that could revolutionize manufacturing, healthcare, automotive, aerospace, and even food industries.

Helmet Ware Awareness Rally

Date: 24.08.2024

RESOURCE PERSON: <u>Inspector of Police, Tiruchengode</u>





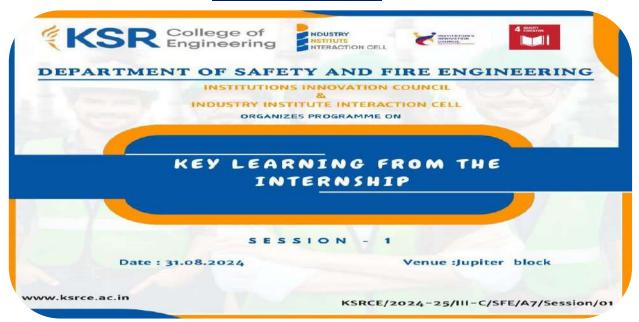




On 24th August 2024, the Department of Safety & Fire Engineering, K.S.R. College of Engineering (KSRCE) organized a Helmet Wear Awareness Rally to promote road safety and highlight the importance of wearing helmets while riding two-wheelers. The rally was inaugurated and addressed by the Inspector of Police, Tiruchengode, who emphasized the significance of following traffic rules and the life-saving impact of helmet usage. The event aimed to instill a sense of responsibility among students and create public awareness on safe commuting practices. The event focused on raising awareness about the life-saving benefits of wearing helmets, encouraging the adoption of safe riding practices, and advocating for stricter enforcement of helmet laws. It was an interactive and engaging event involving participants, safety officers, local authorities, and the general public.

Key Learning from the Internship

Date: 31.08.2024





The internship experience provided an opportunity to work closely with a team that organized and managed various public programs, including educational initiatives, safety awareness campaigns, and events aimed at community engagement. This report reflects the key takeaways from my internship experience, focusing on the insights gained from organizing, coordinating, and executing the programs.

My internship was an enriching experience that gave me a practical understanding of how public safety and awareness programs are planned, executed, and evaluated. It reinforced my ability to handle multiple tasks under pressure, improved my communication skills, and deepened my appreciation for the complexity of organizing events that involve a broad range of stakeholders.

Overall, this internship has equipped me with valuable skills in event management, community outreach, problem-solving, and program evaluation—skills that I believe will be beneficial in any future career path I choose.

Seminar on Drone Automation Date: 02.09.2024

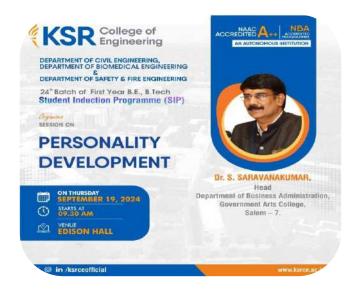




The Seminar on Drone Automation was conducted on 2nd September 2024, the Department of Safety & Fire Engineering, K.S.R. College of Engineering (KSRCE). The session was delivered by Mr. Hariprakash, Founder and CEO of Aerospace Industry, who shared his expertise on the latest developments in drone technology, automation systems, and their practical applications across various industries. The seminar aimed to inspire students by providing deep insights into the innovative world of UAVs and the future potential of aerospace automation.

Student Induction Programme





The Student Induction Programme at K.S.R. College of Engineering (KSRCE) was officially inaugurated by the Principal. The programme aimed to warmly welcome the new batch of students, introduce them to the college culture, academic expectations, and available resources, and help them smoothly transition into their academic journey. The Principal emphasized the importance of discipline, dedication, and

holistic development during the inauguration address. The Student Induction Programme was conducted to welcome and orient new students. The program aimed to help students understand the academic, cultural, and administrative aspects of the institution, as well as the resources available to them for their personal and academic development. The objective was to create a supportive environment for students, familiarize them with the campus facilities, and provide them with essential information on academic expectations, policies, and campus life.





Intra Department paper presentation

DATE: 19.10.2024

The Intra-Department Paper Presentation was an academic event designed to encourage students to engage in research, enhance their presentation skills, and foster intellectual discussions within their department. The event provided a platform for students to present their research papers, case studies, or project work to their peers and faculty members. The goal was to stimulate academic curiosity, promote critical thinking, and offer students the opportunity to showcase their knowledge in their respective fields of study.







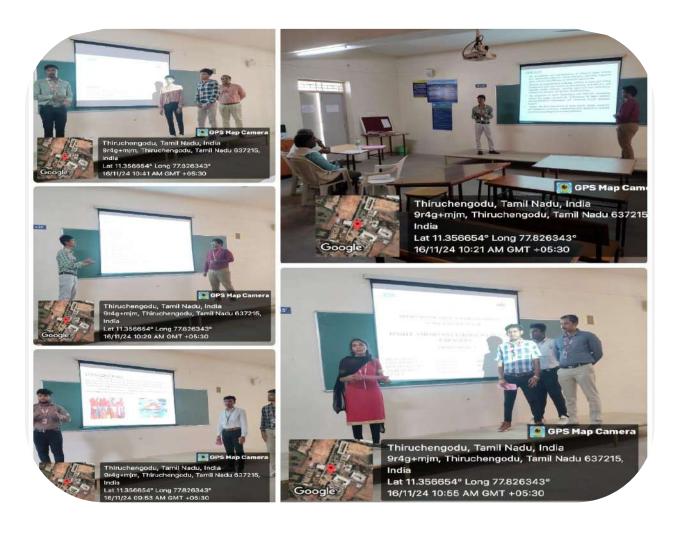
Intra Institutional Idea Challenge

DATE: 15,16.11.2024



On 15th and 16th November 2024, The Intra Institutional Idea Challenge organized by the Department of Safety and Fire Engineering, K.S.R. College of Engineering - Institutions Innovation Council (IIC) was a dynamic event showcasing the innovative projects and entrepreneurial ideas presented by students. The event Participants pitched a diverse range of projects ideas, from tech-driven solutions addressing everyday problems to social enterprises aimed at creating positive societal impact. Each team had the opportunity to receive valuable feedback, refine their ideas, and explore potential funding opportunities, making the event an enriching experience for all involved. The keynote speeches and panel discussions by experienced technical faculty members and innovation leaders, who shared their journeys and offered guidance on navigating the challenges of entrepreneurship. The event emphasized the importance of fostering an entrepreneurial spirit within educational institutions, encouraging students to think creatively and pursue their ideas fearlessly.





Hope Rising Ending Poverty Together

DATE: 23.11.2024





On 23rd November 2024, the Department of Safety & Fire, K.S.R. College of Engineering (KSRCE) organized a special session titled "Hope Rising Ending Poverty Together" The event was led by Prof. V. Santhi, Professor & Head, MBA Department, who addressed the significance of collaborative efforts and innovative strategies in combating poverty. The session aimed to raise awareness among students about social responsibility, sustainable development, and the role of business and management practices in fostering inclusive growth.

NATIONAL LEVEL TECHNICAL SYMPOSIUM SPRING FEST 2024

Workshop on Demonstration of Fire Fighting



During the National Level Technical Symposium SPRING FEST 2024, K.S.R. College of Engineering (KSRCE) hosted a Workshop on Demonstration of Fire Fighting. The workshop aimed to equip participants with essential fire safety skills, practical knowledge on handling fire emergencies, and the effective use of firefighting equipment. This handson session was designed to enhance safety awareness and preparedness among students and faculty members during technical events and beyond.







STUDENT AREA PLACEMENT DETAILS

We are pleased to announce that two of our Final year students have been successfully placed in reputed companies, marking a significant step in their professional journey.



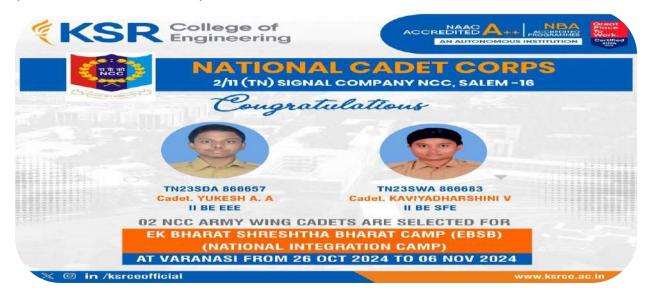
Internship Details

We are proud to share that two of our III Year students have been offered internships at Bunge, providing them with valuable industry exposure and learning opportunities.



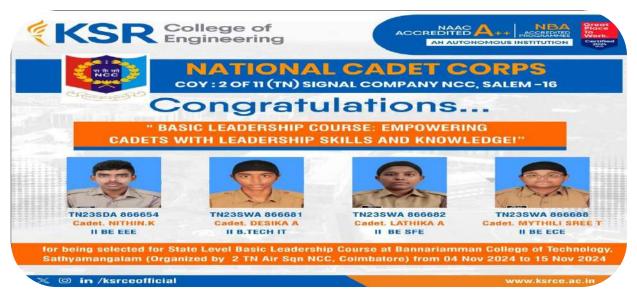
EK BHARATH SHRESHTHA BHARATH CAMP AT VARANASI

We are proud to share that V. Kaviyadharshini II Year student has been selected to participate in a 15-day National Cadet Corps (NCC) camp in Varanasi, offering her a valuable opportunity for leadership development and national-level exposure.



Basic Leadership course at Banariamman college of Technology

Lathika. A a second-year student, took part in a 15-day National Cadet Corps (NCC) camp, where she underwent training under the Basic Leadership Course, aimed at developing essential leadership and discipline skills.



Residential student workshop at IIT Madras

We are proud to announce that Dharsan S, a second-year student, has qualified to participate in the Residential Student Workshop organized by IIT Madras, providing a valuable opportunity for academic enrichment and research exposure.





Workshop at SLCS College of Science – Madurai.

On 14th October 2024, ten of our students attended a workshop at SLCS College of Science, Madurai, gaining valuable knowledge and practical exposure in their respective areas of study.





Workshop at Sri Eswar College

Dharsan S, a second-year student, participated in a workshop held at Sri Eshwar College of Engineering.



Industrial Visit

Sakthi Auto Components Perundurai

Students from the Department of Safety & Fire Engineering, K.S.R. College of Engineering, went on an industrial visit to Sakthi Auto Components, Perundurai, to gain practical exposure to manufacturing processes and industry operations.





MILKY MIST





On 8th August 2024, students from [Department Name], K.S.R. College of Engineering, participated in an industrial visit to Milky Mist. The visit provided them with valuable insights into dairy processing technologies, quality assurance practices, and the overall functioning of a modern dairy production facility.

Value Added Course – Advance Detection Technology and Environmental Sustainability Industrial visit at Anitha Weaving, Tiruchengode.

A Value Added Course on "Advanced Detection Technology and Environmental Sustainability" was conducted for II and III-year students of the Department of Safety & Fire Engineering. The course was delivered by Mr. Boopathi, the resource person, providing in-depth knowledge and practical insights into the latest detection technologies and sustainable environmental practices.

As part of the Value Added Course, students visited Anitha Weaving, Tiruchengode, to gain practical exposure and insights into textile manufacturing processes and industrial operations.





JAYABHARATHI P - III SFE ANNA UNIVERSITY INTERZONE 3RD PLACE

DATE: 22.11.2024

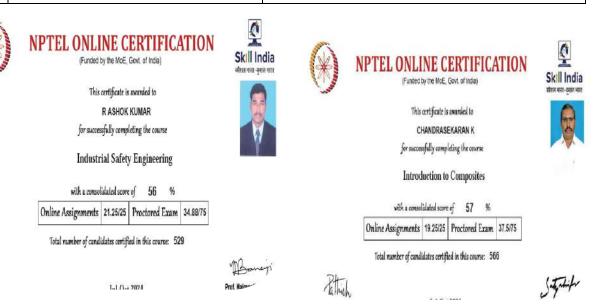
Jayabharathi P, a third-year student of the Department of Safety & Fire Engineering (III SFE), secured 3rd place in the Anna University Interzone competition held on 22nd November 2024. This achievement reflects her dedication and excellence in her field.



NPTEL ACHEVEIMENTS FACULTY

Two of our faculty members successfully completed NPTEL courses, marking a commendable achievement in their continuous professional development.

S.No.	Name of the Faculty	Subject Name	
1.	R.Ashok Kumar	Indutrial safety Enginerring	
2.	K.Chandrasekaran	Introduction to composites	



STUDENT

SRIRAMULU G - III SFE

NPTEL- COURSE: CHEMICAL PROCESS SAFETY

NPTEL- COURSE: ESSENTIALS OF SPORTS INJURY PREVENTION & REHABILITATION



LIST OF PUBLICATION

1.	Enhancing flour quality and milling efficiency: experimental study on bullet plate type flour grinding machine. Palanivel Elayappan Saroja, P Muthugounder, S Shanmugam, R Dhairiyasamy Matéria (Rio de Janeiro) 29 (3), e20240331.	Q4 Journal
2.	EYEWASH & SHOWERFORPRETREATMENTOF CHEMICALSPILLAGE AT ETP AND STP T.Sureshkumar, S.Sakkaravarthi , S. Magibalan M. Prabu, A.V.Balan in AIP Conf. Proc. 2965, 040009 (2024)	
3.	Personal protective equipment perception survey, S. Magibalan M. Prabu, R.Ashok kumar in AIP Conf. Proc. 2965, 040009 (2024)	Scopus indexed Conference
4.	M.Prabu, S.Magibalan Validation of Toyota Stops 6 Plus 2 Safety Practice Enablers in Manufacturing Industry through ISM Approach in AIP Conf. Proc. 2965, 040009 (2024)	Publications
5.	Personal protective equipment perception survey, S. Magibalan M. Prabu, R.Ashok kumar in AIP Conf. Proc. 2965, 040009 (2024)	Scopus indexed Conference Publications

Faculties as participants in Faculty Development/Training Activities

1. Dr. P. Vignesh

- ATAL One Week FDP: Advancement in Electric vehicle technology for a greener future in transportation at K.S.R Polytechnic College from 02.12.24 to 07.12.2024.
- One Week FDP: NEP 2020 Orientation & Sensitization Programme at Malaviya Mission Teacher Training Programme from 18.11.24 to 26.11.2024.
- Two Week Online FDP: Innovation and Entrepreneurship at Centre for Entrepreneurship Development program from 4.12.24 to 16.12.2024.

2. Mr.R.Ashok Kumar

- ATAL One Week FDP: Advancement in Electric vehicle technology for a greener future in transportation at K.S.R Polytechnic College from 18.11.24 to 26.11.2024.
- One Week Online FDP: Program on Additive Manufacturing Advancements in Different Applications at SRM Chennai.

3. Mr.K.Manogar

One Week Online FDP: Indian Knowledge System at Nandha Arts & Science College from 30.9.24
 to 06.09.2024.

Celebration Glimpses

New Year Celebration at KSRCE

The New Year Celebration at K.S.R. College of Engineering (KSRCE) was held on 31st December 2024 and was inaugurated by the Principal, Vice Principal, and Director, with active participation from faculty and staff. The event marked a vibrant and joyful beginning to the year, celebrated with great enthusiasm and a spirit of togetherness.



