A Report on One-Day Workshop on "3D Printing and Robotics Technologies" Organized by Department of Computer Applications On 16.11.2026





Report Submitted by: Dr. K. Prathapchandran, Assistant Professor, Department of Computer Applications.
Resource Person Details: Mr. P. Mohammed Rizwan Ali, Assistant Professor, Department of Mechanical Engineering, AICTE IDEA Lab – Tech Guru, MITS – DTBU.
Time: 11:30 AM to 1: 10 PM
Venue: AICTE IDEA Lab, MITS – DTBU
Participants: BCA Students
Mode of Conduct: Offline
Report Received on 18.11.2026

Report of the Event:

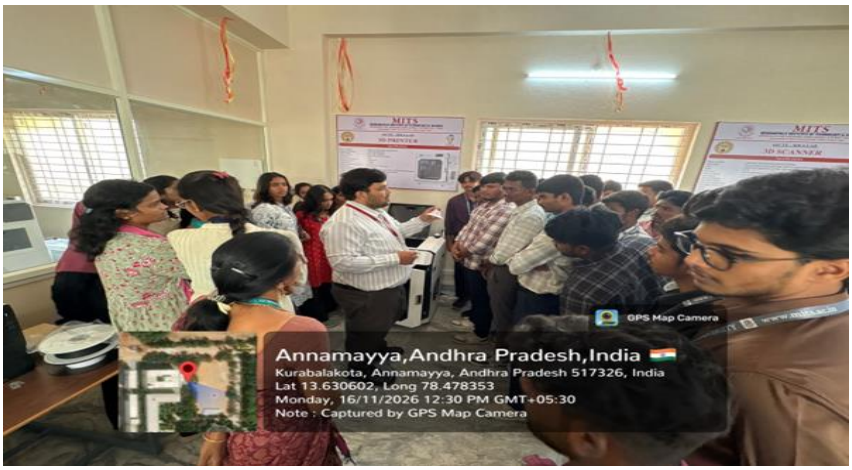
A workshop was conducted by the Department of Computer Applications, MITS – Deemed to be University on the theme "3D Printing and Robotics Technologies" for the students of BCA at the AICTE IDEA Lab on 16th November 2026. The main objective of the workshop was to get hands-on experience of new technologies and their applications in the field of industrial, medical, engineering and technological field. Mr. P. Mohammed Rizwan Ali introduced 3D Printing (Additive Manufacturing) which explained how physical objects can be fabricated in layers using 3D CAD models and how Rapid Prototyping (RP) technologies evolved. He explained a variety of techniques such as Stereolithography (SLA), Fused Deposition Modelling (FDM), Selective Laser Sintering (SLS), Direct Metal Laser Sintering (DMLS), Powder Jetting, Selective Laser Melting (SLM) and Laminated Object Manufacturing (LOM).

The session demonstrated the benefits offered by 3D Printing, including the ability to achieve high precision, minimal material wastage, complex geometry, cost-effective production, eco-friendly production, customization and reduced Product Development time. The resource person also explained its applications like in health care, auto industry, aerospace, product design, jewellery, construction, food industries, tooling, reverse engineering etc. Different materials used in 3D printing such as metals, polymers, ceramics, elastomers and biocompatible materials were also discussed. The presentation provided insights for the students on converting digital design to physical products and motivated them to think about interdisciplinary technologies and innovative solutions for real world problems.

(Technical Presentation: Resource person delivering the technical session on 3D Printing and Robotics Technologies to BCA students).

After the technical presentation the students were shown to the AICTE IDEA lab at MITS – DTBU where they were briefed on advanced prototyping and digital manufacturing facilities and equipment available there. The resource persons gave students insights about the working environment in the laboratory and introduced them to the application of 3D printing technologies in practical life. In the laboratory visit, the students were introduced to the available AICTE IDEA Lab which has a 3D Printer and 3D Scanner. The resource person gave the students an introduction to the role of 3D printing equipment in converting digital designs into real-life objects and explained the significance of 3D scanning in recording the size and shape of any physical objects into digital format.The students enthusiastically took part in the practical demonstration and carefully watched the apparatus.

The resource person explained the practical implication of these technologies in designing products, rapid prototyping, reverse engineering, customized manufacturing and industrial applications. The interactive demo assisted students to relate the theory covered in the presentation with the practical applications.Students also got an opportunity to directly communicate with the resource persons, seek clarification and learn about the possibilities of using emerging technologies to create new solutions. The session sparked an interest in students to delve into the world of interdisciplinary technologies, innovation and hands-on learning.The workshop was successfully completed with a group picture of the resource persons, faculty coordinators and the students.



(Laboratory Demonstration: Resource person explaining the working principles and applications of 3D printing and 3D scanning equipment at the AICTE IDEA Lab)



(Group Photograph: Group photograph of resource persons, faculty coordinators, and BCA student participants at the AICTE IDEA Lab, MITS – DTBU)

The workshop provided valuable exposure to emerging manufacturing technologies and enhanced students' awareness of the practical applications of 3D printing. The programme concluded with a vote of thanks to the resource persons, Head of the Department, faculty members, and student participants for their valuable contributions and active participation.

Suggested Event Outcomes

1. Students gained fundamental knowledge of 3D printing and additive manufacturing.
2. Students understood different rapid prototyping techniques and their working principles.
3. Students became familiar with various materials used in 3D printing.
4. Students explored applications of 3D printing in healthcare, automotive, aerospace, construction, and product design.
5. Students developed awareness of emerging interdisciplinary technologies and their industrial significance.

The programme was organized under the guidance of **Dr. N. Naveen Kumar, Head, Department of Computer Applications, MITS** and Dr. P. T. Anitha, Associate Professor, BCA Coordinator, Dr. K. Prathapchandran and Dr. A. Kalaivani served as the Coordinators of the workshop and facilitated its successful organization.