



**ATIL ACADEMY CELL, NEW DELHI  
SPONSORED  
FACULTY DEVELOPMENT PROGRAM**



on

**“3D PRINTING & DESIGN”**

*16<sup>th</sup> to 20<sup>th</sup> December, 2019*

Coordinator

**Dr. Harshit K. Dave**

Associate Professor

Organized by



**Department of Mechanical Engineering,  
Sardar Vallabhbhai National Institute of Technology, Ichchhanath,  
Surat - 395007, Gujarat, INDIA**

### **About Surat:**

Surat is a top ranking industrial city of the country with clean wide roads and over bridges. It is well known worldwide for textiles, zari, embroidery, and diamond industries. Several large scale industries are located in the city. Surat is situated on the main western railway route between Vadodara and Mumbai and connected to all part of the country through rail network. The institute is located at Ichchhanath on Surat-Dumas road at a distance of about 10 Km from Surat railway station and airport.

### **About the Institute:**

The institute was initially established as Sardar Vallabhbhai Regional College of Engineering & Technology in 1961. It was later upgraded as a National Institute of Technology in 2002. It has been accorded the status of institute of national importance. SVNIT is one of the pioneering engineering institutions of the country which has nurtured many outstanding engineers in India & abroad. At present, the institute runs seven UG programs, eighteen PG programs and a Ph.D. program in all disciplines of engineering and applied sciences. The institute has an excellent placement record with a number of top ranking companies visiting the campus every year.

### **About the Department:**

The Department of Mechanical Engineering came into existence in the year 1961. The department has a team of 37 qualified and dedicated faculty members having specialization in various areas. At present the department is offering a UG program (Mechanical Engineering), five PG programs (Mechanical Engineering, Turbo-machines, Manufacturing, CAD/CAM, and Thermal System Design) and a research program leading to M. Tech (Research) and Ph.D. degree.

### **About the Program:**

3D Printing refers to a group of methods and technologies that create arbitrarily complex three-dimensional structures through the sequential layer wise addition of materials in selected regions corresponding to digital slices of a computer-generated model. Also known as Additive Manufacturing, this emerging technology is revolutionising the manufacturing industry with its ability to turn digital data into physical parts. In the last decade significant amount of research work has been carried out for commercialization and enhance the industrial use of 3D printing technologies across the various sectors spanning aerospace, defence, automotive, biomedical, printing, electronics, industrial manufacturing, construction, education, jewellery, sculpture, and art, to name just a few.

The aim of this program is to provide a fundamental understanding on the state-of-the-art additive and digital manufacturing technologies to a broad spectrum of researchers, industry practitioners, executives, teachers and students. Focus will be on describing all the different

processes under the umbrella of 3D printing technologies, which covers both polymer and metal based systems. Industrial case studies will be used to demonstrate how the technology has been implemented at various application segments. Hands on practice and industrial visit will be included for better understanding of theory & applications.

**Major Course content:**

- Introduction to 3D printing
- 3D CAD modelling and STL file generation for 3D printing
- Different 3D printing Technologies and Materials
- Reverse Engineering for 3D printing
- Hands on Experience for different processes
- Applications in Automobile, Casting, Art & Jewellery, Medical/Dental field, etc.
- Future directions in 3D printing

A test will be conducted at the end of the program. The certificate will be issued to those participants who have attended the program without any absenteeism and scored minimum 60% marks in the test.

**Program Faculty:**

The resource persons for the program shall include faculty from SVNIT, Surat and other nearby IITs/NITs/Research Organizations/Industries.

**Eligibility for Participation:**

Faculty members/ research scholars/ PG scholars from academic institutes approved by the AICTE/ UGC/ MHRD working in Private/ Public/ Government organizations can attend the course

**Registration Fee:**

There is no registration fee for faculty/ research scholars/ PG scholars from academic institutes.

The breakfast and working lunch will be provided during the course. The participants have to manage their dinner and accommodation in guesthouse/hostel by their own cost during the course. The participants have to bear their own travelling expenses.

**Last Date of Registration:**

Hard copy of the duly filled and signed registration form should reach the coordinator on or before **1<sup>st</sup> December 2019**. However, scanned advanced copy of registration form must be sent through <https://forms.gle/KNB851mfoCiW4NDN7> for early registration and confirmation.

