

## FDP OBJECTIVES

- ❁ To update the participants with the state of the art technologies in 3D Printing and Design.
- ❁ To provide knowledge about current technological developments in CAD modeling and 3D Printing.
- ❁ To expose the newer materials, modern tools and methodologies available in 3D Printing.
- ❁ To review the recent developments in Industrial, Real life and Pedagogical applications of 3D Printing.
- ❁ To provide demonstration in 3D modeling, preparing build set-up and fabrication of 3D models.
- ❁ To impart the various research avenues in 3D Printing and Design

## FDP COVERAGE

- 🕒 Global Perspective of 3D Printing and Design
- 🕒 Design for 3D Printing
- 🕒 3D Printing Newer Materials
- 🕒 3D Printing Manufacturing Equipment
- 🕒 3D Printing Manufacturing Techniques
- 🕒 Interdisciplinary Real Case Study Research Problems
  - Aerospace
  - Automobile
  - Medical
  - Defence
- 🕒 Demonstration on
  - 3D Printing Machine
  - 3D Scanner
- 🕒 Scope for Society needed Projects related to 3D Printing and Design
- 🕒 Stress Management

## ELIGIBILITY FOR PARTICIPATION

The faculty members of the AICTE approved Institutions, Research Scholars, PG Scholars, Participants from Government, Industry (Bureaucrats / Technicians / Participants from Industry etc.) and staff of host institutions.

Maximum 200 participants may be allowed to attend ONLINE FDP on a first come first serve basis.

Registration has to be done only through <https://atalacademy.aicte-india.org/signup>

Details of ONLINE platform and meeting link will be communicated to the selected candidates through their registered email.

## RESOURCE PERSONS

Eminent Personalities from Reputed Academic Institutions / R & D Organizations / Industries who are in the 3D Printing practice will deliver lectures and demonstration.

## TEST AND CERTIFICATE

A test shall be conducted (may be online) by coordinator at the end of the program. The certificates shall be issued to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test.

## ADDRESS FOR COMMUNICATION

### Dr. P. UDHAYAKUMAR

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ATAL Online FDP on 3D Printing and Design,  
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## AICTE Training and Learning (ATAL) Academy sponsored

ONLINE Faculty Development  
Programme (FDP)

On

## 3D PRINTING AND DESIGN

30<sup>th</sup> Nov - 04<sup>th</sup> Dec 2020

Convenor

**Dr. A.V. RAMPRASAD**  
Principal

Co-ordinator

**Dr. P. UDHAYAKUMAR**  
Prof & Head / Mech. Engg.



Organized by

Department of Mechanical Engineering  
(Accredited by NBA, New Delhi 5<sup>th</sup> Time)

**K.L.N. College of Engineering**  
(An Autonomous Institution)  
Pottapalayam – 630 612  
Sivagangai District, Tamilnadu

## AICTE TRAINING AND LEARNING (ATAL) ACADEMY

### Vision

To empower the faculty to achieve goals of Higher Education such as access, equity and quality.

### Mission

- \* To establish AICTE Training and Learning (ATAL) cell in all the Technical Institutions, Universities, Deemed-to-be Universities and other Institutions of Technical Learning.
- \* AICTE will support for establishment of AICTE Training and Learning (ATAL) cell in all the technical institutions. Universities. Deemed to be Universities and other institutions of technical learning.
- \* Initially AICTE will establish AICTE Training and Learning (ATAL) Academies in Jaipur, Vadodara, Guwahati and Trivandrum. However, in future more academies may be opened as per requirements. AICTE HQ will have a training cell who will coordinate with training academies of AICTE and training cells across the country.
- \* To establish Academies web portal and mobile application for carrying out its operations.
- \* To build a database of trainers/experts, Video Repositories, Training materials and training needs of technical institutions.
- \* Training needs analysis of technical manpower of the country.

### Objectives of Academy

- \* To set up an Academy which will plan and help in imparting quality technical education in the country

- \* To support technical institutions in fostering research, innovation and entrepreneurship through training.
- \* To stress upon empowering technical teachers & technicians using Information & Communication Technology
- \* To utilize SWAYAM platform and other resource for the delivery of trainings.
- \* To provide a variety of opportunities for training and exchange of experiences. such as workshops, orientations, learning communities, peer mentoring and other faculty development programmes.

## K.L.N. COLLEGE OF ENGINEERING

K.L.N. College of Engineering (KLNCE), an autonomous institution, is the first self-financing Co-educational Engineering College in Madurai, started in the year 1994 by Munificence of Philanthropist and well-wishers in Sourashtra Community which is a linguistic minority in Tamilnadu. This college is sponsored by the committee of eminent industrialists and academicians led by enthusiastic, educationalist and industrialist (Late) Thiru K.L.N. Krishnan.

This college has been approved by All India Council for Technical Education, New Delhi and is affiliated to Anna University, Chennai. This college is situated on the South Eastern outskirts of Madurai, 11<sup>th</sup> Km on Madurai – Nedungulam Road. It is built in an area of 53.8 acres. This College offers Seven Undergraduate Programmes, Five Postgraduate Programmes and Doctoral Programmes in Engineering. The college is accredited by National Assessment and Accreditation Council (NAAC) and also an ISO 9001:2015.

## DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering was started in the year 1994. The Department is well equipped with qualified and experienced faculty members with research and industrial background. The department contains well established laboratories to impart good practical training to the students. The Department has been accredited successfully 5<sup>th</sup> time by National Board of Accreditation (NBA), New Delhi. Anna University Chennai has been recognized the Department as Research centre for doing Ph.D. Six staff members are recognized as supervisors for guiding the Ph.D scholars of the University.

## ABOUT THE FDP

3D Printing or Additive Manufacturing is a process of making three dimensional solid objects from a digital file. The creation of a 3D printed object is achieved using additive processes. In the additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object. 3D printing enables to produce complex shapes using less material than traditional manufacturing methods. The FDP is designed to impart knowledge and skills related to 3D printing technologies, selection of material and equipment and develop a product using this technique in Industry 4.0 environment. Also, this FDP aims to fostering the basic concepts and foundation, methodologies for further study, research, innovations, industrial applications and entrepreneurship.