

ATAL ACADEMY CELL, NEW DELHI
SPONSORED



6 to 10th
January
2020



FACULTY DEVELOPMENT PROGRAM

on

REVERSE ENGINEERING FOR PRODUCT DESIGN



Coordinator

Prof. A. A. Shaikh

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 six 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 conducting 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:

Reverse Engineering is important tool for converting physical object in to digital object, which can be prerequisite for 3D Printing, and any process of additive manufacturing or subtractive manufacturing. It deals with processing of building the 3d model as e – part for further consideration for converting it to part as rapid prototype, and to deal with appropriate material for converting part as rapid manufacturing and depending on properties of material part can be used for rapid tool. Industrial use of reverse engineering process is care rebuilt of broken parts, developing documents for old parts and developing products using available source of technology for further improvement. It is applied to various sectors sports, aerospace, defense, automotive, jewelry, sculpture etc.

The aim of this program is to provide a basic understanding on techniques of developing electronic part for additive and digital manufacturing technologies to a broad spectrum of researchers, industry

participants, teachers and students. The program deals with delivering methods of data extraction from product using contact and non-contact scanners, converting digitized data in to nurbs to surface to solid model. And generation of stereo lithographic files by slicing to print 3d object / IGES file to machine part/cavity by subtractive manufacturing. This subject matter will lead to develop skill of non-geometrical modeling for bio medical application, 3d printed sculpture and animation characters/objects. The course covered is designed as short term training programme of five days under the category of Faculty Development Programme as sponsored by ATAL academy cell, New Delhi.

Major Course content:

- Introduction to 3D CAD modeling
- Reverse Engineering for 3D printing
- Hands on Experience for different scanners
- Exposure of software approach to build 3d non geometric models
- Conversion of model to 3d printed prototype
- Exposure to LOM by CAD generated 2D profiles

Program Faculty:

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

Eligibility for Participation:

The Programme is open to the teaching Faculty members, Research Scholars from Academic institutes approved by AICTE/UGC/MHRD working in Private /Public /Government organizations can attend the course.

Registration Fee:

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

Limited accommodation can be made available in institute/hostel guest house on self-payment basis.

The participants have to bear their own travelling expenses.

Last Date of Registration:

Hard copy of the duly filled and signed registration form along with registration fee should reach the coordinator on or before **15th December, 2019**. However, scanned advanced copy of registration form must be sent for early registration and confirmation.

