

ABOUT INSTITUTE

The Indian Institute of Information Technology Tiruchirappalli (IIITT) was established in the year 2013-14 as the Institute with National Importance under Public Private Partnership Mode by Ministry of Human Resource Development (MHRD), Govt. of India. The Stakeholders of IIITT are Central Govt. of India, State Govt. of Tamil Nadu, and Industry partners, viz., TCS, CTS, Infosys, Ramco Systems, ELCOT, and Navitas. The main objective of IIITT is to impart world class education in Engineering and Technology to conduct research in the relevant fields, and to further advance learning and dissemination of knowledge.

The college has been conferred with autonomy in financial and administrative matters to achieve rapid development. IIIT Tiruchirappalli is operating in the temporary campus within the premises of Oxford Engineering College campus, Tiruchirappalli - 620 009, Tamil Nadu from mid-July 2020.

ABOUT DEPARTMENT

The Department of Mechanical Engineering is focused to create a professional with well-defined technical knowledge in the field of Design, Manufacturing and Industrial Engineering. It deals with interdisciplinary fields and projects that draw on fundamental sciences in pursuit of beneficial engineering solutions. The department aims to develop new, effective, and sustainable alternatives to the various applications in the field of mechanical engineering.

COURSE OBJECTIVES

The course is designed to provide knowledge of product development through various 3D printing techniques. The FDP will give exposure to the participants about applications of 3D printing in industrial and medical fields. The FDP shall also enable the participants to experience 3D printing techniques, prototype design and development.

ORGANIZING COMMITTEE

Patron

Dr. N V S N Sarma,
Director,

Indian Institute of Information Technology
Tiruchirappalli

Chair

Dr. G. Seetharaman, Associate Professor
Dr. R. Dhanalakshmi, Associate Professor

Co-ordinator

Dr. Velmurugan C

Assistant Professor

Department of Mechanical Engineering,
Indian Institute of Information Technology
Tiruchirappalli.

IMPORTANT DATES

Last date for receipt of Registration form	25 January 2021
Intimation of selection	28 January 2021
Mode of Intimation	Through Email only

ABOUT ATAL ACADEMY

The primary objective of the ATAL Academy is to plan and help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation and entrepreneurship through training. The Academy stresses upon empowering technical teachers and techniques using Information and Communication Technology. It also aims at utilizing SWAYAM platform and other resources for delivery of the trainings. It provides a variety of opportunities for training and exchange of experiences. Such as workshops, orientation, learning communities, peer monitoring and other FDPs.



**AICTE Training and Learning (ATAL)
Academy**

Sponsored

**Online Faculty Development
Programme**

on

“3D Printing and Design”

01-05, February 2021



Department of Mechanical Engineering,
Indian Institute of Information Technology
Tiruchirappalli
(Oxford Engineering College Campus)
Tiruchirappalli-620009

www.iiitt.ac.in

ABOUT THE COURSE

Primary objective of this course is to explore the fundamental and advances in 3D printing by providing a common platform to interact with the experts of the field. The contents include introduction to advanced techniques used in additive manufacturing, their end applications, and recent developments. This course will be a platform to gather, provide clear cut ideas regarding 3D printing and its use in biomedical, automobile and aerospace to researchers who are working and planning to work in this field. The program also motivates research ideas with practical applications by the experts in this field of research.

COURSE CONTENTS

- ◆ 3D Printing– Introduction
- ◆ CAD for Additive Manufacturing
- ◆ Additive Manufacturing Techniques
- ◆ Materials for 3D Printing
- ◆ Topology Optimization
- ◆ Process parameters and selection
- ◆ 3D Printer components and their assembly
- ◆ 3D Printing of Polymer
- ◆ 3D Printing of Metals
- ◆ 3D printing of shape memory alloys
- ◆ Additive manufacturing of smart materials
- ◆ Application of 3D printing (Biomedical, automotive, aerospace)
- ◆ Post-processing Requirements and Techniques
- ◆ Sustainable Aspects of 3D Printing Technologies

KEY POINTS

- ◆ There is **no registration fee** from any participants
- ◆ Participants will be selected on first-come first-served basis
- ◆ Selected candidates will be intimated by e-mail

PROSPECTIVE PARTICIPANTS

This workshop is open for participants of Academicians, Research Scholars and PG Scholars from AICTE approved institutions & Central Government institutions

REGISTRATION

The interested candidates are required to register for the FDP through following link on or before the last date <https://www.aicte-india.org/atal>

The number of participants is limited to 200 and will be selected based on first come first serve basis. For any clarification, contact the FDP coordinator.

ADDRESS FOR COMMUNICATION

Dr. Velmurugan C

Assistant Professor

Department of Mechanical Engineering,
Indian Institute of Information Technology

Tiruchirappalli,

(Oxford Engineering College Campus)

Tiruchirappalli, Tamil Nadu, 620009

velmuruganc@iiitt.ac.in

velmuruganiitt@gmail.com

Ph: 9943022961

CERTIFICATE

The digital certificates shall be issued to the participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test. The participants also have to provide compulsory online Feed-back on the last day of FDP.

RESOURCE PERSONS

Faculty from reputed Academic Institutions/ Industries/ R&D labs who are broadly working in the field of 3D printing and design at research and application level will deliver lectures.

EXPECTED OUTCOME

At the end of the program the participants shall be able to understand the following key factors in the field of 3D printing.

- State-of Art of 3D printing techniques
- Basic components and assembly of 3D printing equipment
- Selection of materials for 3D printing
- Mechanical and Metallurgical properties of 3D printed materials
- Need of 3D printing in industrial applications

