

## Workshop on Prototype/Process Design & Development

22nd August 2023

**Institution's Innovation Council (IIC), Ministry of Education (MoE), Dronacharya College of Engineering, Gurugram** organized a workshop on “**Prototype/Process Design and Development**” on **22<sup>nd</sup> August 2023**. **Mr. Siddharth Sharma** (Congruex Asia Pacific LLP as Design Engineer) and **Ms. Richa** (ST Microelectronics as Technical Head) were the resource persons for the workshop.

The event was organized as part of the initiative to celebrate G20 Presidency Year. The workshop revolved around SSIP and IIC, where speakers delved into several aspects of production development processes, entrepreneurship, and transforming knowledge into business.

The workshop aimed to provide participants with a better understanding of how to turn their innovative ideas into practical solutions. Ms. Richa explained how to navigate the journey from ideation to execution, highlighting the importance of maintaining a simple to complex business concept while developing a product. Attendees gained an understanding of the challenges associated with the product development process and the necessary steps involved in taking a concept to market. The workshop also provided a platform for networking and collaboration, allowing participants to share their experiences and ideas with peers and experts in the field.

Overall, the workshop was an opportunity for those who are looking to kick-start their entrepreneurial journey and take their product development skill to the next level.



## Session on Innovation/Prototype Validation

23rd August 2023

**Institution's Innovation Council (IIC), Ministry of Education (MoE) Dronacharya College of Engineering, Gurugram** organized a session on **“Innovation/Prototype Validation”** from **23<sup>rd</sup> August 2023**. **Mr. Sandeep Ranjan** (Solution Architect, HP), **Mr. Rohit Goel** (Director, Leafy Wheels Pvt. Ltd.), **Mr. Mayank Gupta** (Director, Autonexas India Pvt. Ltd.) and **Mr. Prabhat Chaudhary** (Associate Product Tech Support, Unicommerce eSolutions Pvt. Ltd.) **were the speakers for the session.**

The objective of the session was to make participants understand the process of transforming innovative ideas into successful start-ups through prototype validation.

The session commenced with the explanation of importance of prototype validation in the entrepreneurial journey. Speakers said, converting an idea into a working prototype not only validates its feasibility but also attracts potential investors and stakeholders. Participants were explained how initial concept can be converted into a tangible product or service, aligning it with market demands.

Engaging the participants, speakers emphasized the significance of agility and adaptability in the dynamic start-up landscape and elaborated on the iterative nature of prototype development, highlighting real-world examples of renowned start-ups that had successfully navigated the transition from mere innovation to sustainable business ventures.

Towards the end of session participants cleared their doubts with the speakers. It was an interactive and knowledgeable session.



## **AI Workshop: Build Your Own Generative AI Model**

**22nd September 2023**

**Artificial Intelligence Ironclad Innovator (AIII) CLUB, Dronacharya College of Engineering, Gurugram** organized NXTWAVE AI workshop “**Build Your Own Generative AI Model**” on **22<sup>nd</sup> September 2023**. Mr. Trivikarma Kothinti (AI expert and IIT Delhi alumnus) was the keynote speaker of the workshop. 397 students from 3<sup>rd</sup> & 5<sup>th</sup> Semester of CSE (AI&ML)/CSE/CSIT/ECS attended the session. **Dr. Shipra Arora** (Associate Professor, AIML) was the coordinator of the event.

**Mr. Trivikarma** delivered a comprehensive talk on generative AI Model. The contents were well structured and delivered effectively. During the workshop, students delved into multiple AI tools such as OpenAI APIs, Gradio, Hugging Face, Google Colab. The topics covered during the workshop were highly informative, engaging the students actively involved throughout the session. In the hands-on session participants built their own AI application

It was a valuable experience for the participants contributing their personal and professional growth. They gave positive feedback which emphasized the importance of such workshops in knowledge sharing and professional development.



## **Expert lectures on Upskilling and Reskilling**

**13th March 2024**

**Dronacharya College of Engineering, Gurugram in collaboration with ICT Academy organized “Synergies: An Industry-Academia Meet” on 13<sup>th</sup> March, 2024 at college campus.**

Industry experts from Ramboll were **Ms. Vidya Basarkod** (Managing Director, Ramboll India & Director, Ramboll Engineering Centre), **Ms. Lone Tvis** (Group Chief People Officer), **Mr. Michael Falkner** (Senior Director, Global HR Service Delivery), **Mr. Rohit Kumar Chaudhri** (Head HR Business Partnering, India) **Ms. Jyoti Saini**, (Head Ramboll HR Service Center & HR Operations India, ME & APAC), **Ms. Aditee Sharma** (Sr. HRBP), **Ms. Niharika**, Communication & Marketing Consultant.

Teams members of ICT Academy were **Mr. Suresh Babu L** (Associate Vice President), **Mr. Abhinandan Pandey** (State Head), **Mr. Shubham** (Relationship Manager) and **Mr. Dipak Mehta** (Corporate Relationship Manager).

The industry experts were welcomed by Tilak and scarf and green compliments. **Dr. Seema** (ICT Coordinator) then gave the brief introduction of college. Further, Mr. Michael, Ms. Vidya, Ms, Lone introduced Ramboll to the audience.

Ramboll principle is “We people for sustainable change” founded in Denmark in 1945, Ramboll today operates across 35 countries. They combine deep local insight and experience with a global knowledge base to create sustainable societies and drive positive change for their clients. They call it: Bright Ideas, Sustainable change.

Ramboll is rising to the challenge of climate change, helping move the world closer to meeting global climate and nature goals: Halving carbon emissions and being nature positive by 2030, and reaching net zero emissions by 2050. Decarbonisation brings unprecedented opportunities, massive investments, and new solutions that improve living conditions for humans and nature. Businesses and organizations want to cut their carbon footprint but face complex challenges: from defining carbon reduction roadmaps, to implementing low-carbon strategies. They have more than 400 ecologists, biologists, biodiversity consultants, and climate adaptation specialists who have implemented nature-based solutions worldwide. In step with new legislation around the world to restore and enhance biodiversity, they are ready to help clients succeed in their biodiversity ambitions. They discussed about their bigger projects which they are right now undergoing:

1. Development of New international Airport at Noida
2. Development of bigger Andheri to Ghatkopar link road

Students of different branches have asked different questions to industry experts like:

1. Skills required to get opportunities for freshers in Ramboll company.
2. During the planning of any project what precaution you take for smart mobility.
3. What extra courses students can undergo for getting placed in the company?
4. What steps you are taking for net zero during your projects? etc...

At the end, the token of Reverence to the esteemed guests was given by Prof. Isha Malhotra (Principal, DCE). The program was a valuable learning experience for all students. It was an interactive session. The program proved to be a highly insightful and engaging event.



## **International Conference on Technological Innovative Transformation to Industry 5.0 (ICTII 5.0 - 2024)**

**23rd - 24th May 2024**

**Department of Computer Science and Engineering, Dronacharya College of Engineering, Gurugram** organized the two-days “**International Conference on Technological Innovative Transformation to Industry 5.0 (ICTII 5.0)**”, on 23<sup>rd</sup> – 24<sup>th</sup> May, 2024.

The event attracted professionals, scholars, and enthusiasts from diverse fields, facilitating vibrant discussions and knowledge exchange on cutting-edge technologies and practices. With six tracks covering Artificial Intelligence and Machine Learning, Cloud Computing, Blockchain, Mechatronics, 5G/6G Technologies, and Robotics and Automation, attendees delved into distinct themes that are shaping the future of industries. The conference received numerous research papers from institutions and universities, from which 47 potential submissions were selected for presentation and are included in conference proceedings, underscoring the high-quality contributions and the significance of the event in advancing technological innovation.

**Benefit/Outcome:** The two-day conference provided a rich platform for knowledge exchange and professional development. The event fostered networking and collaboration, setting the stage for future innovations and advancements in these dynamic fields.



## Emerging Research Areas in Software & IT Sector

9th February 2024

**Dronacharya College of Engineering, Gurugram** organized the session on “**Emerging Research Areas in Software & IT Sector**”. The workshop was conducted by **Dr. Shipra Arora** on **9<sup>th</sup> Feb, 2024**. The session aimed to explore innovative technologies and methodologies reshaping software development. **190 students** attended the workshop.

The session "Emerging Research Areas in Software & IT Sector" aimed to bring together students to discuss the latest trends, challenges, and opportunities in the rapidly evolving software and IT sectors. As technology continues to advance at an unprecedented pace, it becomes crucial for industry professionals and researchers to stay updated on the emerging issues and innovations shaping the future of software development and IT infrastructure. This event provided a platform for sharing insights on cutting-edge research topics, fostering collaboration, and exploring potential areas for future research.

### **Emerging Technologies in Software Development:**

- **Artificial Intelligence and Machine Learning:** Exploring the integration of AI and ML in software development processes and their impact on automation, decision-making, and user experience.
- **Quantum Computing:** The potential of quantum computing to revolutionize problem-solving in software and IT, with a focus on algorithms, cryptography, and optimization.
- **Blockchain Technology:** Research in the adoption of blockchain for secure transactions, smart contracts, and decentralized applications (dApps).
- **Edge Computing and Fog Computing:** The role of distributed computing in enhancing performance and scalability for IoT applications and real-time data processing.

The session witnessed an overwhelming response, with 190 participants attending, including students, researchers, industry professionals, and academicians. The interactive nature of the sessions encouraged active participation, and attendees were eager to discuss and exchange ideas on emerging research trends.



## Workshop on Innovative Teaching Methods and Pedagogy

23rd September 2023

**Dronacharya College of Engineering, Gurugram**, organized a **Workshop on Innovative Teaching Methods and Pedagogy** to enhance teaching effectiveness and improve student engagement in the classroom on 23<sup>rd</sup> September 2023. Dr. Seema Mahlawat (Associate Professor, Gurugram University) was the eminent speaker of the workshop. The session was attended by **72 faculty members**.

The workshop focused on the importance of innovative teaching strategies in the rapidly evolving education sector. The speaker introduced participants to actively learn teaching techniques like flipped classrooms, gamification, and the integration of technology in teaching. Various interactive activities were conducted to demonstrate the impact of engaging students through experiential learning.

Participants gained insights into how digital tools, case-based learning, and problem-solving approaches can enhance knowledge retention and critical thinking. The session also highlighted the role of artificial intelligence and data analytics in personalized education. Emphasis was placed on student-centric learning models that foster creativity, collaboration, and analytical skills.

The workshop concluded with a Q&A session, where participants actively interacted with the speaker, discussed real-life classroom challenges and sought practical solutions. The event received positive feedback, with participants appreciated the exposure to innovative methodologies that could transform traditional learning experiences.

The workshop was a significant step toward enhancing teaching effectiveness and preparing future educators with modern pedagogical skills.



## **Report on the Activity: World Creativity and Innovation Day**

**April 21 to 25, 2024**

From April 21 to 25, 2024, the Entrepreneurship Development (ED) Cell hosted a week-long event in celebration of World Creativity and Innovation Day at the Auditorium from 10:00 AM to 2:00 PM daily. Themed *“Fostering Creativity and Innovation to Solve Global Challenges,”*

The event aimed to raise awareness about the essential role creativity plays in addressing worldwide issues. The program commenced with an inaugural session that emphasized the importance of innovative thinking in human progress.

A powerful keynote address by Principal Prof. Dr. Isha Malhotra highlighted creativity as a cross-disciplinary force capable of solving problems in areas such as climate change, healthcare, and education. Mr. Rajiv Gulati, an expert in innovation management, also delivered a compelling talk on the role of creativity in societal advancement, encouraging students to tackle real-world challenges with inventive solutions.

The event featured a wide range of engaging activities, including recognition ceremonies for outstanding contributions from students, alumni, and faculty in the fields of innovation and creativity. Student teams were awarded for projects like low-cost water purification systems, AI health diagnostic tools, and educational apps for rural communities. Alumni innovators and faculty members with creative teaching or research approaches were also honored. A vibrant exhibition displayed various student-led innovations, such as eco-friendly packaging, wearable health devices, and solar-powered farming tools.

The interactive workshop on creative problem-solving further empowered participants with practical strategies and collaborative approaches to innovation. The event concluded with encouraging remarks from Director Prof. Dr. B. M. K. Prasad, reinforcing the institution’s commitment to nurturing a culture of creativity. Overall, the initiative successfully inspired the academic community to value and integrates creativity into their everyday problem-solving efforts.



## Exposure and field visit for problem identification

31st October 2023

**Dronacharya College of Engineering, Gurugram** organized an educational industrial visit to the **National Institute of Solar Energy (NISE)** in Gurugram on **31st October 2023**. The visit was attended by 50 B.Tech students from the 3rd semester of EEE, ECE, ME, and R&A branches, along with students from the 5th and 7th semesters. They were accompanied by Dr. Dheivanai (Associate Professor, EEE Department) and Dr. Ankit Agarwal (Assistant Professor, ME Department). NISE, a leading government-funded R&D institution in solar energy, is known for its advanced infrastructure and focus on innovation and education in solar technologies.

The visit provided students with a valuable opportunity to witness real-time applications of solar energy concepts they learn in the classroom.

During the visit, solar energy experts Mr. Siddharth and Mr. Naveen conducted insightful sessions on various solar technologies. Mr. Naveen introduced students to different types of solar collectors, including Flat-Plate Solar Collectors used in domestic settings and Concentrated Solar Collectors for large-scale power production. He elaborated on their construction, materials, and efficiency.

Mr. Siddharth discussed the operational principles of solar-powered water pumps and solar cold storage systems with thermal energy backup, highlighting their significance in remote and agricultural areas. Students also gained exposure to quality control practices, including testing procedures for solar panels and batteries.

The experts shared details about ongoing research and innovations, followed by an engaging Q&A session. This interactive and informative visit deepened students' understanding of solar energy applications, enhanced their technical knowledge, and inspired greater interest in sustainable energy solutions.



## **Inter/Intra Institutional Idea Competition**

**14th -16th September, 2023**

Dronacharya College of Engineering celebrated Engineer's Day from 14th to 16th September 2023 by organizing a dynamic three-day event titled "*Abhiyantriki*", commemorating the birth anniversary of India's eminent engineer, Dr. Mokshagundam Vishweshwaraya. The celebration, held under the aegis of the Institution's Innovation Council (IIC), was in line with the Ministry of Education's vision to promote innovation and creativity among engineering students.

The event was packed with activities designed to highlight the students' technical expertise, innovative mindset, and entrepreneurial abilities. A strong spirit of enthusiasm filled the campus as students actively engaged in a variety of competitions that combined both technical knowledge and creative thinking.

The event lineup included a Technical Quiz, which tested participants' engineering knowledge, and an Idea Presentation session, where students proposed creative and practical solutions to real-world issues. The Prototype Presentation allowed students to display functional models of their ideas, demonstrating their practical application and feasibility.

Additionally, the UI/UX Hackathon focused on developing innovative digital user interfaces, while the SIH Internal Hackathon gave students a chance to tackle real industrial and societal problems, with winning teams earning a spot in the national-level Smart India Hackathon. Overall, "*Abhiyantriki*" proved to be a highly successful initiative that fostered innovation, teamwork, and entrepreneurial thinking among the student community, reinforcing the college's commitment to nurturing future engineers.



## **Session on Problem Solving and Ideation Workshop**

**26th September 2023**

An ideation session is created for a structured process in which a mentor can guide participants through exercises to come up with ideas for the situation they want to solve or the product they want to develop. This workshop is a hands-on, activity-based session built around the Design Thinking process.

The session commenced with a welcome address by Prof. (Dr.) Isha Malhotra (Principal, DCE) and Prof. Neha Chauhan (HOD, ME), extending a warm welcome to industry dignitaries. At first, Mr. Tuhin Srivastava (Vice Chair students SAENIS), engaged with the students and offered insights. Following this, Mr. Anup Kacker (ED, SAENIS) shared his valuable career experiences at organizations like IOCL and Maruti Suzuki. Mr. Vivek Kumar Jakhmola (Director MTA, m EV Korean JV) delivered an expert talk on the theme "Learner to Leader," imparting valuable knowledge to the students about the various roles of leaders in the industry. Subsequently, Mr. Raghavendra Ratti (Deputy General Manager) and Avisek Das (Assistant General Manager) presented their views on recent trends and developments in the industry.

The session mainly focused on:

- Innovation methodology, framework & building on skills and tools.
- Brain storming and ideation sessions.
- Identifying Problems having business potential.
- How to conceive the idea, what are the best practices and how to build a good team?

At the outset the students were welcomed, made aware about the objective of the workshop and the initiatives of Innovation Cell (Ministry of Education, GoI). The important aspects covered by the speaker during the workshop were

1. The concept of Entrepreneurship
2. Importance of innovation and idea generation
3. Importance of problem solving
4. The skills, characteristics, attributes and functions of Entrepreneurs
5. The importance of creative thinking and strategic thinking

About 170 students attended the workshop. The queries of the students were very well handled by the speaker. The overall feedback of the workshop was very positive.



## **Expert talk on "Process of Innovation Development & Technology Readiness Level (TRL)" & "Commercialisation of Lab Technologies & Tech-Transfer"**

**21st February, 2024**

Institution's Innovation Council (IIC), Ministry of Education (MoE), Dronacharya College of Engineering, Gurugram organized a Expert talk on "Process of Innovation Development, Technology Readiness Level (TRL)" on 21st February, 2024. Mr. Vijay Arora was the eminent speaker of the session. 280 students attended the session.

The main objective of this Talk was to create awareness among the students and faculty of Engineering and Science courses about the many innovative ways of technology readiness level.

The session covered the following topics:

- Process and Implications in Innovation Development
- Understanding Technology Readiness Level (TRL)
- Manufacturing Readiness Level (MRL)
- Investment Readiness Level (IRL)
- Understanding the Metric assessment of Innovation Development stages

Afterwards a question-answer session was also taken up and students cleared many doubts. Lastly, Vote of Thanks was given by Dr. Ashima Mehta. Overall, the session was very useful and students got the opportunity to learn a lot.

