AICTE Training and Learning (ATAL) Academy:

AICTE Training and Learning (ATAL) Academy is established to empower faculty to achieve goals of Higher Education such as access, equity and quality. It was felt that Training with latest tools and technologies is vital to keeping an institute competitive and more productive. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. Furthermore, the higher education system is passing through a transformational phase to cope up with the global trends. National Education Policy (NEP)-2020 is a light house for this journey of transformation. Quality teachers' community is always a potential force to enforce the changes and plays a pivotal role in development of knowledge building, knowledge sharing and its dissemination.

Important Information:

The certificates shall be issued to those participants who are registered on ATAL portal *www.aicte-india.org/ atal* and attend the program with required attendance. For more details refer this link *https://atalacademy. aicte-india.org/FAQs*

How to apply:

Participants are required to apply through AICTE ATAL registration Link.

Registration is open to:

This program is open to the Faculty members, Research Scholars, Post-Graduate students are motivated and fascinated to acquire knowledge and life skills.

Number of Participants:

The FDP program will be offered in offline mode and is limited to 50 participants.

Chief Patron

Sri Alluri Indra Kumar, President,

Sir CRR Educational Institutions

Dr.M B S V Prasad,Secretary,

Sir CRR Educational Institutions

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ATAL
Faculty Development Program
on

CHALLENGES OF 3D PRINTING IN BIOMEDICAL APPLICATIONS

29 Dec 2025 - 03 Jan 2026

Organised by
Department of Mechanical Engineering
Sir C. R. Reddy College of Engineering
Vatluru, Eluru District,
AP- 534007

ABOUT COLLEGE

Sir C.R.Reddy College of Engineering is the first Engineering College in Andhra Pradesh sanctioned and recognized by All India Council for Technical Education (AICTE). This College is permanently affiliated to JNTUK from the Academic Year 2017-18. Since its inception in 1989, Sir C.R.Reddy College of Engineering has been a premier institute for quality engineering education in Andhra Pradesh under the stewardship of its broad minded and magnanimous management. The last two and a half decades has seen the Institute fulfilling its motto of 'QUALITY SERVICE & VALUE BASED EDUCATION' to the student community.

The institution is continuously striving for excellence by adopting changes to improve the systems, practices and performance.

ABOUT DEPARTMENT

The Department of Mechanical Engineering has been functioning since the inception of the College in 1989. The present intake is 60 students in First Year with 10% lateral entry in second year. A new P.G.Course M.E. (Machine Design) was introduced by the department during the Academic year 2010 - 2011. The Department has 24 Teaching Faculty members. Out of this 07 are Doctorates. The Department has excellent Laboratory facilities, Work-Shops, Drawing Halls.

A Siemens Skill Develoment Center with a CNC Lathe Machine, CNC Milling machine and with all advanced welding equipment and processes is functioning since 2016.

Another Skill Development center in collaboration with VELJAN HYDRAIR Ltd. & DENISON HYDRAULICS Ltd., Hyderabad is in pipeline with an investment of rupees 1 crore to train the students on advanced Pneumatic and Hydraulic systems.

About the Program:

3D printing is an additive manufacturing method that can build objects directly from a computational model. Unlike traditional manufacturing methods such as milling and molding, 3D printing can construct models of arbitrary complexity in relatively fast time frames. It is a powerful tool for visualizing complex human or animal anatomies and can be used for surgical planning, physician and patient education, medical procedure training, medical device prototyping and personalized medical device manufacturing. 3D printing technology is rapidly evolving with advances in materials, resolution, and speed thus enabling greater realism and higher accuracy; this in turn enables new medical applications. The objective of this program is to provide the faculty with a background in what 3D printing could do for you, a brief description of how the majority of current 3D printers work, and how printing has been (and could be) used in various medical applications.

Objectives of the Program:

- Learn the importance of 3D Printing and their opportunities.
- Evolution of “3D Printing”
- Surgical Planning.
- Laser Engineered net shaping process
- Wire arc additive Manufacturing
- Fused Deposition Modeling
- 3D Printing design considerations, constraints and their applications in
- 3D Product experience.

Program Contents:

- Importance of 3D Printing & Opportunities
- Evolution of 3D Printing
- Design for Additive Manufaturing and its applications
- Surgical Planning
- Laser Engineered net shaping process
- Wire arc additive Manufacturing
- Fused Deposition Modeling (FDM)
- Design Considerations & Constraints
- 3D Product Experience

Outcome of the Program:

- At the End of the Program Participants will be able to understand what are the Opportunities, Threats and challenges in 3D printing related to medical field.
- Able to Understand Basics of 3D Printing, and its evolution towards medical applications.
- Learn the importance of 3D printing in Industries, current components of typical 3D Printing and trends for the future.
- We'll also cover key components of 3D Printing to ensure that students understand how to implement Techniques of 3D Printing in medical applications

Resource Persons:

Eminent personalities and experts from IITs, NITs, Industries and R&D Centers will be delivering the lectures.