

A Visit to the Osmania University and National Centre for Additive Manufacturing (NCAM), Hyderabad, 7th March, 2024

Message from the Head of the Department-Mechanical Engineering:

It's a great insight from the Department of Mechanical Engineering, IFHE-FST, to stretch its capability and enhance the skills and ability to use modern engineering techniques. Therefore, we organized events under the Center for Excellence in Robotics and Advanced Manufacturing, such as faculty development programs, short-term training programs, workshops, etc.

To improve and reach heights in the areas of research, the mission-driven by the Director –FST aimed to encapsulate the overall strategic goals of the institute to reach the objectives and provide a sense of what the Institute values to both those inside the organization and outside of it.

In this regard, we visited the Osmania University CPDDAM- Centre of Excellence and National Centre for Additive Manufacturing (NCAM), Hyderabad, on 7th March 2024 to collaborate on academic and research activities with our organization to explore the latest practices and techniques, gain exposure in the area of advanced manufacturing. Also, exchange of academic information, sponsorship of cooperative seminars, workshops, Training Development and dissemination of knowledge for students, Summer Internship and placement of the eligible students, etc. Students and faculty from the institution will collaborate in the joint research in disciplines of mutual interest with the NCAM.

Dr. Barla. Madhavi
HoD-Mechanical Engineering

Overview of the Visit:

A one-day Visit to the Centre for Product Design, Development and Additive Manufacturing (CPDDAM)- A center of Excellence of OU, RUSA 2.0, MHRD Govt of India, Osmania University and National Centre for Additive Manufacturing (NCAM), Hyderabad was very knowledgeable and unforgettable visit. It overwhelmed the research enthusiasm after the detailed observation of the machines and explanation of the projects by Prof. L.S. Ramakrishna on different 3D Printing machines. As the Head of the Department of Mechanical Engineering IcfaiTech, Faculty of Science Technology, IFHE (Deemed-to-be University, Hyderabad), I gained a wonderful industrial experience and research insight on additive manufacturing. The initiative and zeal for research to make the Institute raise its height in the research Dr.K.L.Narayana, Director –FST, and my faculty

colleague Dr.A. Manmadhachary, who accompanied in the visit, marked the initiation for MoU between the Faculty of Science Technology, and CPDDAM and NCAM. The knowledge shared by Prof. L.S. Ramakrishna was outstanding, and the explanation of the international and national projects and machines was excellent, which made us move completely into the area of 3D printing. The technical officer, Mr. Rakesh from NCAM, explained that the process of using different alloying materials in 3D printing was incredible. The infrastructure and the machinery can create a lot of research for students and faculty in the latest techniques and advancements in the area of additive manufacturing.

The Director- of NCAM, Dr. Jaspreet Sidhu, explained the opportunities in the areas of research for collaboration in conducting faculty development programs, workshops, and training for students, making our visit an inspiration to strengthen the research areas and further progress.

The Schedule of the Visit

Morning Session:

10:00 AM -11:00 AM – Visit to Centre for Product Design, Development, and Additive Manufacturing- A Center of Excellence of OU, RUSA 2.0, MHRD Govt of India, Osmania University.

- Laboratory visit
- Types of 3D Printers-SLM 280, FORMIGA P100, OBJECT 3DPRO, FABPRO 1000 ETC.
- Detailed description of different types of 3D printers (FDM, SLA, SLS).
- Digital Light Processing unit
- 11:00-11:15 – Tea Time
- 11:15- 13:00
- Identifying and understanding the function of each component.
- 3D modeling software (e.g., Tinker CAD, Fusion 360)
- Designing for 3D Printing **13:00 -14:00: Lunch Time**
- Afternoon Session: **14:00- 17:00**
- NCAM laboratory visit
- Material laboratory



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