ARMS NSSCE 2024-2025

TALKENGG SERIES

TALKENGG - N1

Date: September 12, 2024 **Time:** 6:00 PM - 7:00 PM

Platform: Online

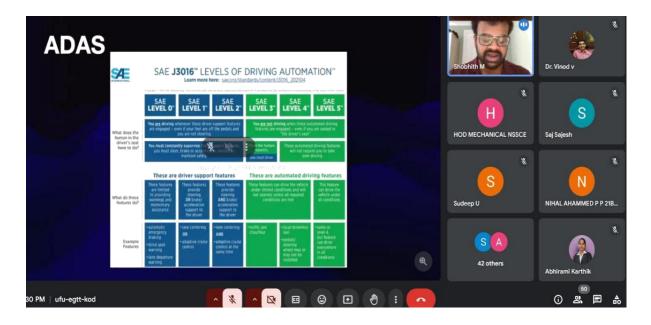
On September 12, 2024, ARMS NSSCE hosted a valuable TalkEngg session titled "Ideation to Validation: To Preserve or To Pivot," featuring Mr. Abhijith, an expert in startup strategy and innovation. The session focused on guiding students through the stages of turning ideas into viable solutions, covering essential strategies for deciding whether to preserve an original concept or pivot to a new direction. Mr. Abhijith began by highlighting the process of ideation, encouraging participants to generate, evaluate, and refine their ideas systematically. He then explained validation techniques, providing insights into methods for assessing an idea's feasibility and market potential. A major theme was the "preserve or pivot" decision-making process, where he shared key indicators that help entrepreneurs determine whether they should stay committed to their original plan or adapt to market demands. The Q&A session was lively, with students eager to discuss real-world scenarios and gain practical advice. Mr. Abhijith's expertise offered participants a framework for navigating the entrepreneurial journey, empowering them with tools to succeed in their projects

TALKENGG - N2

Date: October 6, 2024 **Time:** 6:00 PM - 7:00 PM

Platform: Online





On October 6, 2024, ARMS NSSCE hosted an online session as part of its TalkEngg series, featuring Mr. Shobhith Menon, a Design Engineer at Jaguar Land Rover, London. Mr. Menon's talk provided in-depth insights into the future of the automotive industry, focusing on sustainability, safety, and innovation. Throughout the session, he addressed several critical topics, starting with e-fuels and their potential as sustainable energy sources for future vehicles. He also covered ADAS (Advanced Driver Assistance Systems), emphasising the importance of these systems in enhancing vehicle safety. Other highlights included vehicle safety standards and the circular economy, where he discussed the industry's shift towards sustainable materials and practices to minimise environmental impact. Moreover, Mr. Menon spoke about managing harmful substances in automotive production and Zero Emission Vehicles (ZEVs) as a path toward a cleaner automotive landscape. His talk underscored the industry's commitment to both performance and environmental responsibility. Attendees engaged actively, asking questions that covered technical challenges and the industry's sustainability goals. The session successfully connected students with current industry trends, aligning well with the ARMS NSSCE's objective to bridge academia and industry.

Date: October 9, 2024 **Time:** 6:00 PM - 7:00 PM

Platform: Online

6:23 PM | TALKENGG N4

4



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On October 9, 2024, ARMS NSSCE hosted a dynamic TalkEngg session featuring Mr. Febin Jinsal, NSSCE alumnus and Product Manager - EV IoT at Jio Platforms Limited. Titled "The Future of Vehicles with IoT," the session offered a deep dive into IoT's transformative role in **autonomous driving, smart charging systems**, and **vehicle-to-grid (V2G) communication**.Mr. Jinsal began by explaining how IoT enables advanced autonomous driving systems, allowing vehicles to interact with infrastructure for safer, more efficient operations. He then covered **smart charging** innovations, discussing the importance of creating reliable, automated EV charging systems to meet rising demand. Further, he introduced **V2G communication**, highlighting how this technology allows EVs to return stored energy to the grid, promoting grid stability and sustainability.During the Q&A, students engaged actively, exploring IoT applications and career paths in EV technology. Mr. Jinsal's expertise provided valuable insights, reinforcing ARMS NSSCE's mission to connect students with cutting-edge industry developments.

Date: October 9, 2024 **Time:** 1:00 PM - 2:00 PM

Platform: Offline- Mechanical seminar hall

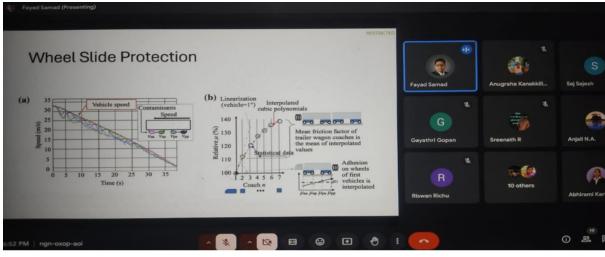


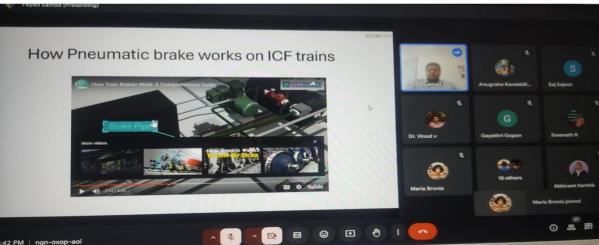


The TALKENGG - N4 session took place on October 9, 2024, from 1:00 PM to 2:00 PM at the Mechanical Seminar Hall. The session featured Aashique, who shared his professional experience with the students. Aashique offered valuable insights into his career journey, highlighting key learnings and challenges he faced in his professional life. He also took the time to guide students, providing practical advice on career development, industry trends, and skill-building. Additionally, he answered students' doubts, offering personalized guidance on various aspects of their academic and professional aspirations. The session proved to be informative and interactive, helping students gain a clearer understanding of their future career paths.

Date: October 16, 2024 **Time:** 6:00 PM - 7:00 PM

Platform: Online

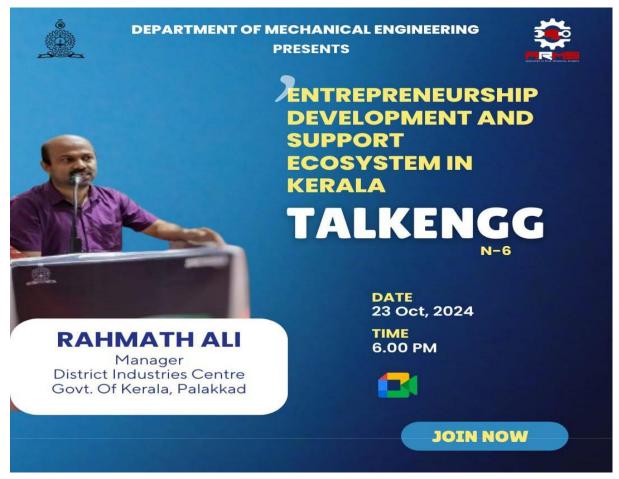




On October 16, 2024, ARMS NSSCE hosted an engaging session in its TalkEngg series, featuring alumnus Mr. Fayad Samad, a System Engineer for Bogie Brakes at Alstom Transport. Mr. Samad presented an "Overview of Railway Braking Systems," sharing his expertise on the critical aspects of modern railway braking technology. The session began with Mr. Samad explaining modern braking systems and the intricate brake control mechanisms used in rail vehicles today. He provided insights into the functionality of pneumatic brakes on ICF (Integral Coach Factory) trains, detailing how these systems enhance safety and control. Additionally, he discussed wheel-slide protection systems, essential for maintaining traction and safety, especially in adverse weather conditions. Students had the opportunity to engage in a Q&A session, where they explored the practical applications of these systems and future advancements in railway technology. Mr. Samad's detailed explanations and professional insights provided attendees with a clear understanding of braking systems and their role in railway safety.

Date: October 23, 2024 **Time:** 6:00 PM - 7:00 PM

Platform: Online



On October 16, 2024, ARMS NSSCE organised a TalkEngg session featuring NSSCE alumni Mr. Rahmathali, a 2001 graduate and current Manager at the District Industries Centre, Government of Kerala, Palakkad. Mr. Rahmathali presented on "Entrepreneurship Development and the Support Ecosystem in Kerala," offering students and attendees insights into the extensive resources and programs available to aspiring entrepreneurs within the state. Mr. Rahmathali discussed various government initiatives designed to foster entrepreneurship, including funding options, incubation centers, and skill development programs. He highlighted Kerala's unique support ecosystem for startups, explaining the role of District Industries Centers in providing guidance, infrastructure, and financial assistance to new ventures. The session emphasized the importance of networking, mentorship, and government support for building a successful business in Kerala.During the interactive Q&A, students inquired about specific programs, challenges faced by new entrepreneurs, and career opportunities in the entrepreneurial sector. Mr. Rahmathali's guidance offered practical insights, encouraging students to explore entrepreneurship as a viable career path.

Date: November 01, 2024

Time: 11:00 AM

Platform: Offline- Mechanical seminar hall



On Friday, 1st November 2024, a session was held at the Mechanical Seminar Hall featuring insights from Sachin Sudhir, Product Manager at Mercedes Benz India, and Rakesh, a Research Scholar from IIT Palakkad. The event focused on the intersection of industry and academia, highlighting career pathways and the role of research and education in shaping the future of engineering. Sachin discussed the dynamic automotive industry, emphasizing the importance of innovation, customer satisfaction, and technical excellence. He highlighted emerging trends such as electric vehicles and autonomous technologies, advising students to stay updated with industry shifts and to gain hands-on experience through internships. Rakesh, on the other hand, shared insights into the research landscape at IIT Palakkad, particularly in advanced manufacturing, robotics, and artificial intelligence. He stressed the importance of interdisciplinary research and the growing need for academia to align more closely with industry demands. Both speakers agreed on the necessity of stronger industry-academia collaboration, with Sachin noting the value of practical exposure for students and Rakesh emphasizing how such collaborations drive innovation. The session concluded with the recognition of the importance of skills development, including technical expertise and soft skills like leadership, communication, and critical thinking, which are essential for future careers in both academia and industry.

Date: November 05, 2024

Time: 03:00 PM

Platform: Offline- Mechanical seminar hall





The TALKENGG - N7 session, organized by the Department of Mechanical Engineering at NSS College of Engineering, took place on November 5, 2024, at 3:00 PM in the Mechanical Seminar Hall. The session featured seniors who are currently placed in prominent EPC (Engineering, Procurement, and Construction) companies. They shared valuable insights into the recruitment process, essential technical and soft skills, and the day-to-day responsibilities in the EPC industry. The speakers emphasized the importance of practical knowledge, proficiency in design and analysis software, and a strong foundation in core subjects such as thermodynamics and fluid mechanics.

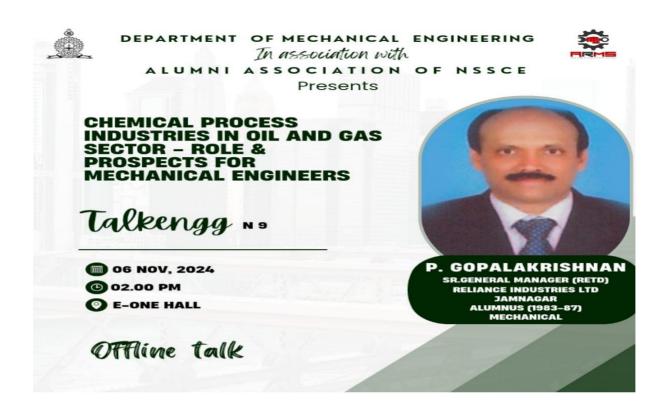
One of the speakers, who is still pursuing their **B.Tech**, shared their ongoing journey of preparing for **placements** while managing academics, inspiring students to maintain a balance between the two. The session also covered the advantages of pursuing higher studies like **M.Tech** to enhance technical expertise and career prospects in specialized domains.

The **Q&A segment** was highly engaging, with students asking questions about **career growth**, **company cultures**, and **industry trends**. Overall, the session motivated participants to focus on developing both **technical skills** and **personal growth** to succeed in the competitive **EPC sector**.

Date: November 05, 2024

Time: 02:00 AM

Platform: Offline- E-One hall









The event titled "Chemical Process Industry in the Oil and Gas Sector - Role and Prospect of Mechanical Engineers" was held on 06th November 2024, at 2:00 PM in E-One Hall. The session featured P. Gopalakrishnan, Sr. General Manager (Retd) at Reliance Industries Ltd, Jamnagar and an alumnus of the 1983-87 Mechanical batch, as the guest speaker. Organized by ARMS NSSCE and the Alumni Association, NSSCE, the event provided valuable insights into the role of mechanical engineers in the chemical process industry, particularly within the oil and gas sector. P. Gopalakrishnan highlighted the significance of this sector in the global economy and discussed the essential roles mechanical engineers play in optimizing processes, enhancing safety, and improving operational efficiency. The session also delved into the future prospects for mechanical engineers, emphasizing the increasing demand for skilled professionals in the evolving industry. This event was an exceptional opportunity for attendees to gain knowledge about the growing importance of mechanical engineers in the oil and gas sector and the promising career paths available in this field.

Date: November 05, 2024

Time: 07:00 PM Platform: Online



An online session titled "Navigating Higher Education in Germany" took place on Saturday, 16th November 2024, from 7:00 PM to 8:00 PM. The session provided valuable insights for students interested in pursuing higher education in Germany. Key topics included admission procedures, scholarships, visa requirements, student life, and career opportunities in Germany. The speaker highlighted the benefits of studying in Germany, such as affordable education, access to top-tier research facilities, and a wide range of courses in both English and German.

The session also addressed challenges faced by international students and provided practical tips for navigating them. This event offered an excellent opportunity for prospective students to better understand the **academic**, **cultural**, and **career aspects** of studying in Germany.

Date: January 01, 2025 **Time:** 09:00 AM

Platform: Offline- Measurements lab



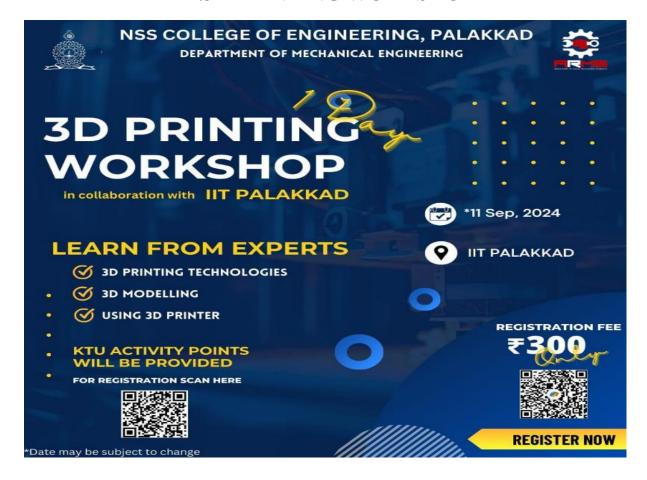


"Engineering Beyond the Classroom: Insights from Manoj N H" was an enlightening session hosted by ARMS, for the 2022 admission students on 1st January 2025. Mr. Manoj N H, former Manager of R&D at Maruti (2011-2015) and currently working in exhaust system design, shared his extensive industry experience with the students, providing them valuable insights into the practical aspects of engineering. During the session, Mr. Manoj elaborated on his work in exhaust system design, explaining its crucial role in vehicle performance, emissions control, and compliance with environmental regulations. He also highlighted the challenges and innovations involved in creating efficient and sustainable exhaust systems for modern vehicles.

Beyond the technical knowledge, Mr. Manoj provided significant career guidance for students nearing the completion of their B.Tech. He emphasized the importance of competitive exams like GATE for those seeking higher studies or research-oriented careers and discussed various career prospects available after B.Tech. His insights on industry expectations and potential career paths, including specialized fields like automotive engineering and product design, helped students broaden their understanding of the opportunities that lie ahead. The session proved to be an invaluable learning experience, motivating students to explore diverse career paths and pursue their goals with a clearer vision. Mr. Manoj's practical advice and real-world perspective left a lasting impact on the students, inspiring them to consider new avenues in engineering and take proactive steps toward their future.

WORKSHOPS

1.3D PRINTING WORKSHOP

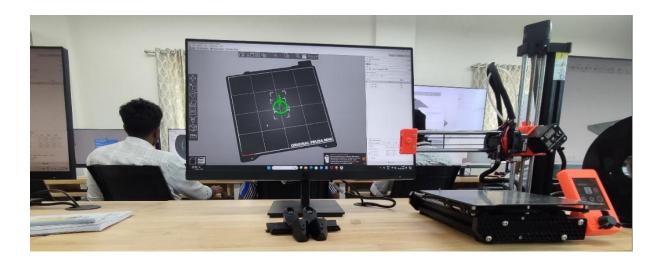


On November 11 and 30, 2024, at 9:30 AM, ARMS NSSCE conducted an insightful event at IIT Palakkad, offering participants a deep dive into the world of 3D printing technology. The session began with an introduction to the history, evolution, and future possibilities of 3D printing. Participants also learned the fundamentals of 3D design, gaining hands-on experience with user-friendly software to create their own models. The event featured a practical session where attendees could bring their designs to life using cutting-edge 3D printers. Furthermore, attendees

gained valuable knowledge about the different materials used in 3D printing and their diverse applications in various industries.

The event was structured to cater to both beginners and those with some experience in the field. Throughout the session, participants had the opportunity to ask questions, discuss ideas, and collaborate with fellow enthusiasts and experts. ARMS also emphasized the growing importance of 3D printing in sectors like manufacturing, healthcare, architecture, and education. By the end of the event, attendees left with a well-rounded understanding of 3D printing's potential, practical skills in 3D design, and a renewed interest in exploring how this technology can transform various industries. The interactive environment fostered creativity and innovation, making the event a valuable learning experience for everyone involved.







LIST OF STUDENTS PARTICIPATED

	3D Printing on 30-	09-2024	
SI.No	Name	Class	Roll.No
1	Rishinand	S3 MB	150
2	Goutham Govind T P	S3 MB	105
3	Hrishikesh Sunil	S3 MB	110
4	Siddharth Sunil	S3 MB	156
5	Harigovind B	S3 MB	109
6	Aswin Dev V H	S3 MA	54
7	Navnit Jayaprakash	S3 MB	139
8	Sravan S	S3 MB	158
9	Dhananjayan C K	S3 MA	62
10	Nirmal Sutar	S3 MA	43
11	Vineesh S	S3 MB	164
12	Aravind krishna S	S3 MA	A59
13	Sudheesh V K	S3 MB	159
14	Sudheesh S	S5 MB	160
15	Mohammed Shibil	S5 MB	113
16	Muhammed Jaseem	S5 MB	117

SI.No	Name	Class	Roll.No
1	Aditya Vinod	S3 MA	22
2	Arjun K R	S3 MA	49
3	Amal M	S3 MA	37
4	Akshay P Panicker	S3 MA	34
5	Agnay Anil	S3 MA	24
6	Anupama M A	S3 MA	42
7	Aswathi M	S3 MA	53
8	Abin Raj	S3 MA	12
9	Abhirami M	S3 MA	8
10	Alex Antony K R	S3 MA	35
11	Anantha Krishna M A	S3 MA	40
12	Amal K M	S3 MA	36
13	Amith Aravind	S5 MA	31
14	Fitha A	S5 MA	56
15	Charulatha J	S5 MA	52
16	Akash K T	S5 MA	19
17	Bhavana V	S5 MA	50
18	Abhinav E S	S5 MA	5
19	Adhersh K P	S5 MA	12
20	Abin Babu	S5 MA	10

2.OPEN LAB WORKSHOP



The "Open Lab" event, held on 17th January 2025 from 9:30 AM to 1:30 PM at NSS College of Engineering, Akathethara, Palakkad, was a unique opportunity for higher secondary students to step into the world of engineering. The event, organized by various department associations, featured a prominent contribution from the Mechanical Engineering Department's association, ARMS. ARMS members took the students on an insightful tour through the department's advanced facilities, beginning with the **Thermal Lab**, where students witnessed the practical applications of heat transfer, thermodynamics, and energy conservation through live demonstrations. They learned how thermal systems are integral to industries like power generation, refrigeration, and manufacturing. In the **Measurements Lab**, students explored the importance of precision in mechanical engineering, interacting with high-accuracy instruments used for measuring parameters like force, pressure, and displacement. This gave them a deeper understanding of how critical measurement tools ensure the success of engineering designs and

processes. The **3D Printing Lab** was a standout feature, where students observed the fascinating process of additive manufacturing. They saw firsthand how complex mechanical components are designed and fabricated layer by layer, offering them a glimpse into the future of prototyping, product design, and customization in the engineering field. Throughout the event, ARMS members not only explained the theoretical principles behind these technologies but also highlighted their real-world applications, sparking curiosity and creativity among the students. The goal was to inspire and guide the students in exploring the vast opportunities within mechanical engineering, showing them how innovation and cutting-edge technology can shape the future. By the end of the event, the students left with a clearer understanding of mechanical engineering's scope and practical impact, feeling motivated and equipped to consider it as a potential career path.

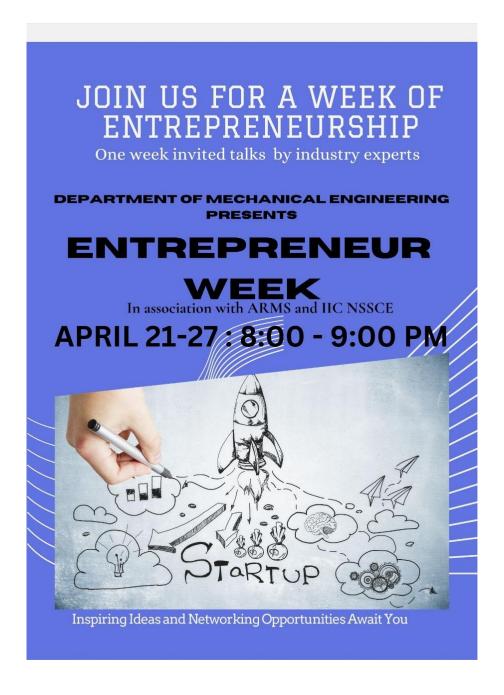








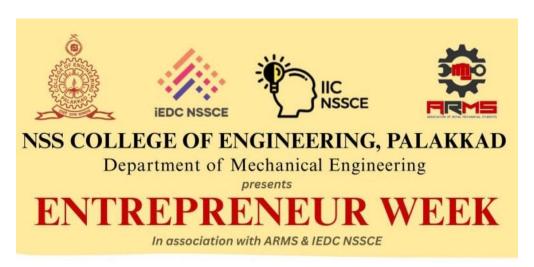
ENTREPRENEUR WEEK



The Department of Mechanical Engineering at NSS College of Engineering successfully organized Entrepreneur Week from April 21 to April 27. The program was conducted in association with **ARMS** and **Institution's Innovation Council (IIC) NSSCE**. The event was scheduled daily from 8:00 PM to 9:00 PM in an online/interactive mode, making it accessible to a wider audience. The highlight of the event was the startup-focused discussions that gave participants a better understanding of business ideation, strategy, and networking. Students were introduced to practical aspects of entrepreneurship such as funding, scaling, and challenges faced by young entrepreneurs.

ENTREPRENEUR WEEK

DAY-1



Topic

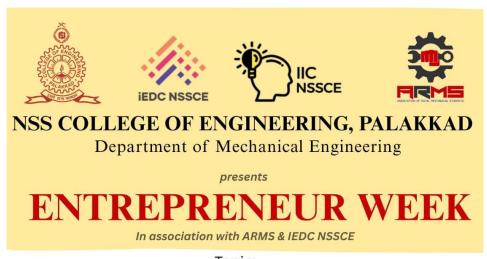
Cultivating Entrepreneurship Mindset in Engineering Colleges



The Entrepreneur Week 2025 commenced on 21st April with its inaugural session delivered by Mr. Bergin S Russel, a key figure in academic entrepreneurship and startup promotion in Kerala. The session focused on developing an entrepreneurial mindset among engineering students and highlighted the importance of innovation, creativity, and risk-taking in the current competitive world. The inaugural day set a strong foundation for the rest of the Entrepreneur

Week. Students actively participated in the session, gaining awareness about entrepreneurship opportunities and the importance of mindset change. The interactive session also gave them clarity on how to utilize institutional platforms like IEDC to transform their ideas into viable startups. Day 1 of Entrepreneur Week was a highly insightful and inspiring beginning. With the expert guidance of Mr. Bergin S Russel, participants were encouraged to cultivate an entrepreneurial mindset and explore innovative pathways in their academic and professional journey.

DAY -2



Topic:

Company Creation in India and Abroad



The second day of Entrepreneur Week commenced on 22nd April 2025 featured an insightful session by Mr. Jobin Geo, a successful entrepreneur and co-founder of Magic Motion Media and WECS labs. His talk centered on the nuances of establishing companies both within India and in international markets, giving students valuable exposure to the global entrepreneurial landscape. Mr. Geo discussed the step-by-step process of company formation in India, including legal frameworks, registration procedures, funding opportunities, and government support for startups. The session gave participants a comprehensive understanding of the entrepreneurial ecosystem in India and abroad. It inspired students to think beyond local opportunities and encouraged them to pursue ventures with a global vision. The interactive Q&A enabled participants to clarify their doubts regarding company registration, funding, and international collaborations. Day 2 of Entrepreneur Week was highly enriching, providing students with a comparative outlook on company creation in India and overseas. With Mr. Jobin Geo's expertise and experiences, participants gained motivation to explore entrepreneurship not just as a national opportunity but as a global journey.









NSS COLLEGE OF ENGINEERING, PALAKKAD

Department of Mechanical Engineering

ENEUR WEEK

In association with ARMS & IEDC NSSCE

Topic:

Company Auditing Procedures



Speaker: C A RAJMOHAN R **SVAR & ASSOCIATES**



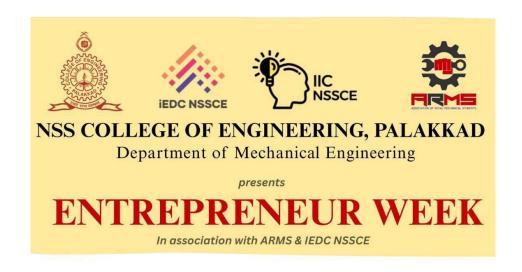
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The third day of Entrepreneur Week on 23rd April 2025 was marked by a highly informative session on Company Auditing Procedures, delivered by C A Rajmohan R, an experienced Chartered Accountant from SVAR & Associates. The talk focused on the importance of auditing for startups and established businesses, offering participants a comprehensive understanding of how audits ensure transparency, accountability, and regulatory compliance. The

session began with an introduction to the concept and purpose of auditing, highlighting its role in building credibility for companies. Mr. Rajmohan explained the different types of audits including statutory, internal, tax, and management audits Detailed insights were shared on the audit procedures and documentation required for both small and large businesses. The session proved extremely beneficial to students and aspiring entrepreneurs as it gave them a clear picture of the financial and legal responsibilities of running a company. Participants understood the importance of maintaining proper records, adhering to compliance norms, and conducting regular audits for sustainable growth.

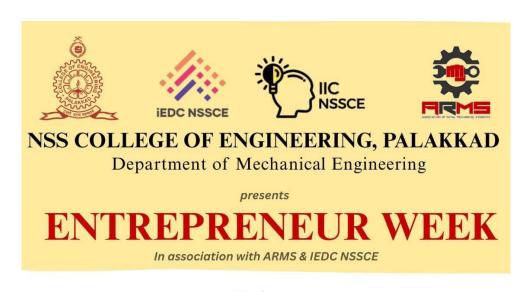
DAY-4



Market Analysis



Day 4 of Entrepreneur Week on 24th April 2025 featured an engaging session on **Market Analysis** delivered by **Mr. Sarath Sankar**, Project Manager at **KIED**. The talk focused on the significance of market analysis in entrepreneurial decision-making, emphasizing how understanding customer needs and market trends is vital for building sustainable businesses. Mr. Sankar explained the importance of market research as the foundation of entrepreneurship, helping startups minimize risks and identify opportunities. He introduced key tools and techniques for market analysis, such as SWOT analysis, competitor mapping, customer segmentation, and demand forecasting. The session helped participants recognize that a strong business idea alone is not enough without market validation. Students gained clarity on how to assess industry trends, study competitors, and identify customer behaviour patterns before launching a product or service. The insights offered will enable budding entrepreneurs to make informed decisions and reduce risks in their ventures.



Topic:

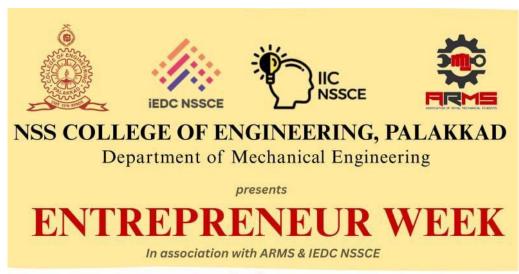
Need of IPR and its legal aspects in India and Abroad



As part of the ongoing Entrepreneur Week, the Day 5 session was conducted on 25th April 2025 from 8:00 PM to 9:00 PM. The session focused on the topic "Need of IPR and its Legal Aspects in India and Abroad" and was delivered by Adv. Aiswarya D P, LLM, representing The Legal Practice Solicitors, London. The session highlighted the growing importance of Intellectual Property Rights (IPR) in today's entrepreneurial and innovation-driven world. The speaker elaborated on various forms of IPR such as patents, copyrights, trademarks, and designs, and their role in safeguarding innovation and creativity. Special emphasis was given to how IPR protection encourages startups and businesses to innovate without the fear of idea theft or misuse. The session was highly interactive, with students and participants actively engaging in discussions and

clarifying their doubts about patent filing, copyright ownership, and international IPR treaties. The real-life case examples shared by the speaker gave participants a clearer understanding of the legal complexities involved. Overall, the event was extremely informative and beneficial for budding entrepreneurs and innovators, providing them with valuable legal knowledge on how to protect their ideas and innovations in both domestic and international markets.

DAY-6



Topic:

International Patent and Prototype Development



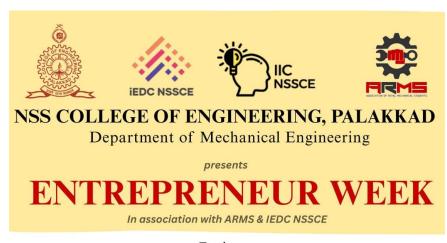
This event, part of "Entrepreneur Week," was the sixth day of a series conducted on 26th April 2025 focused on fostering innovation and entrepreneurship. The session's topic was "International Patent and Prototype Development," which is a critical subject for aspiring innovators and engineers. The webinar was held online, allowing for broad participation. The session was led by Mr. Abhijith T G, the CTO of Wolybot Pvt. Ltd., a professional with practical experience in the field. The discussion likely covered essential aspects of the patent process and product development, including

Fundamentals of Patenting: An introduction to intellectual property, what constitutes a patent, and the differences between national and international patents.

Prototype Development: The importance of creating a functional prototype, key stages in the development process, and how a prototype supports a patent application.

Practical Steps: A step-by-step guide on how to file for an international patent, including the role of the Patent Cooperation Treaty (PCT).

Case Studies: Potential examples or insights from Mr. Abhijith's experience at Wolybot Pvt. Ltd. to illustrate the challenges and successes of bringing an idea to market.



Regulations and Compliance Requirements for Companies in Kerala



On the seventh day of the "Entrepreneur Week" series conducted on 27^{th} April 2025 focused on the critical topic of "Regulations and Compliance Requirements for Companies in Kerala," a subject essential for anyone looking to establish or manage a business in the region. The event was conducted online, allowing for accessible participation. The session was led by Mr. Aswin Padmakumar KAS from the Kerala Industries and Commerce Department, providing an authoritative and practical perspective. The "Regulations and Compliance Requirements for Companies in Kerala" session was a crucial part of Entrepreneur Week, offering attendees a clear understanding of the legal and regulatory framework for doing business in Kerala. The expertise of Mr. Aswin Padmakumar KAS ensured a highly informative and practical session.